27th Asian-Pacific Conference on International Accounting Issues

Conference Theme
Global Perspectives of Accounting Information in the 21st Century

PROGRAM & PROCEEDINGS

November 1-4, 2015
Gold Coast, Australia

Co-hosted by
Bond Business School
Bond University, Gold Coast, Australia
and
Craig School of Business
California State University, Fresno, U.S.A.
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CONFERENCE VENUE MAP
27th ASIAN-PACIFIC CONFERENCE
ON INTERNATIONAL ACCOUNTING ISSUES

CONFERENCE ADVISORS
Mark Hirst, Dean, Bond Business School, Bond University, Australia
Robert Harper, Dean, Craig School of Business, California State University, Fresno, U.S.A.

CONFERENCE EXECUTIVE COMMITTEE MEMBERS
Keith Duncan, Head of Department, Accounting, Bond Business School, Bond University, Australia
Ali Peyvandi, Chairman, Asian-Pacific Conference on International Accounting Issues, U.S.A.
Keitha Dunstan, Pro Vice-Chancellor (Learning and Teaching), Bond University, Australia

ASIAN-PACIFIC CONFERENCE ADVISORY COMMITTEE MEMBERS
Ali Peyvandi (Chair), California State University, Fresno, U.S.A.
Benjamin Tai, California State University, Fresno, U.S.A.
Marie-Jose Albert-Batt, Burgundy School of Business, Dijon, France
Dhia AlHashim, California State University, Northridge, U.S.A.
Bhabatosh Banerjee, University of Calcutta, India
CS Agnes Cheng, Hong Kong Polytechnic University, Hong Kong SAR
Susela Devi, UNITAR International University, Malaysia
Rong-Ruey Duh, National Taiwan University, Taiwan
Alan Dunk, University of Canberra, Australia
Keitha Dunstan, Bond University, Australia
Alvaro Gasca Neri, EY, Mexico
Sidney Gray, University of Sydney, Australia
Siti Nurwahyuningsih Harahap, Universitas Indonesia, Indonesia
Barron H. Harvey, Howard University, U.S.A.
Mostafa K. Hassan, University of Sharjah, U.A.E.
Joanna Ho, University of California, Irvine, U.S.A.
Simon Ho, Hang Seng Management College, Hong Kong SAR
In Ki Joo, Yonsei University, Korea
Peter Kajüter, University of Münster, Germany
Danuja Kunpanitchakit, Chulalongkorn University, Thailand
Raymond Leung, University of the Fraser Valley, Canada
Xing Liu, Chongqing University, China
Marc Massoud, Claremont McKenna College, U.S.A.
Shirley Polejewski, University of St. Thomas, U.S.A.
Behnaz Quigley, Marymount University, U.S.A.
Edson Luiz Riccio, University of Sao Paulo, Brazil
Katherine Schipper, Duke University, U.S.A.
Cindy Yoshiko Shirata, Hosei University, Japan
Sylvia Veronica Siregar, Universitas Indonesia, Indonesia
Tom Smith, The University of Queensland, Australia
Tony van Zijl, Victoria University of Wellington, New Zealand
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ASIAN-PACIFIC CONFERENCE BEST PAPER AWARDS COMMITTEE
Shu Lin (Chair), California State University, Fresno, U.S.A.
Keith Duncan, Bond University, Australia
Ellie (Larelle) Chappelle, Queensland University of Technology, Australia

CONFERENCE ASSISTANTS
Crystal Cui, California State University, Fresno, U.S.A.
Adrian Gepp, Bond University, Australia
Vesna Bragagnolo, Bond University, Australia
Debbie Koehler, California State University, Fresno, U.S.A.

ASIAN-PACIFIC CONFERENCE REVIEWERS FOR PAPERS
Bhabatosh Banerjee, University of Calcutta, India
K.C. Chen, California State University, Fresno, U.S.A.
CS Agnes Cheng, Hong Kong Polytechnic University, Hong Kong SAR
Jacqueline Christensen, Bond University, Australia
Susela Devi, UNITAR International University, Malaysia
Rong-Ruey Duh, National Taiwan University, Taiwan
Keith Duncan, Bond University, Australia
Siti Nurwahyuningsih Harahap, Universitas Indonesia, Indonesia
Mostafa K. Hassan, University of Sharjah, United Arab Emirates
Lizhong Hao, California State University, Fresno, U.S.A.
Joanna Ho, University of California, Irvine, U.S.A.
Janice Hollindale, Bond University, Australia
Patricia Huff, California State University, Fresno, U.S.A.
Peter Kajüter, University of Münster, Germany
Simone Kelly, Bond University, Australia
Danuja Kunpanitchakit, Chulalongkorn University, Thailand
Raymond Leung, University of the Fraser Valley, Canada
Shu Lin, California State University, Fresno, U.S.A.
Ray MacNamara, James Cook University, Australia
Gary Monroe, University of New South Wales, Australia
Martin Nienhaus, University of Münster, Germany
Denise Patterson, California State University, Fresno, U.S.A.
Ali Peyvandi, California State University, Fresno, U.S.A.
Shirley Polejewski, University of St. Thomas, U.S.A.
Behnaz Quigley, Marymount University, U.S.A.
Cindy Yoshiko Shirata, Hosei University, Japan
Sylvia Veronica Siregar, Universitas Indonesia, Indonesia
Timothy Sterns, California State University, Fresno, U.S.A.
Benjamin Tai, California State University, Fresno, U.S.A.
Tony van Zijd, Victoria University of Wellington, New Zealand
Tamara Zunker, Bond University, Australia
CONFERENECE SPONSORS

Proudly Co-hosted and Sponsored by

![Bond University](image1)

![California State University](image2)

Proudly Sponsored by

![Gold Coast Tourism Corporation](image3)

![Bloomberg](image4)

![University of Queensland Business School](image5)

![AFAAANZ](image6)
Special Event included in Conference Fee

Melbourne Cup Luncheon

Tuesday, 3 November 2015
1:00pm - 3:00pm

The Horse Race that Stops a Nation

The Melbourne Cup is Australia's major thoroughbred horse race. Originating in 1861, it is currently the richest ‘two-mile’ handicap in the world. Traditionally, people from all over Australia stop work and celebrate this iconic event by attending lunch celebrations.

The Bond University Equestrian Club will create the atmosphere of an authentic Melbourne Cup lunch. This event includes a spectacular lunch, award-winning Duetz sparkling wine, mocktails and boutique Australian beers from Burleigh Brewing Company. This event also includes presentation of the Vernon Zimmerman Best Paper Awards.

The race will be shown live on the big screen. You will have an opportunity to try your luck by purchasing Sweepstakes Lottery tickets. You will also be able to support the Bond University Equestrian Club by buying tickets for a chance to win prizes in a Raffle Lottery.

In keeping with Australian tradition, ladies are encouraged to wear hats or fascinators, and gentlemen are encouraged to wear suits. Web search Melbourne Cup Fashion for ideas.

On a Tuesday in November,
The first one to be sure,
As the winner flashes past the post,
You’ll hear the thousands roar.
For never has there been a race
To catch imagination
Than the race that’s run at Flemington
The race that stops the nation!
Optional Dinner and Show

Tuesday, 3 November 2015
5:45pm - 9:45pm

Outback Spectacular
~ Brand New Show in 2015 ~
High Country Legends

With all the drama and action you would expect from Australia’s favourite dinner show, you will be dazzled by amazing animal stars, death defying stunts and aerial performances as you hear the brave tale of an Aussie girl. Be mesmerised by a spectacular display of special effects as you travel the Road to Omeo with Australia’s yesteryear ghosts. All of this is accompanied by a stirring musical score composed especially for the show. This is a show not to be missed!

Discounted price of $90 per ticket while stocks last.
Includes a 3 course dinner, drinks and transportation.
Buses will depart the conference hotel at 5:45pm.

Tickets Selling Fast
Book Now on apc2015.eventbrite.com.au to secure your place.
PLENARY SESSION SPEAKERS BIOGRAPHY

Professor Tom Smith, Frank Finn Professor in Finance, The University of Queensland

Tom is an internationally renowned researcher in the fields of finance theory and econometrics. He is ranked the number one Finance Academic in Australia and New Zealand and in the top 100 worldwide in the last fifty years in terms of tier 1 publications. He is particularly proud of all of his PhD students and the fact that they have more than 50 tier 1 publications.


Craig Mitchell BCom, Partner Risk Advisory group of Deloitte

Craig is a Senior Partner in the Risk Advisory group of Deloitte and leads the technology risk team in Brisbane. He has over twenty-three years of experience assisting Australian and international companies improve their operations where matters of business process, risk, controls and technology are concerned.

Craig’s focus on assurance incorporates internal audit, technology assurance and project assurance. He also has a deep understanding of internal control design/transformation, cyber security, analytics, business resilience, contract risks, WHS, risk management, compliance requirements (SOX, APRA, Privacy, ASX Governance Principles, etc) and corporate governance. Craig’s foundation experience is based on accounting standards, taxation law and corporate law.

Through Craig’s risk management and corporate governance experience, he was invited to the ASX Corporate Governance Council alongside the Group of 100 where he assisted in the drafting of the 2nd edition of the ASX Corporate Governance Principles. This also resulted in Craig co-authoring both Group of 100 and ASX guides to ASX Principle 7: Recognise and manage risk.

Craig leverages both his business (accounting/finance) and information technology skills to provide commercial advice where matters of technology are concerned. He is a Chartered Accountant; as well as a Member of the Institute of Internal Auditors and Member of the Information Systems and Control Association.
Michael O’Neill BActS Hons/LLB, PhD, FIAA

Michael has worked as an equities analyst and portfolio manager at Investors Mutual Ltd since 2008. The company has received several awards as Australian fund manager of the year, most recently from Morningstar in 2015. Prior to this he was a consulting Actuary for four years. Michael was awarded a PhD in Finance at the University of Queensland, Australia, in 2014 and has since been appointed as an Adjunct Associate Professor of Actuarial Sciences at Bond University. His research interests lie in volatility modelling and forecasting, and he recently presented an invited paper, On the Supply of and Demand for Volatility, at the New Frontiers in Finance conference hosted by the Financial Markets Research Centre at Vanderbilt University in the US.

Michael also holds a combined degree at the Australian National University, graduating in 2005 in Actuarial Studies with First Class Honours and a University Medal, and with a Bachelor of Laws. Michael qualified as a Fellow of the Actuaries Institute in 2007, and has been a director on the Institute’s Board since 2008.

Bryan Howieson M.Com. FCPA FAFAANZ

Bryan is Associate Professor in the School of Accounting and Finance at the University of Adelaide. He has held prior positions at the Adelaide Graduate School of Business and the Universities of South Australia and Western Australia. His teaching and research interests relate primarily to financial reporting and accounting standard setting, but he also has strong interests in accounting education, professional ethics and corporate governance. Bryan has published extensively including a monograph on accounting for investment property for the Australian Accounting Research Foundation and papers in academic and professional journals.

Bryan has had a long association with accounting standards setting in Australia including acting as an alternate member of Australia's Urgent Issues Group and the Consultative Group and has assisted the Australian Accounting Standards Boards in research projects. He was recently appointed to the AASB’s Academic Advisory Panel. He has undertaken a number of consultancies in the private and public sectors in the areas of financial reporting and codes of conduct.

Bryan has served as a director of several not-for-profit entities including as President (Australia) of the Accounting and Finance Association of Australia and New Zealand and as Vice-President on the Executive Committee of the International Association for Accounting Education and Research. Bryan was a member of CPA Australia's 'Member of the Future' committee, is immediate Past-President of the South Australian Division of CPA Australia, and now serves on CPA Australia’s Representative Council and Professional Qualifications Advisory Committee.
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Conference Theme
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PROGRAM

November 1-4, 2015
Gold Coast, Australia
27TH ASIAN-PACIFIC CONFERENCE
ON INTERNATIONAL ACCOUNTING ISSUES
GOLD COAST, AUSTRALIA

PROGRAM

SUNDAY, NOVEMBER 1, 2015

9:00 a.m. – 5:00 p.m.  DOCTORAL COLLOQUIUM  ROMNEY ROOM

Sponsor:
The University of Queensland Business School

Keynote Presenters:
Tom Smith, Professor, The University of Queensland, Australia
Robert Faff, Professor, The University of Queensland, Australia
Terry O’Neill, Professor, Bond University, Australia

12:00 p.m. – 5:30 p.m.  GENERAL REGISTRATION  ROMNEY ROOM

5:30 p.m. – 7:00 p.m.  WELCOME RECEPTION  FOUNTAIN TERRACE

Master of Ceremonies:
Keith Duncan, Head of Department, Accounting, Bond Business School, Bond University, Australia

Welcome Remarks:
Ali Peyvandi, Chairman, Asian-Pacific Conference on International Accounting Issues, U.S.A.
Mark Hirst, Dean, Bond Business School, Bond University, Australia

Featuring:
Bond University String Quartet

MONDAY, NOVEMBER 2, 2015

8:00 a.m. – 5:00 p.m.  GENERAL REGISTRATION  WOOLSHED

8:30 a.m. – 9:00 a.m.  OPENING CEREMONY  MACARTHUR'S BALLROOM

Master of Ceremonies:
Crystal Cui, Coordinator, Asian-Pacific Conference on International Accounting Issues, U.S.A.
Adrian Gepp, Course Coordinator, Bond University, Australia

Welcome Remarks:
Ali Peyvandi, Chairman, Asian-Pacific Conference on International Accounting Issues, U.S.A.
Keitha Dunstan, Pro Vice-Chancellor (Learning and Teaching), Bond University, Australia
Shu Lin, Chair, Department of Accountancy, Craig School of Business, California State University, Fresno, U.S.A.
Mark Hirst, Dean, Bond Business School, Bond University, Australia
9:00 a.m. – 10:00 a.m. KEYNOTE SPEECH
“THE FUTURE OF RESEARCH IN ENVIRONMENTAL ACCOUNTING AND FINANCE”

Moderator:
Keitha Dunstan, Pro Vice-Chancellor (Learning and Teaching), Bond University, Australia

Speaker:
Tom Smith, Professor, The University of Queensland, Australia

Q&A

10:00 a.m. – 10:30 a.m. COFFEE BREAK

10:30 a.m. – 12:00 p.m. PLENARY SESSION
“GLOBAL PERSPECTIVES OF ACCOUNTING INFORMATION IN THE 21ST CENTURY”

Moderator:
Keitha Dunstan, Pro Vice-Chancellor (Learning and Teaching), Bond University, Australia

Speakers:
Craig Mitchell, Partner, Risk Advisory, Deloitte, Australia
Michael O’Neil FIAA, Equities Analyst, Investors Mutual Limited
Bryan Howieson, Associate Professor, University of Adelaide, Australia

Q&A

12:15 p.m. – 1:30 p.m. LUNCHEON

Chairperson: Rong-Ruey Duh, National Taiwan University, Taiwan

1:45 p.m. – 3:15 p.m. CONCURRENT SESSIONS

SESSION 1(A): “AUDITING ISSUES”

Moderator: Benjamin Tai, California State University, Fresno

DO AUDITORS RECOGNIZE CEO RISK-TAKING INCENTIVES?
Wei-Chern Koh, SIM University, Singapore
Kin-Wai Lee, Nanyang Technological University, Singapore

ARE BIG N AND INDUSTRY SPECIALIST PREMIUMS ASSOCIATED WITH THE SIZE AND COMPOSITION OF AUDIT TEAMS?
Kenichi Yazawa, Aoyama Gakuin University, Japan
Sarowar Hossain, University of New South Wales, Australia
Gary S. Monroe, University of New South Wales, Australia

AUDIT FIRMS’ KNOWLEDGE SHARING AND AUDIT REPORT TIMELINESS: THE ROLE OF INFORMATION TECHNOLOGY
Rong-Ruey Duh, National Taiwan University, Taiwan
Ching-Chieh Lin, National Pingtung University, Taiwan
Judy Chuan-Chuan Lin, Soochow University, Taiwan
Wen-Chih Lee, National Kaohsiung University of Applied Sciences, Taiwan
SESSION 1(B): “FINANCIAL REPORTING ISSUES”  
Moderator: Keith Duncan, Bond University, Australia

CEO GENDER AND REAL ACTIVITY EARNINGS MANAGEMENT  
Joo Yeon Hong, Sungkyunkwan University, Korea  
Kyunga Na, Keimyung University, Korea  
Young-Soo Choi, Sungkyunkwan University, Korea

CAUSAL EFFECTS OF QUARTERLY REPORTING – AN ANALYSIS OF BENEFITS AND COSTS  
Peter Kajüter, University of Münster, Germany  
Florian Klassmann, University of Münster, Germany  
Martin Nienhaus, University of Münster, Germany

PUNISHMENT OF BRIBERY AND CORRUPTION: EVIDENCE FROM THE MALAYSIAN JUDICIARY SYSTEM  
Muhammad Nurul Houqe, Victoria University of Wellington, New Zealand  
Reza M. Monem, Griffith University, Australia  
Muhammad Arif Idrus, Victoria University of Wellington, New Zealand

SESSION 1(C): “CAPITAL MARKETS ISSUES”  
Moderator: Cindy Yoshiko Shirata, Hosei University, Japan

VOLUNTARY MONTHLY EARNINGS DISCLOSURES AND ANALYST BEHAVIOR  
Shou-Min Tsao, National Central University, Taiwan  
Hsueh-Tien Lu, National Central University, Taiwan  
Edmund C. Keung, National University of Singapore, Singapore

AUDIT COMMITTEES AND CORPORATE PERFORMANCE: EVIDENCE FROM AUSTRALIAN LISTED COMPANIES  
Ismail Gani, Southern Cross University, Australia  
Ian Eddie, Southern Cross University, Australia  
Albert Wijeweera, Southern Cross University, Australia

A REAL OPTIONS APPROACH TO VALUING AGRICULTURAL RESOURCE ASSETS UNDER UNCERTAINTY: US CORN CROPS  
Marcus Smith, James Cook University, Australia  
Simone Kelly, Bond University, Australia  
Ray McNamara, James Cook University, Australia

SESSION 1(D): “MANAGERIAL ACCOUNTING ISSUES”  
Moderator: Bhabatosh Banerjee, University of Calcutta, India

IMPLEMENTATIONS OF THE BALANCED SCORECARD AND THEIR IMPACT ON ORGANIZATION EFFICIENCY  
Sharlene Biswas, The University of Auckland, New Zealand  
Paul Rouse, The University of Auckland, New Zealand  
Lorenzo Lucianetti, University of Chieti and Pescara, Italy

THE RELATIONSHIPS BETWEEN AUTHENTIC CORPORATE SOCIAL RESPONSIBILITY (CSR) AND ORGANISATIONAL COMMITMENT (OC)  
Huw Jones, University of Newcastle, Australia  
Lisa Barnes, University of Newcastle, Australia

BRAND EFFECTS ON FIRMS’ PERFORMANCE BY INDUSTRY  
Masahiko Fukuda, Bunkyo University, Japan
SESSION 1(E):  “INTERNATIONAL ACCOUNTING ISSUES”  ROMNEY A
Moderator: Behnaz Quigley, Marymount University, U.S.A.

ADOPTING INTERNATIONAL FINANCIAL REPORTING STANDARDS (IFRS) AS THE NATIONAL STANDARDS BY 2020: IS VIETNAM READY FOR THAT?
Duc Hong Thi Phan, RMIT University Vietnam, Vietnam
Mahesh Joshi, RMIT University, Australia
Bruno Mascielli, Swinburne University of Technology, Australia

EARNINGS MANAGEMENT MOTIVES AND FIRM VALUE FOLLOWING MANDATORY IFRS ADOPTION – EVIDENCE FROM CANADIAN COMPANIES
Raymond Leung, University of the Fraser Valley, Canada

PROPERTIES OF ANALYST FORECASTS AND BOND UNDERWRITING RELATIONSHIP: EVIDENCE FROM KOREA
Seong Ho Bae, Kyungpook National University, Korea
Seok Woo Jeong, Korea University, Korea
Woo Jae Lee, Korea University, Korea
Kwangwuk Oh, Korea University, Korea

SESSION 1(F):  “CORPORATE GOVERNANCE ISSUES”  ROMNEY B
Moderator: Tamara Zunker, Bond University, Australia

CORPORATE SOCIAL RESPONSIBILITY, STRATEGY, AND FIRM PERFORMANCE
Joanna L. Ho, University of California, Irvine, U.S.A.
Fu-Hsuan Hsu, National Taiwan University, Taiwan
Chia-Ling Lee, National Chung Cheng University, Taiwan

BOARD DIVERSITY AND CORPORATE DIVIDEND POLICY: DO FREE CASH FLOW AND OWNERSHIP CONCENTRATION MATTER?
Redhwan Ahmed AL-Dhamari, Universiti Utara Malaysia, Malaysia
Ku Nor Izah Ku Ismail, Universiti Utara Malaysia, Malaysia

CORPORATE GOVERNANCE AND CORPORATE SOCIAL RESPONSIBILITY ASSURANCE: EVIDENCE FROM CHINA
Yuyu Zhang, Queensland University of Technology, Australia
Lin Liao, Southwestern University of Economics and Finance, China

SESSION 1(G):  “EARNINGS MANAGEMENT ISSUES”  ROYAL PALMS GARDEN LOUNGE
Moderator: Susela Devi, UNITAR International University, Malaysia

EARNINGS QUALITY FROM A MANAGEMENT PERSPECTIVE: FOCUSING ON A JAPAN-U.S. COMPARISON
Tetsuyuki Kagaya, Hitotsubashi University, Japan

EARNINGS SMOOTHNESS OF FIRMS WITH DISPERSE OWNERSHIP
Jae Eun Shin, Korea University, Korea
Seung Weon Yoo, Korea University, Korea

INSTITUTIONAL OWNERSHIP AND EARNINGS OPACITY
Zuhrotun, Universitas Pembangunan Nasional “Veteran” Yogyakarta, Indonesia
Retno Yulianti, Universitas Pembangunan Nasional “Veteran” Yogyakarta, Indonesia
Indra Kusumawardani, Universitas Pembangunan Nasional “Veteran” Yogyakarta, Indonesia
Lita Yulita Fitriani, Universitas Pembangunan Nasional “Veteran” Yogyakarta, Indonesia
3:15 p.m. – 3:30 p.m. COFFEE BREAK

3:30 p.m. – 5:00 p.m. CONCURRENT SESSIONS

SESSION 2(A): “AUDITING ISSUES” MERINO A
Moderator: Rong-Ruey Duh, National Taiwan University, Taiwan

HOW DOES INVESTORS PERCEIVE ‘FRESH LOOK’ VS ‘POOR KNOWLEDGE’? –MANDATORY AUDIT FIRM ROTATION FROM SOUTH KOREA
Seon Mi Kim, Chonnam National University, Korea
Sook Min Kim, Korea University, Korea
Dong Heun Lee, Korea University, Korea
Seung Weon Yoo, Korea University, Korea

AN EXPERIMENTAL INVESTIGATION OF THE EFFECT ON THE INFLUENCE OF CLIENT EXPLANATIONS OF HAVING A FORMER AUDIT PARTNER AS CLIENT SENIOR FINANCIAL OFFICER
Michael Favere-Marchesi, Simon Fraser University, Canada
Craig Emby, Simon Fraser University, Canada

THE EFFECT OF CONTROLLING SHAREHOLDERS AND THE ROLE OF BOARD OF COMMISSIONERS AND AUDIT COMMITTEE TO AUDIT QUALITY
Vidyata Annisa, Universitas Indonesia, Indonesia
Vera Diyanty, Universitas Indonesia, Indonesia
Ratna Wardhani, Universitas Indonesia, Indonesia

SESSION 2(B): “FINANCIAL REPORTING ISSUES” MERINO B
Moderator: Sylvia Veronica Siregar, Universitas Indonesia, Indonesia

THE ASYMMETRIC WEIGHTS ON TARGET'S ACCOUNTING INFORMATION IN M&A MARKET OVER BUSINESS CYCLE
Jinsuk Heo, Korea University, Korea
So-Jin Yu, Korea University, Korea

VOLUNTARY DISCLOSURE OF ASSET REVALUATIONS: THE IMPACT OF THE QUALITY OF APPRAISALS
Youngghyo Song, Korea University, Korea
Jinhan Pae, Korea University, Korea

TRADE UNION MEMBERSHIP AND VOLUNTARY EMPLOYEE RELATED DISCLOSURES
Tamara Zunker, Bond University, Australia
Pamela Kent, Griffith University, Australia

SESSION 2(C): “CAPITAL MARKETS ISSUES” LEICESTER A
Moderator: Mohammad Nurul Houqe, Victoria University of Wellington, New Zealand

DOES COMPARATIVE INFORMATION QUALITY DRIVE U.S. LISTED ADR CROSS-MARKET INFORMATION TRANSFERS: AN INVESTIGATION OF EMERGING MARKET ECONOMIES
Mohammad S. Bazaz, California State University, San Bernardino, U.S.A.
David L. Senteney, California State University, San Bernardino, U.S.A.
Michael Senteney, Ohio University, U.S.A.

MARKET REACTION TO PREFERRED STOCK: FOCUSING ON ITS CHARACTERISTICS OF “EQUITY”
Makoto Tsukahara, Hitotsubashi University, Japan
THE IMPACT OF COST STICKINESS ON EARNINGS INFORMATIVENESS
Eung-Gil Kim, Korea University, Korea
Jin-Bae Kim, Korea University, Korea
Gun Lee, Korea University, Korea
Min-Young Lee, Korea University, Korea

SESSION 2(D): “ISSUES IN FINANCE” LEICESTER B
Moderator: Raymond Leung, University of the Fraser Valley, Canada

THE MARKET UNDERVALUATION OF EQUITY: THE CASE OF MALAYSIAN LISTED PROPERTY DEVELOPERS
Chee Kwong Lau, The University of Nottingham-Malaysia Campus, Malaysia
Li Li Wong, The University of Nottingham-Malaysia Campus, Malaysia

DETERMINANTS OF FAMILY FLOWS IN AUSTRALIAN SUPERANNUATION INDUSTRY
Natalie Xiaowen Peng, The University of Queensland, Australia

INTRODUCTION THE 2015 LAW ON PUBLIC INVESTMENTS AND RECOMMENDATION TO PUBLIC SECTOR ACCOUNTING IN VIETNAM
Mai Thi Hoang Minh, University of Economics Ho Chi Minh City, Vietnam
Nguyen Xuan Hung, University of Economics Ho Chi Minh City, Vietnam

SESSION 2(E): “INTERNATIONAL ACCOUNTING ISSUES” ROMNEY A
Moderator: Tony van Zijl, Victoria University of Wellington, New Zealand

AFS VERSUS FVTOCI: TWINS OR SIBLINGS?
Orapin Duangploy, Dhurakij Pundit University, Thailand
Pattanant Petchchedchoo, Dhurakij Pundit University, Thailand

THE CONCEPT OF CONTROL IN IFRS 15 – REVENUE FROM CONTRACTS WITH CUSTOMERS: UNDERSTANDING ITS IMPLICATIONS
Ying Zhee Lim, University of Malaya, Malaysia
Susela Devi, UNITAR International University, Malaysia
Nurmazilah Mahzan, University of Malaya, Malaysia

BANKRUPTCY PREDICTION USING INDUSTRY-SPECIFIC VARIABLES
Khaled Halteh, Bond University, Australia
Kuldeep Kumar, Bond University, Australia

SESSION 2(F): “CORPORATE GOVERNANCE ISSUES” ROMNEY B
Moderator: Joanna Ho, University of California, Irvine, U.S.A.

THE ROLE OF FINANCIAL REPORTING IN CORPORATE POLITICAL STRATEGY
Christopher Bleibtreu, University of Konstanz, Germany
Roland Königsgruber, Vrije Universiteit Amsterdam, The Netherlands

FEMALE EXECUTIVES AND DISCRETIONARY ACCRUALS: THE KOREAN EVIDENCE
Seok Woo Jeong, Korea University, Korea
Hyun Ah Kim, Korea University, Korea

DO FOREIGN OWNERSHIP AND CORPORATE GOVERNANCE MECHANISM REDUCE INFORMATION ASYMMETRY?
Devyana Indah Fajriani, Universitas Indonesia, Indonesia
Siti Nurwahyuningsih Harahap, Universitas Indonesia, Indonesia
SESSION 2(G): “ACCOUNTING EDUCATION ISSUES”  ROYAL PALMS GARDEN LOUNGE
Moderator: Jamal Roudaki, Lincoln University, New Zealand

INTRODUCING TEAM-BASED LEARNING (TBL) INTO INTRODUCTORY ACCOUNTING COURSES
Jacqueline Christensen, Bond University, Australia
Janice Hollindale, Bond University, Australia

USE OF SOCIAL MEDIA BY UNIVERSITY ACCOUNTING STUDENTS AND ITS IMPACT ON LEARNING OUTCOMES
Tehmina Khan, RMIT University, Australia
Michael Kend, RMIT University, Australia
Susan Robertson, RMIT University, Australia

STAKEHOLDER INVOLVEMENT AND INSTITUTIONAL RESPONSE IN VIETNAMESE ACCOUNTING EDUCATION
Binh Bui, Victoria University of Wellington, New Zealand
Hien Hoang, Victoria University of Wellington, New Zealand
Duc Hong Thi Phan, RMIT University Vietnam, Vietnam
Premasiri Yapa, RMIT University, Australia

6:30 p.m. – 7:00 p.m.  PRE-DINNER COCKTAIL  THE GRANGE
7:00 p.m. – 10:00 p.m. GALA DINNER  THE GRANGE

Chairperson: Marie-Jose Albert-Batt, Burgundy School of Business, Dijon, France

Featuring: Bond University Orchestra and Bond University Band

TUESDAY, NOVEMBER 3, 2015

8:00 a.m. – 3:00 p.m.  GENERAL REGISTRATION  WOOLSHED
8:00 a.m. – 9:30 a.m.  CONCURRENT SESSIONS

SESSION 3(A): “AUDITING ISSUES”  MERINO A
Moderator: Simon Ho, Hang Seng Management College, Hong Kong SAR

THE EFFECT OF AUDITOR QUALITY AND LEGISLATIVE OVERSIGHT ON THE FOLLOW-UP OF AUDIT RECOMMENDATION AND AUDIT FINDINGS/OPINION
Dyah Setyaningrum, Universitas Indonesia, Indonesia
Lindawati Gani, Universitas Indonesia, Indonesia
Dwi Martani, Universitas Indonesia, Indonesia
Cris Kuntadi, Universitas Indonesia, Indonesia

AUDIT FEES AND REMEDIATION OF INTERNAL CONTROL WEAKNESSES: EVIDENCE FROM JAPANESE LISTED COMPANIES
Dali Hu, Northeast Normal University, China

AUDIT REGULATION AS DISCOURSE: UNDERSTANDING STANDARD SETTING USING THE THEORY OF COMMUNICATIVE ACTION
Dessalegn Getie Mihret, Deakin University, Australia
Monika Kansal, Central Queensland University, Australia
Mohammed Muttakin, Deakin University, Australia
SESSION 3(B): “FINANCIAL REPORTING ISSUES”
Moderator: Marie-Jose Albert-Batt, Burgundy School of Business, Dijon, France

ARRANGEMENT OF FINANCIAL POSITION AND VALUE RELEVANCE
Hyuk Shawn, Keimyung University, Korea
Jae-Gyung Jung, Tongmyong University, Korea
Sung-Chool Jung, Sungkyunkwan University, Korea
Tae-Young Paik, Sungkyunkwan University, Korea

ACCOUNTING GOODWILL AND COST OF CAPITAL
Yuji Shirabe, Hitotsubashi University, Japan

ACCRUALS QUALITY AND DISCLOSURE QUALITY: EVIDENCE FROM INDONESIA
Jenifer Siagian, Universitas Indonesia, Indonesia
Eliza Fatima Nasution, Universitas Indonesia, Indonesia

SESSION 3(C): “EARNINGS MANAGEMENT ISSUES”
Moderator: Lee Lee Ong, Bond University, Australia

CORPORATE GOVERNANCE AND STOCK PRICES OF JAPANESE FIRMS ADOPTING INTERNATIONAL FINANCIAL REPORTING STANDARDS: EARLY EVIDENCE
Fumiko Takeda, University of Tokyo, Japan
Takeshi Watanabe, University of Tokyo, Japan

DETERMINANTS OF EARNINGS QUALITY FOR THE UAE BANKS
Magdi El-Bannany, University of Sharjah, U.A.E.

EXTRAORDINARY LOSS EFFECTS ON MANAGEMENT FORECASTS: EVIDENCE FROM JAPANESE FIRMS
Yuki Ono, Hitotsubashi University, Japan

SESSION 3(D): “CORPORATE SOCIAL RESPONSIBILITY ISSUES”
Moderator: Jacqueline Christensen, Bond University, Gold Coast, Australia

DRIVERS OF TIGHT CARBON CONTROL IN THE CONTEXT OF CLIMATE CHANGE REGULATION
Binh Bui, Victoria University of Wellington, New Zealand
Larelle Chapple, Queensland University of Technology, Australia
ThuPhuong Truong, Victoria University of Wellington, New Zealand

EXAMINATION OF CORPORATE SOCIAL RESPONSIBILITY DISCLOSURE OF INDONESIAN LISTED FIRMS
Sylvia Veronica Siregar, Universitas Indonesia, Indonesia
Siti Nurwahyuningsih Harahap, Universitas Indonesia, Indonesia
Fitriany Amarullah, Univeristas Indonesia, Indonesia
Desi Adhardani, Universitas Indonesia, Indonesia

PROFITABILITY VS SUSTAINABILITY OF FISHERY BUSINESS IN KOTA KUPANG, INDONESIA: A VALUE CHAIN APPROACH
Enos Kabu, Politeknik Negeri Kupang, Indonesia
Deviarbi Sakke Tira, Universitas Nusa Cendana, Indonesia
SESSION 3(E):  “INTERNATIONAL ACCOUNTING ISSUES”  ROMNEY A
Moderator:  Janice Hollindale, Bond University, Australia

INTERNATIONAL ACCOUNTING INFLUENCES ON CHINA: THE RISE AND FALL
Hedy Jiaying Huang, Massey University, New Zealand
Rowena Sinclair, Auckland University of Technology, New Zealand
Keith Hooper, Unitec Institute of Technology, New Zealand

INDIAN CONVERGENCE TO IFRS: INSIGHTS FROM ACCOUNTING PRACTITIONERS AND BANK EXECUTIVES
Mahesh Joshi, RMIT University, Australia
Sharad Sharma, RMIT University, Australia
Premasiri Yapa, RMIT University, Australia
Arabella Volkov, RMIT University, Australia

DETERMINANTS OF MANAGEMENT ACCOUNTING AND CONTROL PRACTICES IN THE EMERGING MARKET OF THE UNITED ARAB EMIRATES
Walaa Wahid ElKelish, University of Sharjah, U.A.E.
Robert C. Rickards, Munich Business School, Germany

SESSION 3(F):  “CORPORATE GOVERNANCE ISSUES”  ROMNEY B
Moderator:  Siti Nurwahyuningsih Harahap, Universitas Indonesia, Indonesia

MODELLING THE INFLUENCE OF CEO VALUES AND LEADERSHIP STYLES ON FINANCIAL DECISION MAKING
Connie Vitale, University of Western Sydney, Australia
Anne Abraham, University of Western Sydney, Australia

THE EFFECTS OF CORPORATE SOCIAL RESPONSIBILITY INPUT ON VALUATION AND ACCOUNTING QUALITY – BIOTECHNOLOGY AND MEDICAL INDUSTRIES
Hsuan-Wei Chang, National Chung Hsing University, Taiwan
Ling-Hui Cho, National Chung Hsing University, Taiwan
Yi-Mien Lin, National Chung Hsing University, Taiwan

LEGAL ORIGIN AND CAPITAL MARKET DEVELOPMENT
Mohammad Tareq, University of Dhaka, Bangladesh
Mohammad Nurul Houqe, Victoria University of Wellington, New Zealand
Tony van Zijl, Victoria University of Wellington, New Zealand

SESSION 3(G):  “CROSS-CULTURAL ISSUES”  ROYAL PALMS GARDEN LOUNGE
Moderator:  Peter Kajüter, University of Münster, Germany

CROSS-COUNTRY DIFFERENCES IN THE APPLICATION OF IFRS – EVIDENCE FROM FAIR VALUE MEASUREMENT
Tyge-F. Kummer, Griffith University, Australia
Martin Schmidt, ESCP Europe Berlin, Germany

THE DETERMINANTS OF PERFORMANCE IN CHINA: A STUDY FOCUSED ON CULTURAL AND INSTITUTIONAL DRIVERS IN THE AREA OF SHANGHAI
Gregory Wegmann, University of Burgundy, France
Ivan Ruviditch, Shanghai Normal University, China

THE EFFECTS OF NATIONALITY ON MANAGEMENT CONTROLS AS A PACKAGE
Takahito Kondo, Kyoto Sangyo University, Japan
Takeshi Nishii, Senshu University, Japan
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<td>9:30 a.m. – 9:45 a.m.</td>
<td>COFFEE BREAK</td>
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<td>9:45 a.m. – 11:15 a.m.</td>
<td>CONCURRENT SESSIONS</td>
<td><strong>SESSION 4(A): “AUDITING ISSUES”</strong>&lt;br&gt;Moderator: Adrian Gepp, Bond University, Australia&lt;br&gt;&lt;br&gt;PERCEIVED PEER PRESSURE AND AUDIT QUALITY: EVIDENCE FROM CHINA&lt;br&gt;May M. Wang, Lingnan University, Hong Kong&lt;br&gt;Pauline W.Y. Wong, Hang Seng Management College, Hong Kong&lt;br&gt;&lt;br&gt;EFFECTS OF PROFESSIONAL SKEPTICISM TRAITS AND ORGANIZATIONAL CULTURE ON ASSESSMENT OF RISK OF MATERIAL MISSTATEMENT&lt;br&gt;Takiah Mohd Iskandar, Universiti Kebangsaan Malaysia, Malaysia&lt;br&gt;Norman Mohd Saleh, Universiti Kebangsaan Malaysia, Malaysia&lt;br&gt;Romlah Jaffar, Universiti Kebangsaan Malaysia, Malaysia&lt;br&gt;Radzi Jidin, The University of New South Wales, Australia&lt;br&gt;Sayed Alwee Hussnie Sayed Hussin, National Audit Department of Malaysia, Malaysia&lt;br&gt;&lt;br&gt;EMPIRICAL STUDY ON THE DISCLOSURE OF REASONS FOR AUDITOR SWITCHING: EVIDENCE FROM JAPAN&lt;br&gt;Ayami Sakai, Doshisha University, Japan</td>
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<td><strong>SESSION 4(B): “FINANCIAL REPORTING ISSUES”</strong></td>
<td>Moderator: CS Agnes Cheng, Hong Kong Polytechnic University, Hong Kong SAR&lt;br&gt;&lt;br&gt;THE ROLE OF FINANCIAL STATEMENT COMPARABILITY IN THE RELATIONSHIP BETWEEN THE LEVEL OF IFRS ADOPTION AND INVESTORS’ HOME BIAS&lt;br&gt;Aria Farahmita, Universitas Indonesia, Indonesia&lt;br&gt;Sidharta Utama, Universitas Indonesia, Indonesia&lt;br&gt;Fitriany Amarullah, Universitas Indonesia, Indonesia&lt;br&gt;Etty R. Wulandari, Universitas Indonesia, Indonesia&lt;br&gt;&lt;br&gt;MARKET PRICING ACCRUAL AND CASH FLOW COMPONENTS IN INDONESIA&lt;br&gt;Achmad Hizazi, Universitas Jambi, Indonesia&lt;br&gt;Winanto Widayat, Universitas Tarumanegara, Indonesia&lt;br&gt;&lt;br&gt;AIG CASE: REVENUE PRINCIPLE, &amp; CONSISTENCY CONVENTION&lt;br&gt;Behnaz Quigley, Marymount University, U.S.A.</td>
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<td><strong>SESSION 4(C): “CAPITAL MARKETS ISSUES”</strong></td>
<td>Moderator: Magdi El-Bannany, University of Sharjah, U.A.E.&lt;br&gt;&lt;br&gt;FAIR VALUE VS. HISTORICAL COST ACCOUNTING MEASUREMENTS FOR REPORTING NON-FINANCIAL ASSETS: DOES FAIR VALUE ACCOUNTING MEASUREMENT PRODUCE HIGHER FINANCIAL REPORTING QUALITY?&lt;br&gt;Tatyana Ryabova, Grenoble Ecole Management, France&lt;br&gt;Keji Chen, California State University, Northridge, U.S.A.&lt;br&gt;Rishma Vedd, California State University, Northridge, U.S.A.&lt;br&gt;&lt;br&gt;THE VALUE RELEVANCE OF LOAN LOSS PROVISIONS&lt;br&gt;Lee-Seok Hwang, Seoul National University, Korea&lt;br&gt;Young Jun Kim, Hankuk University of Foreign Studies, Korea</td>
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IMPACT OF FAIR VALUE MEASUREMENTS ON CORPORATE INVESTMENTS: EVIDENCE FROM JAPAN
  Tomohiro Suzuki, Asia University, Japan
  Takuma Kochiyama, Asia University, Japan

SESSION 4(D):  “MANAGERIAL ACCOUNTING ISSUES”  LEICESTER B
  Moderator:  Dyah Setyaningrum, Universitas Indonesia, Indonesia

ARE DEPRECIATIONS FIXED COSTS? THEIR VARIABILITY AND STICKINESS IN SHORT AND LONG TERMS
  Tae-Young Paik, Sungkyunkwan University, Korea
  Haewon Moon, Sungkyunkwan University, Korea
  Gayoung Ji, Sungkyunkwan University, Korea
  Hyoik Lee, Sungkyunkwan University, Korea

THE INFLUENCE OF ECONOMIC (IR) RATIONALITY AND MANAGERIALISM ON LATE 20TH CENTURY PUBLIC SECTOR REFORMS
  Graham Bowrey, University of Wollongong, Australia
  Ciorstan Smark, University of Wollongong, Australia
  Greg Jones, University of Southern Queensland, Australia

THE EFFECT OF INTERNAL CONTROL MATERIAL WEAKNESSES ON EXECUTIVE EQUITY INCENTIVES AND CORPORATE RISK-TAKING
  Chih-Hsien Liao, National Taiwan University, Taiwan
  Hsin-Yi Huang, National Taiwan University, Taiwan

SESSION 4(E):  “RESEARCH FORUM: FINANCIAL REPORTING ISSUES”  ROMNEY A
  Moderator:  Ratna Wardhani, Universitas Indonesia, Indonesia

TRANSLATION CHALLENGES AND TERMINOLOGY PROBLEMS IN FINANCIAL REPORTING: THE CASE OF ESTONIA
  Jaan Alver, Tallinn University of Technology, Estonia
  Lehte Alver, Tallinn University of Technology, Estonia

INFLUENCE OF BOURDIEU’S ‘HABITUS’ ON INVESTMENT DECISION MAKING: A LOCAL GOVERNMENT PERSPECTIVE
  Greg Jones, University of Southern Queensland, Australia
  Anne Abraham, University of Western Sydney, Australia

THE LONG-TERM EFFECT OF MERGERS: A SURVIVAL ANALYSIS OF JAPANESE BIG BUSINESSES
  Takashi Shimizu, The University of Tokyo, Japan

SESSION 4(F):  “RESEARCH FORUM: CORPORATE GOVERNANCE ISSUES”  ROMNEY B
  Moderator:  Bhabatosh Banerjee, University of Calcutta, India

CORPORATE GOVERNANCE DISCLOSURES IN THE NEW ZEALAND AGRICULTURAL COMPANIES
  Jamal Roudaki, Lincoln University, New Zealand

DISCLOSURE INFORMATION, PRESS COVERAGE, AND THEIR INFLUENCE ON MARKET LIQUIDITY: EVIDENCE FROM JAPAN
  Hiroyuki Aman, Kwansei Gakuin University, Japan
  Hiroshi Moriyasu, Nagasaki University, Japan

SRI FUND FIRMS AND EARNINGS QUALITY
  Wan Suk Ko, Hankuk University of Foreign Studies, Korea
SESSION 4(G): “RESEARCH FORUM: MANAGERIAL ACCOUNTING ISSUES”  
ROYAL PALM GARDEN LOUNGE
Moderator: Sanjib Kumar Basu, St. Xavier's College, India

ACTIVITY-BASED COSTING AS AN ALTERNATIVE TOOL IN DETERMINING SUBIDIZED FARES OF PT PELAYARAN NASIONAL INDONESIA (PERSERO)
Bambang Tjahjadi, Airlangga University, Indonesia  
Daniel Pandapotan, Universitas Indonesia, Indonesia

EFFECT OF IFRS ADOPTION ON CORPORATE STRATEGY AND PERFORMANCE MEASUREMENT: EMPIRICAL EVIDENCE OF JAPANESE MANUFACTURING COMPANIES
Yuta Hoshino, Sugiyama Jogakuen University, Japan

SHARED FINANCIAL INTEREST, FAIRNESS, AND HONESTY IN BUDGET REPORTING
Dini Rosdini, Universitas Padjadjaran, Indonesia

11:15 a.m. – 11:30 a.m. COFFEE BREAK

11:30 a.m. – 1:00 p.m. CONCURRENT SESSIONS

SESSION 5(A): “AUDITING ISSUES”  
MERINO A
Moderator: Susela Devi, UNITAR International University, Malaysia

HOW DO INDUSTRY SPECIALIST AUDITORS IMPROVE AUDIT QUALITY? EVIDENCE FROM NEW AUDIT HOUR BREAKDOWN DISCLOSURE FROM KOREA
Soo Young Kwon, Korea University, Korea  
Han Yi, Korea University, Korea  
Yongsuk Yun, Korea University, Korea  
Kyoungchul Jung, Korea University, Korea

THE EFFECTS OF THE MANDATORY AUDIT PARTNER ROTATION ON AUDIT QUALITY IN KOREA: FOCUSED ON THE IMPACT OF REGULATORY CHANGE
Yeonhee Park, Kongju National University, Korea  
Moon Ki Chung, Su Won University, Korea  
Jeong Ho Koo, Kumoh National Institute of Technology, Korea

IMPACT OF ABNORMAL AUDIT FEE TO AUDIT QUALITY: INDONESIAN CASE STUDY
Fitriany Amarullah, Universitas Indonesia, Indonesia  
Sylvia Veronica Siregar, Universitas Indonesia, Indonesia  
Viska Angraita, Universitas Indonesia, Indonesia  
Fathimah Shafiiyyah, Universitas Indonesia, Indonesia

SESSION 5(B): “AUDITING ISSUES”  
MERINO B
Moderator: Behnaz Quigley, Marymount University, U.S.A.

AUDIT FIRMS AND DISCLAIMERS: IS THE BAR SET TOO LOW?
Keith Hooper, Unitec Institute of Technology, New Zealand  
Jenny Wang, Unitec Institute of Technology, New Zealand

AUDITOR REAPPOINTMENT AND RELATED PARTY TRANSACTIONS: CROSS-COUNTRY EVIDENCE FROM EAST ASIA
Mohd Mohid Rahmat, Universiti Kebangsaan Malaysia, Malaysia  
Siti Hajar Asmah Ali, Universiti Kebangsaan Malaysia, Malaysia  
Kamran Ahmed, La Trobe University, Australia
WHOSE AUDIT QUALITY IS HIGHER: BIG FOUR VERSUS MID-TIER FIRMS? EMPIRICAL EVIDENCE FROM INDONESIA
Antonius Herusetya, Universitas Pelita Harapan, Indonesia
Francis Cia, Universitas Pelita Harapan, Indonesia

SESSION 5(C): “CAPITAL MARKETS ISSUES”
Moderator: Cindy Yoshiko Shirata, Hosei University, Japan

AN EMPIRICAL STUDY OF THE CHARACTERISTICS OF COMPANIES DELISTING THROUGH A MANAGEMENT BUYOUT IN JAPAN
Chieko Matsuda, Tokyo Metropolitan University, Japan

THE DARK SIDE OF DELEGATION OF DECISION RIGHTS: THE INFLUENCE OF DISPLACEMENT OF RESPONSIBILITY AND INCENTIVE-BASED COMPENSATION SCHEME ON MISREPORTING
Vincent K. Chong, University of Western Australia, Australia
Isabel Wang, University of Western Australia, Australia

A MULTIPLE-STAKEHOLDER PERSPECTIVE ON BANK PERFORMANCE MEASUREMENT
Necmi Kemal Avkiran, The University of Queensland, Australia

SESSION 5(D): “TAXATION AND ENVIRONMENTAL ISSUES”
Moderator: Ray MacNamara, James Cook University, Australia

NEGOTIATING DOUBLE TAX AGREEMENTS BEFORE THE OECD MODEL AGREEMENT: NEW ZEALAND’S EARLY DOUBLE TAX AGREEMENTS
Andrew M C Smith, Victoria University of Wellington, New Zealand

CORPORATE TAX AVOIDANCE, INSTITUTIONAL INVESTOR AND THE COST OF EQUITY CAPITAL: EVIDENCE FROM KOREA
Hong Min Chun, Chungbuk National University, Korea
Yong Keun Yoo, Korea University, Korea
Grace Il Joo Kang, SIM University, Singapore

THE EFFECT OF ENVIRONMENTAL PERFORMANCE AND SUSTAINABILITY DEVELOPMENT ON FIRM PERFORMANCE WITH INSTITUTIONAL OWNERSHIP AS A MODERATING VARIABLE: INDONESIAN EVIDENCE
Agnestika Yuniko Marzal, Trisakti University, Indonesia
Deni Darmawati, Trisakti University, Indonesia

SESSION 5(E): “FINANCIAL REPORTING AND ETHICS ISSUES”
Moderator: Tom Smith, The University of Queensland, Australia

INFLUENCES ON ACCOUNTING ETHICS: A NEW MODEL OF ETHICAL DEVELOPMENT
Paul Dunn, Brock University, Canada
Barbara Sainty, Brock University, Canada

THINK LOCAL, ACT GLOBAL: AN AUSTRALIAN CASE STUDY OF THE ROLE OF NATIONAL ACCOUNTING STANDARD-SETTERS
Bryan Howieson, University of Adelaide, Australia

THE FRAUD DETECTION TRIANGLE: A NEW FRAMEWORK FOR SELECTING VARIABLES IN FRAUD DETECTION RESEARCH
Adrian Gepp, Bond University, Australia
Kuldeep Kumar, Bond University, Australia
Sukanto Bhattacharya, Deakin University, Australia
SESSION 5(F): “RESEARCH FORUM: FINANCIAL REPORTING ISSUES” ROMNEY B
Moderator: Alvaro Gasca Neri, EY, Mexico

RAPID CHANGES IN TECHNOLOGY AFFECT TO INTERNAL AUDIT INFORMATION SYSTEM: A CASE STUDY OF INTERNAL AUDIT OFFICE, CHULALONGKORN UNIVERSITY
Wanpen Krittaphol, Chulalongkorn University, Thailand
Viruch Sripiwapon, Chulalongkorn University, Thailand
Waesmae Saah, Chulalongkorn University, Thailand

THE IMPACT OF DEFERRED TAX CREDIT IN BRAZILIAN BANKS’ EQUITY: A STUDY OF CAUSALITY OF DEFERRED TAX ASSETS VARIATIONS IN SHAREHOLDERS’ EQUITY VARIATIONS
José Antonio de França, University of Brasilia, Brazil
Gustavo Heitor Esteves Souza, University of Brasilia, Brazil
Wilfredo Sosa Sandoval, Catholic University of Brasilia, Brazil

USE AND DISTORTION OF GRAPHS IN JAPANESE FINANCIAL REPORTING
Kenji Kawashima, Hosei University, Japan

SESSION 5(G): “RESEARCH FORUM: INTERNATIONAL FINANCIAL REPORTING STANDARDS ISSUES” ROYAL PALMS GARDEN LOUNGE
Moderator: Wan Suk Ko, Hankuk University of Foreign Studies, Korea

ACCOUNTING EXPERTISE AT GRADUATION: CONTRIBUTION TO THE TRAINING OF EXPERTS COUNTERS IN THE CITY OF RIO DE JANEIRO, FROM THE APPLICATION OF THE CONTINGENCY MODEL VROOM MOTIVATION
Idalberto Jose das Neves Junior, Universidade Católica de Brasília (UCB), Brazil
Arnaldo Gonçalves Dias, ITCP Courses & graduate and Faculty Mauá (DF), Brazil
Jorge Luiz Amaral, ITCP Courses & graduate and Faculty Mauá (DF), Brazil
Marcelo Daia Barreto, ITCP Cursos & Pós-Graduação and Faculdade Mauá (DF), Brazil

THE INFLUENCE OF THE STANDARDIZATION PROCESS IN ACCOUNTING AND AUDITING SYSTEMS UNDER A GLOBAL FRAMEWORK: A NARRATIVE-DESCRIPTIVE APPROACH
Hiroko Inokuma, Tohoku University, Japan
Masatoshi Sakaki, Ernst & Young ShinNihon LLC, Japan

DID THE FIRST-YEAR DISCLOSURE OF ARO AFFECT INVESTORS’ DECISION-MAKING? – CASE OF IFRS CONVERGENCE IN JAPAN
Yuki Tanaka, Hosei University, Japan

DO IFRS ADOPTION IMPROVE FOREIGN DIRECT INVESTMENT IN IRAN?
Alemeh Yazdanian, University of Tehran, Iran
Farzaneh Jalali Aliabadi, University of Tehran, Iran
Elham Jamali, University of Tehran, Iran

1:00 p.m. – 3:30 p.m. MELBOURNE CUP LUNCHEON MACARTHUR’S BALLROOM
PRESENTATION OF VERNON ZIMMERMAN BEST PAPER AWARDS
Chairperson: Tony van Zijl, Victoria University of Wellington, New Zealand
Awards Presenter: Shu Lin, California State University, Fresno, U.S.A.
Featuring: Bond University Equestrian Club
3:15 p.m. – 4:45 p.m.  CONCURRENT SESSIONS

SESSION 6(A):  “AUDITING ISSUES”  MERINO A
Moderator:  Viruch Sripawapon, Chulalongkorn University, Thailand

AUDIT RISK FROM MULTIPLE DIRECTORSHIPS: A NEW ZEALAND ANALYSIS
Karen Van Peursem, Victoria University of Wellington, New Zealand
B. E. Purcell, KPMG Auckland, New Zealand

AUDITING AND THE DETERMINANTS OF VALUATION ALLOWANCE FOR DEFERRED TAX ASSETS IN JAPAN
Koreyoshi Seki, Hitotsubashi University, Japan

WHO IS AUDITED? EXPERIMENTAL STUDY ON RULE-BASED TAX AUDITING SCHEMES
Yoshio Kamijo, Kochi University of Technology, Japan
Hiroshi Uemura, Kochi University of Technology, Japan
Takehito Masuda, Osaka University, Japan

SESSION 6(B):  “FINANCIAL REPORTING ISSUES”  MERINO B
Moderator:  Siti Nurwahyuningsih Harahap, Universitas Indonesia, Indonesia

CORPORATE GOVERNANCE DISCLOSURE IN INDONESIA
Chaerul Djusman Djakman, Universitas Indonesia, Indonesia
Sylvia Veronica Siregar, Universitas Indonesia, Indonesia
Siti Nurwahyuningsih Harahap, Universitas Indonesia, Indonesia

FORENSIC ACCOUNTING: FACTORS EMPLOYED IN SELECTING AND RETAINING FORENSIC ACCOUNTANTS AS COURT SPECIALISTS, IN THE OPINION OF MAGISTRATES IN THE STATE OF RIO DE JANEIRO
Idalberto Jose das Neves Junior, Universidade Católica de Brasília (UCB), Brazil
Maria Aparecida Botelho Florido, ITCP Cursos & Pós-Graduação and Faculdade Mauá (DF), Brazil
Viviane Pereira Esteves, ITCP Cursos & Pós-Graduação and Faculdade Mauá (DF), Brazil
Marcelo Daia Barreto, ITCP Cursos & Pós-Graduação and Faculdade Mauá (DF), Brazil

THE EFFECT OF ACCRUAL QUALITY TO THE LEVEL OF BANK DEBT WITH CONTROLLING OWNERSHIP AS MODERATING VARIABLE
Chindy Chresna Agung Bujana, Universitas Indonesia, Indonesia
Ratna Wardhani, Universitas Indonesia, Indonesia

SESSION 6(C):  “CAPITAL MARKETS”  LEICESTER A
Moderator:  Simone Kelly, Bond University, Australia

THE MARKET-WIDE COST OF CAPITAL IMPACTS ON THE AGGREGATE EARNINGS-RETURNS RELATION: EVIDENCE FROM JAPAN
Yuto Yoshinaga, Hitotsubashi University, Japan

VENTURE CAPITAL INVESTMENT, CORPORATE GOVERNANCE AND TECHNOLOGY FIRMS PERFORMANCE
Nor Haiza Aziz, Universiti Kebangsaan Malaysia, Malaysia
Norman Mohd Saleh, Universiti Kebangsaan Malaysia, Malaysia
Mohamat Sabri Hassan, Universiti Kebangsaan Malaysia, Malaysia
Selamat Kundari, Universiti Kebangsaan Malaysia, Malaysia

INVESTMENT FORECAST DISCLOSURE AND THE COST OF EQUITY CAPITAL: EVIDENCE FROM THE TREATMENT EFFECT ESTIMATIONS
Yoshinori Shimada, Iwate University, Japan
SESSION 6(D): “ACCOUNTING EDUCATION AND FINANCIAL ACCOUNTING”

Moderator: Michael Kend, RMIT University, Australia

EFFECTIVENESS OF ONLINE TEACHING OF ACCOUNTING AT UNIVERSITY LEVEL
Teruyo Omura, University of Southern Queensland, Australia

EXPLORING THE OVERVIEW OF FORENSIC ACCOUNTING AND THE DEMAND FOR BUSINESS AND EDUCATION TRAINING IN VIETNAM
Vo Van Nhi, University of Economics Ho Chi Minh City, Vietnam
Tran Anh Hoa, University of Economics Ho Chi Minh City, Vietnam
Pham Quang Huy, University of Economics Ho Chi Minh City, Vietnam

INCORPORATING UNOBSERVABLE CONSTRUCTS INTO STATISTICAL ANALYSIS BY USING STRUCTURAL EQUATION MODELS
Takashi Obinata, The University of Tokyo, Japan
Takashi Yaekura, Waseda University, Japan

SESSION 6(E): “RESEARCH FORUM: AUDITING ISSUES”

Moderator: Sukanto Bhattacharya, Deakin University, Australia

EFFECT OF MANAGEMENT COMPENSATION AND AUDITOR REPUTATION ON TAX MANAGEMENT IN THE LISTED BANKING COMPANIES IN INDONESIA
Fahreza, PT Perusahaan Gas Negara (Persero) Tbk, Indonesia

TAX COMPLIANCE WITH STRATEGIC AUDITORS: AN EXPERIMENTAL STUDY
Yutaro Murakami, Keio University, Japan
Satoshi Taguchi, Doshisha University, Japan

THE EFFECT OF GOVERNMENT INTERNAL AUDITOR’S ROLE ON AUDIT OPINION AND FINDINGS
Ren Adam Abdillah Siregar, Universitas Indonesia, Indonesia
Dyah Setyaningrum, Universitas Indonesia, Indonesia

SESSION 6(F): “RESEARCH FORUM: FINANCIAL REPORTING ISSUES”

Moderator: Enos Kabu, Politeknik Negeri Kupang, Indonesia

WHAT IS IMPORTANT IN PMS? KEY FACTORS IN THE SUCCESS OF PMS
Tarmo Kadak, Tallinn University of Technology, Estonia
Erkki K. Laitinen, University of Vaasa, Finland

MEASURING BOILERPLATE MD&A DISCLOSURE LEVELS OF JAPANESE FIRMS
Takeaki Ito, Konan University, Japan

A STUDY ON ISSUES OF PUBLIC SECTOR ACCOUNTING IN JAPAN
Harumi Ishida, Bunkyo University, Japan
Michiko Toyama, Bunkyo University, Japan

SESSION 6(G): “RESEARCH FORUM: ENVIRONMENTAL AND EDUCATION ISSUES”

Moderator: José Antonio de França, University of Brasilia, Brazil

CSR DISCLOSURE OF THE INDIAN COMPANIES: A STUDY
Sanjib Kumar Basu, St. Xavier's College, India
FRONTIER OF ACCOUNTING EDUCATION: LAUNCHING INTERNATIONAL GRADUATE SCHOOL OF ACCOUNTING POLICY
   Toshifumi Takada, Tohoku University, Japan
   Xiaohui Qu, Xiamen University, China

ACCOUNTING AND CORPORATE GOVERNANCE IMPACT OF CORPORATE GOVERNANCE ON CAPITAL MARKETS OF LISTED PSUS: A REVIEW
   Mahalakshmi Venkataswamaiah, Seshadripuram College, India

5:45 p.m. – 9:45 p.m.   OPTIONAL DINNER AND SHOW: OUTBACK SPECTACULAR (OFF-SITE)

   Buses will depart the conference hotel at 5:45pm

WEDNESDAY, NOVEMBER 4, 2015

9:00 a.m. – 5:30 p.m. OPTIONAL TOUR

   Featuring:
   Currumbin Wildlife Sanctuary & Mt. Tambourine Rainforest Skywalk
27th Asian-Pacific Conference on International Accounting Issues

Conference Theme
Global Perspectives of Accounting Information in the 21st Century

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Gold Coast, Australia
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Wei-Chern Koh and Kin-Wai Lee

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Kenichi Yazawa, Sarowar Hossain and Gary S Monroe

“AUDIT FIRMS’ KNOWLEDGE SHARING AND AUDIT REPORT TIMELINESS: THE ROLE OF INFORMATION TECHNOLOGY”
Rong-Ruey Duh, Ching-Chieh Lin, Judy Chuan-Chuan Lin and Wen-Chih Lee

“CEO GENDER AND REAL ACTIVITY EARNINGS MANAGEMENT”
Joo Yeon Hong, Kyunga Na and Young-Soo Choi

“CAUSAL EFFECTS OF QUARTERLY REPORTING – AN ANALYSIS OF BENEFITS AND COSTS”
Peter Kajüter, Florian Klassmann and Martin Nienhaus

“PUNISHMENT OF BRIBERY AND CORRUPTION: EVIDENCE FROM THE MALAYSIAN JUDICIARY SYSTEM”
Muhammad Nurul Houq, Reza M. Monem and Muhammad Arif Idrus

“VOLUNTARY MONTHLY EARNINGS DISCLOSURES AND ANALYST BEHAVIOR”
Shou-Min Tsao, Hsueh-Tien Lu and Edmund C. Keung

“AUDIT COMMITTEES AND CORPORATE PERFORMANCE: EVIDENCE FROM AUSTRALIAN LISTED COMPANIES”
Ismail Gani, Ian Eddie and Albert Wijeweera

“A REAL OPTIONS APPROACH TO VALUING AGRICULTURAL RESOURCE ASSETS UNDER UNCERTAINTY: US CORN CROPS”
Marcus Smith, Simone Kelly and Ray McNamara

“IMPLEMENTATIONS OF THE BALANCED SCORECARD AND THEIR IMPACT ON ORGANIZATION EFFICIENCY”
Sharlene Biswas, Paul Rouse and Lorenzo Lucianetti

“The Relationships Between Authentic Corporate Social Responsibility (CSR) and Organisational Commitment (OC)”
Huw Jones and Lisa Barnes

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“Accounting and Corporate Governance Impact of Corporate Governance on Capital Markets of Listed PSUs: A Review”
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DO AUDITORS RECOGNIZE CEO RISK-TAKING INCENTIVES?

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ABSTRACT

This paper examines whether CEO risk-increasing (risk-decreasing) incentives matter to auditors in various settings, over and above the auditee firm-specific characteristics documented in prior research. First, we find that auditors’ litigation risk is positively (negatively) related to CEO risk-increasing (risk-decreasing) incentives. Second, we find that audit fees are positively associated with greater CEO risk-increasing incentives. Third, we document that greater CEO risk-decreasing incentives are positively associated with a lower probability of corporate bankruptcy. Finally, we show that auditors are less likely to issue going concern opinions to firms with greater CEO risk-decreasing incentives. Overall, our results suggest that CEO risk-taking incentives influence auditors’ judgments in significant ways over and above previously documented firm-specific characteristics. More generally, our results show that it is important for auditors to understand the nature of top management equity compensation incentives in assessing audit risk, consistent with recent developments in Business Risk Auditing approach which suggests that auditors should acquire a deep and comprehensive understanding of the auditee’s business models and management characteristics to handle increasing audit complexity.
ARE BIG N AND INDUSTRY SPECIALIST PREMIUMS ASSOCIATED WITH THE SIZE AND COMPOSITION OF AUDIT TEAMS?

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ABSTRACT

Using a unique data set related to audit teams, we investigate the difference in audit fees and audit team compositions between Big N (IS) and non-BIG N (non-IS) auditors. We break the determinants of audit fees into four factors: size of audit team, number of high-ranking auditors in the audit team, dependence of the audit team on other assistants (audit team leverage), and audit fees per person to analyse the source of fee premiums because these are similar to indicators used by audit partners to plan audit teams. For Big N auditors we find that (1) Big N audit fees are higher than those of non-Big N firms, (2) Big N audit teams are larger than those of non-Big N firms, (3) the number of high-ranking auditors in a Big N audit team is similar to that of a non-Big N audit team, (4) Big N teams have more audit team leverage, and (5) Big N audit teams have lower audit fees per person than non-Big N firms. As for industry specialist (IS) auditors, we find that (1) IS audit fees are higher than those of non-IS audit teams, (2) the size of an IS audit team is not different from that of a non-IS audit team, (3) IS and non-IS teams have similar audit team leverage, (4) both IS and non-IS teams have a similar number of high-ranking auditors, and (5) IS teams have higher audit fees per person than non-IS teams. Additionally, IS auditors assign more high-ranking auditors to teams for large clients, and fewer to teams for small clients compared with non-IS auditors. These results suggest that Big N auditors earn fee premiums by using more audit staff, and not high-ranking auditors. This also suggests that IS auditors earn fee premiums by charging a higher audit fee per person. In addition, IS auditor may assign higher-ranking auditors to larger clients to build their reputation and enhance audit techniques. These findings provide insight into how Big N (IS) auditors have developed their competence compared to their competitors and earn fee premiums.
AUDIT FIRMS’ KNOWLEDGE SHARING AND AUDIT REPORT TIMELINESS: 
THE ROLE OF INFORMATION TECHNOLOGY

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ABSTRACT

This paper examines whether the audit firms’ knowledge sharing shortens audit lags, and whether information technology applications moderate such relationship. Data collected from a survey with 22 audit firms and from the field were analyzed. The results indicate that, consistent with the hypotheses, audit firms’ knowledge sharing is negatively associated with audit lags. That is, knowledge sharing in audit firms facilitates audit timeliness. Further, the effect on audit lags is more pronounced for audit firms with higher level of information technology applications, suggesting the crucial role of information technology in realizing the effect of knowledge sharing on audit efficiency.
CEO GENDER AND REAL ACTIVITY EARNINGS MANAGEMENT

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ABSTRACT

Using the female CEO and male CEO groups over a 14-year (1992–2013) period, we find that the male CEOs use aggressive discretionary accruals and real activities operations in order to report small positive earnings or small earnings increases whereas the earnings management using real activities operation of suspect firms disappear in the female CEO group.
CAUSAL EFFECTS OF QUARTERLY REPORTING – AN ANALYSIS OF BENEFITS AND COSTS

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ABSTRACT

We exploit a quasi-natural experiment to analyze the causal effects of mandatory quarterly reporting in Singapore: While firms with a market capitalization above S$75 million had to publish quarterly financial statements starting in 2003, firms with a market capitalization below this threshold were excluded from the regulation. By isolating the causal effect of quarterly reporting using regression discontinuity analysis, we provide evidence on the benefits and costs of mandatory quarterly reporting. We find that mandatory quarterly reporting does not reduce information asymmetry, but causes firms to deviate from their prior investment strategy. On net, mandatory quarterly reporting imposes a burden on firms as perceived by the market’s valuation. Implications for regulators are discussed.
PUNISHMENT OF BRIBERY AND CORRUPTION: EVIDENCE FROM THE MALAYSIAN JUDICIARY SYSTEM

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ABSTRACT

We investigate the judiciary outcomes of crimes involving bribery and corruption in the context of the Malaysian judiciary system. Using a sample of 1869 court cases over the period 2006 to 2013, we find that ‘white-collar’ workers, government employees, and Indigenous Malaysians (Bumiputra) receive more lenient treatment from the judiciary system compared to others. Moreover, male offenders receive harsher sentences compared to female ones. In states controlled by the ruling party, offenders in general receive ‘softer’ treatment from the judiciary system compared to that in opposition-controlled states. Our findings clearly suggest that not everybody is equal in the eyes of the Malaysian judiciary system.
VOLUNTARY MONTHLY EARNINGS DISCLOSURES AND ANALYST BEHAVIOR

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ABSTRACT

We examine how voluntary monthly earnings disclosures relate to monthly analyst behavior. We focus on the number of analysts following a firm and several properties that characterize analysts’ earnings forecasts for the upcoming annual earnings. We find firms that disclose monthly earnings attract more analysts, have more accurate and less dispersed analyst earnings forecasts, and have lower overall uncertainty and less commonality of information contained in analysts’ earnings forecasts. In addition, the effect of monthly earnings disclosure on analyst behavior is more pronounced for the firms that regularly disclose monthly earnings. Our results are consistent with the notion that an important role of voluntary increase in interim reporting frequency is to trigger the generation of idiosyncratic information by financial analysts. In other words, analysts tend to complement rather than substitute for firm-provided voluntary disclosures.
AUDIT COMMITTEES AND CORPORATE PERFORMANCE: EVIDENCE FROM AUSTRALIAN LISTED COMPANIES

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ABSTRACT

This paper reports the results of a study investigating the relationship between compliance with the audit committee requirements for companies listed on the Australian Stock Exchange (ASX) and various measures of corporate performance. The study uses data from a sample of companies listed in the ‘Materials Sector’ over the period 2007 - 2009. Panel data estimation is used and finds significant relationships between board audit committee characteristics complying with the ASX Corporate Governance requirements and corporate performance variables.
A REAL OPTIONS APPROACH TO VALUING AGRICULTURAL RESOURCE ASSETS UNDER UNCERTAINTY: US CORN CROPS

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ABSTRACT

Real options are well known for their usefulness in evaluating non-renewable resources. This study derives an asset valuation model using real options methodology to evaluate renewable agriculture investments. The model calculates the value of an investment project as well as computing the critical strike prices at which it becomes optimal to exercise various options over the asset, including when to invest (commence or recommission operations), disinvest (temporarily decommission or delay operations) or abandon the asset altogether. The model incorporates the real options approach into a traditional valuation framework to develop an objective means for calculating a risk-adjusted discount rate applicable to traditional discounted cash flow valuations.
IMPLEMENTATIONS OF THE BALANCED SCORECARD AND THEIR IMPACT ON ORGANIZATION EFFICIENCY

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ABSTRACT

Purpose
Using the results of a survey of Italian firms who have implemented a balanced scorecard (BSC), we investigate how different types of implementation affect organization efficiency. We combine the results of this survey with firms’ efficiency scores to investigate how three Types of BSC, the use of a strategy map and communicating the BSC to different levels affect organizational performance.

Methodology
A survey was carried out of Italian firms who have implemented the BSC with details of how it was implemented. Data Envelopment Analysis (DEA) was used to measure organization efficiency using data obtained from companies’ financial reports.

Findings
Results show that implementation does improve performance as measured by DEA. More specifically, firms that use strategy maps and employ a type III BSC experience greater improvements in efficiency. Firms who proactively implemented the BSC outperformed firms that adopted it as a fad or reactive strategy. In the latter case they underperformed with subsequent cost in the form of lower efficiency.

Practical implications
Understanding how the different uses of the BSC affect organizational efficiency can provide guidance to organizations on how they should apply the BSC in order to optimise its benefits and thus improve their efficiency.

Originality and value
This study investigates not only the effect of implementing a BSC but also how it is implemented and used. We use DEA to measure firm performance providing a more comprehensive measure than used in prior studies.
THE RELATIONSHIPS BETWEEN AUTHENTIC CORPORATE SOCIAL RESPONSIBILITY (CSR) AND ORGANISATIONAL COMMITMENT (OC)

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ABSTRACT

Firms face increasing pressure to understand and managed their obligations to stakeholders (Parmar et al, 2010), and maximise their social performance (Hull & Rothenberg, 2008). Corporate financial behaviour in the wake of recent corporate financial scandals (Al BDour et al, 2011; Guiling, 2013), and the Global Financial Crisis (Parma et al, 2010; Guiling, 2013), have heightened stakeholder awareness of Corporate Social Responsibility (CSR). How firms strategise and implement CSR may improve firm performance (Suprawan, 2011). CSR initiatives in developed countries, such as Australia, are expected to be particularly impactful due to the strong institutions, standards, and appeal systems (Mishra & Suar, 2010). Indeed, firms that display superior integration with the societies in which they operate may develop a sustainable competitive advantage (Porter & Krammer, 2006). However, the abundance of CSR definitions and related terminology has created uncertainty among both practitioners and academics as to how CSR should be defined, developed, and implemented (Dahlsrud, 2008). This research aims to test how CSR impacts firm performance in the Australian context. Specifically, how authentic CSR impacts the levels of Organisational Commitment (OC) of professionals and managers in Australia. To align with the strategic purpose, an authentic view of CSR is adopted in this research, based on McWilliams and Siegel’s (2001) definition of CSR: “...actions that appear to further some social good, beyond the interests of the firm and that which is required by law”, as characterised by ‘Social good’ actions that go beyond legal requirements, and are embedded in day-to-day operations (Suprawan, 2011). Presently, the impacts of firm CSR strategies and implementation on Australian employees are poorly understood. In academia, this research helps fill gaps in the literature around the impacts of CSR on employees. In practice, an improved understanding of how CSR can be strategised and implemented will aid management decision making, and may increase firm performance.
BRAND EFFECTS ON FIRMS’ PERFORMANCE BY INDUSTRY

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ABSTRACT

The purpose of this study is to make clear that each industry has different brand effects on firms’ performance. Keller (1998, 2008) proposed a theory of ‘Customer Based Brand Equity’ and suggested brand awareness, favorable brand association, and unique brand association as sources of the brand equity. Based on the theory, I selected as brand strength index, brand awareness ratio, favorability of brand ratio, and unique attractiveness of brand ratio from a survey called ‘Brand Japan’ published every year. This survey is conducted through internet and 50 brands are shown for each person. For each brand questions are asked if he/she knows the brand, if he/she likes the brand, and if he/she thinks that the brand has uniqueness which other brands don’t have. As firms’ performance, return on asset (operation profit divided by total asset) is used. I analyzed the two variables the brand strength and ROA by structural equation modeling (SEM). More concretely, two empirical studies are conducted; the first one is to compare the standardized regression coefficient between a group made of alcoholic drink and soft drink and a group of the other industries. It is proved that there is variance in the coefficient between the two groups, meaning that the group of alcoholic drink and soft drink has larger brand effects on firms’ performance than the other industries.

The second study is to compare 11 industries which have more than 60 samples from all the industries except bank, insurance, and securities. Non-manufacturing industries such as retail, wholesale, and service have high coefficient and larger brand effects on firms’ performance as shown below. This implies that firms in these industries should invest in brand building, particularly in unique brand association which affects firms’ performance.
ADOPTING INTERNATIONAL FINANCIAL REPORTING STANDARDS (IFRS) AS THE NATIONAL STANDARDS BY 2020: IS VIETNAM READY FOR THAT?

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ABSTRACT

This paper reports the findings of a survey on the perception of Vietnamese accountants regarding the benefits and disadvantages of IFRS as well as the potential costs and challenges of IFRS implementation. The paper examines the differences in the perceptions of accounting academics and practitioners pertaining to IFRS adoption in Vietnam. Although IFRS reporting was perceived as being costly and challenging, surprisingly, the respondents were optimistic on the long-term benefits and two-thirds of the respondents showed their willingness to adopt IFRS. This study is one of a few studies examining the perception of Vietnamese accountants and academics on this matter.
EARNINGS MANAGEMENT MOTIVES AND FIRM VALUE FOLLOWING MANDATORY IFRS ADOPTION – EVIDENCE FROM CANADIAN COMPANIES

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ABSTRACT

When Canada already has a set of well-established legal enforcement and investor protection mechanism to control earnings management; and the quality of Canadian GAAP is high, I examine if the accounting quality for Canada can still be improved since its adoption of IFRS mandatorily in 2011. The extant literature argues that IFRS adoption benefits firms domiciled in countries with strong legal and financial institutions. However, when the quality of IFRS is as good as the local standards for many Anglo-Saxon countries such as Canada, it is questionable for these countries to receive substantial economic consequences. Following the literature, I estimate a set of comprehensive measurements of earnings management as the proxies of accounting quality. Empirically, I document evidence that even though the results are mixed, there are still certain significant improvements in accounting quality. However, I find that firms issuing more equities are motivated to associate with lower earnings quality. Also, firms engaging in two distinct strategic directions (prospector vs. defender) have systemically dissimilar effects on earnings quality in IFRS adoption. Finally, I document evidence that firm value following IFRS adoption has been increased, but at the expense of lower accounting quality. Overall, my study shed some lights into the literature that accounting standards per se is not sufficient to ensure a uniform-level of accounting quality because firm-level earnings management motives are important factors too.
ABSTRACT

The purpose of this study is to investigate whether analysts’ forecasting behavior is affected by the potential conflict of interest (COI) and, in return, whether analysts’ forecasting behavior affects firms that may create the COI by awarding underwriting contracts.

Previous studies find that analysts forecast earnings more optimistically but inaccurately or recommend stocks more favorably when they face the COI (Dugar and Nathan 1995; Michaely and Womack 1999; Ljungqvist et al. 2006). In this paper, we extend this line of research by examining whether analysts are affected by the mere existence of potential COI and the magnitude of potential COI in their forecasting and, in return, whether firms intending to issue bonds are affected by analysts’ optimistic but inaccurate forecasting behavior in awarding underwriting contracts.

To answer our research questions, we analyze earnings forecasts for firms that issued bonds during the period of 2000 to 2008 in Korea. We use analysts’ forecasts for firms intending to issue bonds because most previous studies use stock issuing firms and inaccurate forecasts for bond issuing firms are expected to cost less for analysts (Watts and Zimmerman1991; Ljungqvist et al. 2006), which may provide an environment for analysts to forecast more aggressively than for stock issuing firms. Our results are as follows. First, analysts affiliated with security companies that become underwriters ex post issue more optimistic but less accurate forecasts for firms intending to issue bonds than other analysts for the same firms. Furthermore, the amount of bonds to be issued forces all analysts to issue more optimistic but less accurate forecasts in general, and analysts who become affiliated ex post issue more optimistic but less accurate forecasts for firms intending to issue a large amount of bonds than non-affiliated analysts. Second, firms intending to issue bonds are affected by analysts’ optimistic forecasts and are more likely to make underwriting contracts with security companies that have analysts who issue more optimistic but less accurate forecasts. The results of this paper imply that in their decision making, investors should discount to a greater extent the earnings forecasts for firms intending to issue bonds.
ABSTRACT

There are mixed findings on the relationship between corporate social responsibility (CSR) and firm performance. This study argues that this relationship is conditioned on whether firms incorporate their strategy (i.e., prospector vs. defender) into CSR activities. We use the largest 3,000 U.S. companies from 2003 to 2011 to examine our conjecture through different types of CSR (i.e., public vs. internal) that firms may undertake. Specifically, public CSR is likely to attract public attention and signal a company’s social responsibility, while internal CSR involves employees’ welfare and corporate governance, which are related to internal operations. Our findings show that prospectors engaging in public CSR can enjoy better financial performance than defenders that do the same. Conversely, defenders investing in internal CSR perform better than prospectors that do so. While we observe that undertaking internal socially irresponsible activities lowers defenders’ financial returns, these activities increase prospectors’ financial performance.
BOARD DIVERSITY AND CORPORATE DIVIDEND POLICY: DO FREE CASH FLOW AND OWNERSHIP CONCENTRATION MATTER?

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ABSTRACT

This study investigates the effect of board diversity in terms of gender and ethnicity on dividend payout policy when a firm has free cash flow agency problem. It also tests whether the probability of diverse boards would minimize free cash flow agency problem through making large dividend payments is more pronounced in firms with high ownership concentration. Our results differ with different measures of corporate dividend policy, and vary with the level of free cash flows and ownership concentration. More specifically, we find that the presence of women (ethnic Malays) on boards has a positive impact on dividend yield (dividend payout), and this effect is conditional upon the level of free cash flows generated by firms. Our results also show that the role of female and Malay directors in forcing controlling shareholders of firms with substantial free cash flows to cash out the firms’ resources through issuing higher dividend payments is more prominent when the firms’ ownership structure is concentrated in the hands of largest shareholders. Our findings, to some extent, support the government calls for increasing the number of women participation on corporate boardrooms and the participation of Malays in the corporate sector.
CORPORATE GOVERNANCE AND CORPORATE SOCIAL RESPONSIBILITY ASSURANCE: EVIDENCE FROM CHINA

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ABSTRACT

We investigate the association between corporate governance characteristics and the company’s Corporate Social Responsibility (CSR) assurance decision in the setting of the China market. By examining 2,054 firm-years of Chinese listed companies with CSR reports from 2009 to 2013, we find the evidence that a firm’s CSR assurance decision is positively and significantly associated with board size and female directors. However, there is no evidence that the board independence is significantly related to CSR assurance. With regarding to CSR assurance providers, boards with large size and more female directors are more likely to choose auditing profession as CSR assurance provider. Furthermore, in the Chinese setting, State-owned enterprises (SOEs) and Non-SOEs have different patterns in CSR assurance decision.
EARNINGS QUALITY FROM A MANAGEMENT PERSPECTIVE: FOCUSING ON A JAPAN-U.S. COMPARISON

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ABSTRACT

The purpose of this study is to identify the differences between CFOs’ views of earnings quality in the U.S. and Japan. Earnings quality depends on what objectives financial information users have and who these users are. I make a conjecture that in the U.S. accounting system it is assumed that accounting information, especially earnings information, is mainly for investors, and usefulness for investors’ decision-making is the most important factor in considering earnings quality because accounting information can contribute to improvement of discipline from the capital market. On the other hand, I speculate that in the Japanese accounting system it is assumed that accounting information is not only for investors, but also for other stakeholders for long-term relationships or transactions. It is difficult for firms to meet all the needs of accounting information from multiple stakeholders; therefore, they shed light mainly on stewardship. I show some evidence which support my conjectures. Firstly, U.S. firms put more emphasis on earnings information in normal situations than Japanese firms, therefore their motivations for managing earnings are stronger. In particular, executive compensation or subsequent career for top managers may promote earnings management. Secondly, U.S. firms shed more light on future-oriented, transparent, and neutral information, meanwhile Japanese firms focus more on persistent and prudent earnings. Thirdly, U.S. CFOs tend to believe that management professional judgment could improve earnings quality; meanwhile Japanese CFOs tend to think that detailed guidelines or rules improve it. Fourthly, U.S CFOs believe that capital market players and corporate governance, designed by perspectives for improving the disciplines from capital market, improve earnings quality, but Japanese CFOs don’t believe so. I conclude that the differences between the U.S. and Japan depend on whether a country puts more emphasis on a market-based corporate system or relation-based corporate system.
This paper shows the relation between ownership concentration structure and earning smoothness. Prior literature suggests that firms with disperse ownership have incentives to provide more information in an attempt to relieve investors’ concern on agency problems. With the view that earnings smoothing is conducted with the managerial intent to provide information on the firms’ underlying income stream, this paper shows that firms with disperse ownership structure provide a more smooth income stream for the purpose of alleviating investors’ concern over agency problems. This paper also finds that the relation between disperse ownership and earnings smoothness is stronger for the subsample of firm-years with large CEO ownership. This result is consistent with the reasoning that CEOs with large ownership are expected to have more influence on financial reporting policy, and also have more incentives to minimize investors’ discount.
INSTITUTIONAL OWNERSHIP AND EARNINGS OPACITY

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ABSTRACT

The level of earnings opacity in Indonesia is very high. One cause of the high earnings opacity of a country is concentrated ownership (Anderson et al. 2006; Anderson et al. 2009). Most of single majority shareholders in Indonesia are institutions, including government, bank, insurance, pension, and mutual fund, thus, it is assumed that each kind of single majority shareholders has different motivation towards corporate earnings opacity level. Therefore, the purpose of this study is to test the effect of institutional ownership on earnings opacity. Sample of this study consists of all firms listed on Indonesia Stock Exchange in 2009-2013. Regression analysis test hypothesis is used in this study. This study builds an index to measure earnings opacity. The findings suggest that: (1) the higher concentrated ownership by government tends to have greater earnings opacity (2) the higher concentrated ownership by bank tends to have greater earnings opacity (3) firms with concentrated ownership by pension fund tends to have higher earnings opacity (4) firms with concentrated ownership by mutual fund tends to have higher earnings opacity.
HOW DOES INVESTORS PERCEIVE ‘FRESH LOOK’ VS ‘POOR KNOWLEDGE’?  
~MANDATORY AUDIT FIRM ROTATION FROM SOUTH KOREA

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ABSTRACT

Although the implementation of mandatory audit firm rotation has been globally reopened, little is 
known about the relation between mandatory audit firm rotation and the perceptions of investors. The prior studies provide indirect evidences of the effects of audit firm tenure on audit quality/audit 
quality perception under conflicting arguments. By discussing these conflicting arguments and the 
current regulatory demand, we examine how investors perceive the implementation of mandatory 
audit firm rotation in South Korea.

Using a direct setting to examine our research question, we analyze the relation between firms with 
mandatorily switched audit firm and the implied cost of equity capital from 2006 to 2010. We find 
that, across all three specifications of the dependent variables (Price Earnings to Growth ratio, 
Modified Price Earnings to Growth ratio and Gode and Mohanram model), mandatorily switched 
firms have a significantly negative association with the implied cost of equity capital. These results 
are found to be robust using the arithmetic mean of the implied cost of equity capital. These results 
indicate that investors expect a lower ex-ante return from the firms switching audit 
firm mandatorily than from other firms. We infer that investors perceive mandatory audit firm 
rotation provide an environment to qualified audit through enhanced auditor independence and 
skepticism, the cost of equity capital thus is decreased. We expect that this study contributes to 
improve understanding of the impact of mandatory audit firm rotation on information risk 
evaluations and provides political implication to policy makers by presenting the benefit of 
mandatory audit firm rotation.
AN EXPERIMENTAL INVESTIGATION OF THE EFFECT ON THE INFLUENCE OF CLIENT EXPLANATIONS OF HAVING A FORMER AUDIT PARTNER AS CLIENT SENIOR FINANCIAL OFFICER

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ABSTRACT

A major concern of regulators is the potential impairment of independence of the external auditors. This has resulted in a number of regulations regarding the relationships of auditors and their clients. It is considered by some that these restrictions may have created a conflict between independence and expertise. Of particular concern in this paper are the restrictions on the employment of previous audit partners in a senior management capacity by a continuing audit client. This paper reports the results of a study that experimentally examined whether auditors are more likely to have their judgments influenced by/to accept client explanations when the client representative providing those explanations is a former audit partner of the auditor’s firm.

The participants were presented with a scenario in which they, as the current audit engagement partner, were asked to discuss with the client’s senior financial officer (CFO), the potential impairment of goodwill on the client’s financial statements. There was information pro and con the recognition of impairment, requiring the participant to exercise professional judgment. The identity of the client’s senior financial officer was manipulated to be either a former audit partner of the firm (FAP), a former audit partner of another firm, or an individual whose previous experience was not explicitly specified. The results of the experiment showed that when arguments for considering goodwill to be not impaired were provided by a FAP, the current audit engagement partner was more likely to accept them. The level of judgment confidence expressed by the participants was similar whether the explanation was provided by former audit partner of the same firm or a different firm, and both were higher than in the condition where the explanation was provided by a CFO who had no affiliation with the auditors or another audit firm.

The implications of these results for the issue of independence versus expertise are discussed.
ABSTRACT

This research aims to investigate the effect of controlling shareholders and the effectiveness of Board of Commissioners and Audit Committee to audit quality measured with AQMS (Audit Quality Metric Score). The results of this research provide evidence that alignment and entrenchment effect of controlling shareholders have positive effect on audit quality. The effectiveness of Board of Commissioners and Audit Committee provides positive effect on audit quality. For sensitivity analysis, by changing the tenure in AQMS to tenure regardless partner rotation, the result shows that the model is robust and provides consistent result.
THE ASYMMETRIC WEIGHTS ON TARGET’S ACCOUNTING INFORMATION IN M&A MARKET OVER BUSINESS CYCLE

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ABSTRACT

We examine whether acquirers place different weights on target’s accounting information upon M&A decisions over the business cycle. Prior studies reveal that target’s accounting information such as accounting multiples and accounting quality is useful in target selection and acquisition process by better estimating target’s information uncertainty behind its intrinsic values. Further, we hypothesize that acquirers seek to focus on different accounting information in details depending on economic states due to macro-economic risks while prior studies assume that acquirers deal with the information, regardless of economic conditions. Using a large sample of U.S. mergers from 1980 to 2012, we find that on the target selection stage, acquirers seek to profitable targets during economic expansion; however, they choose more stable targets during economic recession. On the acquisition process, acquirers give more weights on target’s accounting quality during the economic downturn than during the economic expansion, controlling for other accounting multiples. M&A deals with acquirers and high quality targets are more likely to be completed during the recession. Our findings suggest that acquirers seem to have more interests of the future growth potentials during the economic expansion while they rather seek to minimize any risks caused by the economic recession that affects M&A decision when they selecting targets. Similarly, on the acquisition process, acquirers relatively put more weights on accounting quality during the economic recession than the economic expansion in order to minimize the increased information uncertainty derived from the recession. Overall, we provide convincing evidence that not only target’s accounting information is useful for acquirer’s M&A decisions, but also, its relative weighting on target’s accounting information varies with the business cycles. Also, we find that the business cycle is an important determinant of M&A decisions.
VOLUNTARY DISCLOSURE OF ASSET REVALUATIONS: THE IMPACT OF THE QUALITY OF APPRAISALS

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ABSTRACT

Financial distress precipitated by the Global Financial Crisis of 2008 led many Korean firms to adopt a revaluation option for property, plant, and equipment. Although the financial impact of revaluations were substantial, many firms did not voluntarily disclose the results of revaluations on a timely basis. In this paper, we compare firms that voluntarily disclosed their revaluation results on a timely basis with those that did not until they issue financial statements. We find that firms are more likely to voluntarily disclose revaluations when they hire a big reputable appraisal firm and when they have a large amount of revaluation increments. We also observe a significantly positive market reaction around the voluntary disclosure of the revaluation results. The positive market reaction is mainly observed for firms that hired a big reputable appraisal firm, had a large amount of revaluation increments, and were under greater financial distress before revaluations.
TRADE UNION MEMBERSHIP AND VOLUNTARY EMPLOYEE RELATED DISCLOSURES

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ABSTRACT

Stakeholder theory is applied to examine the relation between employee related disclosures and trade union membership for Australian listed companies. We find that the quantity of employee related disclosures is associated with increased trade union representation. However, an analysis of categories disclosed indicates that higher trade union membership is associated with less disclosure of industrial relations and employee morale. Employee share ownership, adverse publicity regarding employees, employee concentration, more dispersed ownership and higher profit per employee are also associated with increased quantity of disclosure of employee related information.
DOES COMPARATIVE INFORMATION QUALITY DRIVE U.S. LISTED ADR CROSS-MARKET INFORMATION TRANSFERS: AN INVESTIGATION OF EMERGING MARKET ECONOMIES

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ABSTRACT

Level II and III ADRs permit issuers to be listed on the major U.S. exchanges with the stipulation that they comply with extensive SEC disclosure requirements. Foreign private issuers are compelled to file a set of audited financial statements prepared in accordance with U.S. GAAP, or alternatively, IFRS or Home Country Accounting Principles with attendant reconciliation to U.S. GAAP prior to 2008. Although the Form 20-F reconciliation is discontinued in 2008 for IFRS filers, non-U.S. issuers are required to satisfy other Form 20-F stipulations such as expanded Item 17 and Item 18 disclosures. We conjecture that non-U.S. firms choosing to be listed on the major U.S. exchanges will incur the added costs associated with the supplemental disclosure requirements in order to attract sufficient investor attention as to have the disclosures impounded in the home country equity share price in the manner described by Fishman and Hagerty (1989). Because a prominent attribute of ADR firms is that they benefit from multiple-market trading, we investigate whether the Form 20-F disclosure cross-market information transfers are associated with emerging market economy status. We employ models of the cross-market ADR and equity security share returns and trading volume controlling for the emerging economy status and incremental firm-specific SEC Form 20-F accounting principles disclosures. Preliminary results indicate that (1) U.S. listed ADR firms from emerging economies experience greater cross-market information transfers associated with the SEC Form 20-F filing, and (2) that the increased cross-market information transfers associated with the SEC Form 20-F filing are proportional to the difference in quality of accounting principles employed for home country reporting purposes vis-à-vis the accounting principles employed for SEC Form 20-F reporting purposes. Results are consistent with a feedback process through which the new information disclosed by the SEC Form 20-F reporting requirements in the ADR market attenuates the price discovery process in the home country equity market when the difference in information environment quality is large.
MARKET REACTION TO PREFERRED STOCK: FOCUSING ON ITS CHARACTERISTICS OF “EQUITY”

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ABSTRACT

This paper investigates the market reactions when firms issue various types of preferred stocks, which are distinguished based on whether the issuer adds stock conversion or cash redemption options to them. While in Europe and the USA there are accounting standards that indicate accounting treatment of some portions of preferred stocks that are considered similar to a liability, such as preferred stocks that have an added cash redemption option; no such accounting standards exist in Japan. The results of this research indicate that a positive return is observed when firms issue preferred stocks having an added stock conversion option, but no significant return is observed for preferred stocks having only an added cash redemption option. These results imply that there is a “bail out” role in issuing preferred stocks in Japan, which is different from their major usage in Europe and the USA. Further, the results also imply that there exist differences between preferred stocks with the added options, and those without.
THE IMPACT OF COST STICKINESS ON EARNINGS INFORMATIVENESS

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ABSTRACT

This paper examines whether sticky cost behavior reduces the information about future earnings reflected in current stock returns. Despite predicting cost behavior is essential part of earnings prediction (Weiss 2010), the effects of cost stickiness on the information environment are nearly unknown. Thus we investigate whether the FERC which indicates the informativeness of realized earnings about future earnings varies with the degree of cost stickiness. We posit that cost stickiness negatively affects the association between current stock returns and future earnings. Consistent with our hypothesis, we find that firms with greater cost stickiness have lower FERC and this negative effect of current sticky cost behavior on the FERC persist over at least future two-years of aggregation period of earnings. These findings indicate that sticky cost behavior reduces the information of two-year-ahead earnings reflected in current stock price. That is, this implies that investors do not view sticky cost behavior as the rational decision making of managers. We also find that the negative relationship between cost stickiness and the FERC is more pronounced when firms’ asset or employee intensity is low. These results support our main argument that sticky cost behavior exacerbates the informativeness of earnings because firms with low asset or employee intensity bear relatively lower adjustment cost. Our study provides evidence on the effect of sticky cost behavior on the informativeness of accounting earnings.
THE MARKET UNDervaluation OF EQUITY: THE CASE OF MALAYSIAN LISTED PROPERTY DEVELOPERS

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ABSTRACT

The market value of Property Companies is said to be fundamentally represented by their underlying net asset value (Adams & Venmore-Rowland 1990). However, the share price of listed property companies (LPCs) in Malaysia, for the most part, are found to be undervalued at an average of 34% below their net asset value (Lau 2013). Such undervaluation or discount to net asset value (NAV) questions the viability of NAV as a fundamental basis of property company valuation and leads us seek answers to the causes of Share Price Discount to NAV. In this study, a model is established to test the likely causes using a combination of variables that are common to the property industry financial operational environment. The findings conclude that the value added performance of the Malaysian LPCs play a role in the discount of share price to NAV. The findings imply that accuracy and reliability in the financial data are vital in sustaining the market value of listed property companies. In addition, listed property companies in Malaysia facing poor performance in return to equity shareholders could consider creating sustainable shareholder value through improvement in value chain activities.
DETERMINANTS OF FAMILY FLOWS IN AUSTRALIAN SUPERANNUATION INDUSTRY

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ABSTRACT

This study examines the determinants of superannuation family flows, with a focus on the effect of marketing expense. Superannuation funds differ significantly from managed funds both in terms of investor attributes and the investment decision process. I measure flows using the actual decision making measure, member-nominated transfers, to examine those investors who have ‘made a choice’ at fund family level. The use of family-level analysis is more consistent with the superannuation fund industry structure and the investor decision-making process. Preliminary results indicate that the return-chasing behaviour commonly found in managed funds research does not exist in the superannuation context. But investors do punish bad performers by withdrawing investments. In addition, marketing plays an important role in attracting investors from other superannuation fund families.
ABSTRACT

The public sector has a key role to play in enhancing the local goods and services. The Government is fully aware of the fact that Vietnam needs a proper public sector as a product of the state’s public policy, which provides high-quality and well-functioning educational, healthcare or social security systems through the effective management and use of public funds. These services should be needed investments onto them for getting the objectives set by the official organizations as well as Vietnam does. Furthermore, Vietnam is in the stage of improving its economy, adopting market economy mechanisms, and integrating into the world economy. So, Vietnam should change investment environment and make the advantages for accounting of using state budget. This paper aims to introduce the content of law on public investments in Vietnam and it will be effect on the year 2015. It employs an overview of this law and investigates the role of public investment on infrastructure on economic performance for the case of Vietnam. Moreover results suggest that there may be some effects to public sector accounting in Vietnam, particular on some aspects related with administration and non-business accounting. This study compares between the 2015 law with accounting in governmental tasks organizations in some aspects for clearly clarification. The results demonstrated three aspects of transparency, bookkeeping and expense for investment in public sector.
AFS VERSUS FVTOCI: TWINS OR SIBLINGS?

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ABSTRACT

AFS or available-for-sale securities and FVTOCI or fair value through other comprehensive income have several similar characteristics that users may presume they are the same in accounting. Both require fair value measurement and recognition of changes in fair value in other comprehensive income (OCI). AFS is introduced in IAS 39, whereas FVTOCI securities have recently been finalized and published in IFRS 9 to be effective on January 1, 2018.

The purpose of this paper is to delineate the differences between AFS and FVTOCI for both debt and equity securities. The analyses of these two classifications between the two standards are made on classification and measurement, impairment, and hedge accounting. The findings of this study indicate that some of AFS Securities may not meet the criteria for FVTOCI Securities classification and may end up in amortized cost. Impairment loss is an overhaul from IAS 39; expected loss rather than incurred loss is applied in IFRS 9 for FVTOCI Securities. While both standards consider hedge accounting as optional, IFRS 9 widens the choices of hedging instruments and is more principle based. Lastly, the study sheds light on the necessity of revisiting management of regulatory capital in the banking industry.
THE CONCEPT OF CONTROL IN IFRS 15 – REVENUE FROM CONTRACTS WITH CUSTOMERS: UNDERSTANDING ITS IMPLICATIONS

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ABSTRACT

In May 2014, the FASB and the IASB jointly published the long awaited revenue standard IFRS 15 – Revenue from Contracts with Customers. IFRS 15 serves as the only converged standard between the boards to date, and is expected to overcome the deficiencies of the current revenue standards that were developed separately by the boards. The new revenue standard introduces a five-step revenue recognition approach and prescribes that revenue is to be recognized when control of the goods or services sold is passed to the customer. The concept of control is expected to bring practical changes to certain industries on the timing of revenue recognition. However, this concept is new to most constituents, especially accounting educators. This paper provides an overview of how the concept of control evolved in the course of the development of the standard, and the practical issues associated with the implementation of this new concept.
BANKRUPTCY PREDICTION USING INDUSTRY-SPECIFIC VARIABLES

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ABSTRACT

This paper will set a precedent in Business Failure Prediction (BFP) modelling by testing for the validity of industry-specific variables using various statistical methods. An analysis of financial ratios for the Australian marketplace using a number of variables for an experiment data-set that includes hundreds of existing and bankrupt businesses across five sectors observed over a 12 month period from 2013-2014. Tests are carried out across different parametric and nonparametric techniques to predict potential business bankruptcies. The paper will also compare the accuracy of models using industry-specific variables vis-à-vis traditional models containing a predefined set of variables. There are many gains from the study, including tailoring models to each industry – hence increasing the predictability success rate, and the potential to aid the economy as a whole not to fall into a recession or slump as a result of increased business failure.
THE ROLE OF FINANCIAL REPORTING IN CORPORATE POLITICAL STRATEGY

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ABSTRACT

This paper examines the interaction between financial reporting and corporate political activity. We establish a model where accounting has an explicit role in policymaking as the socially optimal policy depends on a firm’s financial situation which can be assessed using accounting information. We distinguish between generic and information-based lobbying as two separate but interdependent means of exerting political influence. We endogenously derive the credibility of information-based lobbying from the dual use of financial reports by political decision-makers and the capital market. We furthermore endogenously derive different categories of policy salience and show that they lead to different corporate political activities and different reporting strategies. We find that a change in the effectiveness of generic lobbying influences reporting strategies for high policy salience issues but not for low salience issues. We also find that the possibility to manipulate financial reports influences the marginal benefits of lobbying. It increases them for both high and low salience policies but decreases them for medium-low salience policies. Optimal lobbying therefore interacts with the accounting infrastructure which determines the extent of reporting bias. Finally, we find that an increase in the effectiveness of generic lobbying decreases the financial contribution firms would be willing to make in order to gain access to a political decision maker for low to medium salience policies but has no effect for high salience issues.
FEMALE EXECUTIVES AND DISCRETIONARY ACCRUALS: THE KOREAN EVIDENCE

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ABSTRACT

Recently, many countries have made efforts to increase the participation of female executives in firms’ decision-making, in order to utilize their female talent. Researchers have been providing positive evidence in support of the benefits of employing female executives, with respect to firm performance and earnings quality, but thus far their studies have been limited to the United States. Considering the culture differences between the United States and other countries, whether female executives contribute to corporate governance is not clear. In this study, we investigate the association between the presence of female executives and discretionary accruals in order to generalize the effect of female executives on firms’ financial and accounting decisions. Consistent with prior results, we find that female executives help make corporate decisions by lowering the earnings discretion. This study contributes to generalizing the impact of gender diversity on financial reporting practices by showing the existence of female executives in Korea, whose culture is vastly different from that of the United States.
DO FOREIGN OWNERSHIP AND CORPORATE GOVERNANCE MECHANISM REDUCE INFORMATION ASYMMETRY?

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ABSTRACT

This research aimed to examine the influence of foreign ownership and Corporate Governance (CG) mechanism on information asymmetry of Indonesian listed companies. GCG mechanism variable consists of Corporate Governance Perception Index (CGPI), size of board commissioner and proportion of independent commissioner. The result shows that the foreign ownership and CGPI affect information asymmetry negatively, which means that these two variables effectively reduce information asymmetry. Higher foreign ownership creates bigger pressure for management to disclose more and therefore reduce information asymmetry. Firms with higher CGPI score are more willing to be more transparent and therefore disclose more, which later reduce information asymmetry. Meanwhile, board of commissioner size and proportion of independent commissioner do not any influence on information asymmetry. In can be interpreted that the board of commissioner size and independence do not represent the effectiveness of monitoring mechanism. Result of this study is very important for an emerging country like Indonesia that needs to identify factor to strengthen its capital market. A reduction in information asymmetry may lead to higher stock liquidity and lower cost of equity capital. It can be obtained by attracting foreign investors and encouraging listed firms to enhance their CG mechanism effectiveness.
INTRODUCING TEAM-BASED LEARNING (TBL) INTO INTRODUCTORY ACCOUNTING COURSES

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ABSTRACT

There is considerable evidence, both anecdotal and from a large body of research, suggesting a significant proportion of students have a negative perception of introductory financial accounting subjects (Warren & Young, 2012). This study examines the perceptions and expectations of students in introductory accounting courses, and in particular, their perceptions of team-based learning (TBL) as a key pedagogical component of their learning activities. Students are organised into permanent strategic teams for the whole semester to work on multiple group activities. The aim is to create a cooperative learning environment to improve learning via development of self-managed learning teams (Johnson & Johnson, 1999; Michaelsen, Bauman Knight, & Fink, 2002; Opdecam & Everaert, 2012). Cooperative learning is based on the concept of small groups working together to achieve a common goal, mastery of a concept, solve a problem or accomplish an academic task such as a report or assignment.

TBL requires instructors to adopt a new pedagogical approach and create an environment which places more emphasis on teaching the skills and strategies to better engage and equip students for professional life. Whilst the core knowledge areas of the introductory accounting programs are determined by the professional bodies and thus the learning outcomes must be aligned with these, significant modifications can be made to the delivery and assessment of the program. TBL facilitates ‘flipping’ the classroom where there is the requirement for students to prepare themselves for class by studying the assigned readings from designated sources. The instructor is then able to focus on delivering the content at a higher level and facilitating team activities. This shifts the instructor’s role from one of primarily dispensing information to facilitating student learning. The students’ role changes from one of passive recipients of information to one of accepting responsibility for their learning by being prepared for in-class activities (Michaelsen, 2008). This paper discusses the essential key elements for successful implementation of TBL and use of web based technologies for feedback, assessment and evaluation to enhance TBL outcomes.
USE OF SOCIAL MEDIA BY UNIVERSITY ACCOUNTING STUDENTS AND ITS IMPACT ON LEARNING OUTCOMES

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ABSTRACT

The proliferation in the use of social media, such as Facebook and Twitter, among university students is well documented. With many universities providing student resources in formats suitable for IPad, laptop and mobile phone use, the use of social media for university activities has also become easier. This study explores the use of social media by University Accounting Students to support their academic activities. It also explores the impact these media have on learning outcomes. Findings suggest that university accounting students use social media for a number of academic related purposes. Furthermore, the use of such media is significantly associated with student’s grades.
STAKEHOLDER INVOLVEMENT AND INSTITUTIONAL RESPONSE IN VIETNAMESE ACCOUNTING EDUCATION

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ABSTRACT

To date there are only few papers that address the current state of accounting education in Vietnam. Prior research into Vietnamese Higher Education Institutions (HEI) suggest that despite the development of mass higher education, the quality is deteriorating and the market and the society is losing trust in the ability of universities to produce qualified and skilled graduates. In response, the state, particularly the Ministry of Education and Training (MoET), is reinforcing accountability mechanisms while granting some level of institutional autonomy to these HEIs. However, it is unclear how this reform affects the quality of accounting education. Furthermore, there is little research on the involvement of external stakeholders, particularly professional bodies and accounting firms, in influencing graduate competencies through contributing to accounting programs. This study contributes to the literature by explicitly investigating the involvement of different stakeholders in accounting education within Vietnamese universities. We conduct 17 interviews with representatives from Ministry of Education and Training (MoET) and Ministry of Finance (MoF), the line ministry responsible for accounting/finance-related institutions, professional bodies and accounting firms and university administrators and accounting academics from a leading Vietnamese university.

The findings suggest that MoET, and the parent university, only regulates and supervises an overall curriculum framework but has granted substantial independence to universities, in particular in developing and approving accounting programs. In contrast, MoF has little regulatory authority and only participates in accounting education at university level through a consultative role. There is a strong role of external guidance in accounting education, as external stakeholders such as accounting firms and other employers are extensively consulted with in the assessment, development and modification of accounting curriculum and specific courses. Accounting firms play a more active role than professional bodies in influencing accounting education, with the latter organising various activities to engage with both accounting students and academics, though their access to university/school’s top management is limited. University administrators exercises their given autonomy by undertaking various policies and controls to improve teaching quality and better cater to the changing labour market needs. However, the effectiveness of the controls, especially teaching evaluation, is constrained due to no integration of evaluation results to promotion or reward decisions. Academics enjoy substantial discretion in designing and delivering accounting courses but there is a lack of opportunity for collegial decision-making process or individual academics’ contribution to systematic changes in accounting programs. Overall, our study suggests that accounting education in Vietnam is driven by growing institutional autonomy combined with increasing external guidance and reduced state control. However, accounting education quality still depends on the piecemeal efforts of individual academics due to the absence or low effectiveness of system-wide policies and controls that motivate improvements in teaching quality. Our findings enable regulators and decision-makers to better understand the dynamics between stakeholders in accounting education and in developing policies to enhance accounting graduates’ competencies and outcomes.
THE EFFECT OF AUDITOR QUALITY AND LEGISLATIVE OVERSIGHT ON
THE FOLLOW-UP OF AUDIT RECOMMENDATION AND AUDIT
FINDINGS/OPINION

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ABSTRACT

The purpose of this study is to analyze direct and mediating effect of auditor quality and legislative oversight on the follow-up of audit recommendations and audit findings/opinion. This study uses Indonesia’s local governments’ financial statement from 2010-2012. The empirical test result shows that there is a direct effect between auditor quality and legislative oversight on the follow-up of audit recommendations, as well as indirect effect on audit findings/opinion. High quality auditor is able to produce high quality recommendations that can be easily followed by the audited entity. Strong legislative oversight encourages closer monitoring over local government financial management so that local governments more committed to following up the audit recommendation. The higher the audit recommendations are acted upon, the better the quality of local government financial statements as shown by decrease in audit findings and higher probability to achieve unqualified audit opinion.
AUDIT FEES AND REMEDIATION OF INTERNAL CONTROL WEAKNESSES: EVIDENCE FROM JAPANESE LISTED COMPANIES

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ABSTRACT

In Japan, the financial instruments and exchange act, published in June, 2006, requires the management of listed companies to assess internal control over financial reporting and the assessment must be audited by certified public accountants from the fiscal year starting on April 1, 2008. Because of the requirement on practical guideline when assessing and auditing internal control over financial reporting, the final report of “On the Setting of the Standards and Practice Standards for Management Assessment and Audit concerning Internal Control over Financial Reporting (Council Opinions)” (Council Opinions of 2007) was released by the Business Accounting Council (BAC) on February 15, 2007. The Financial Instruments and Exchange Act together with the Council Opinions of 2007 are also called J-SOX. The basic structure of J-SOX is almost the same as Sarbanes-Oxley Act of 2002 in the United States (US-SOX).

Prior studies indicate that companies that remediated the internal control weaknesses disclosed under US-SOX have lower audit fees when compared with companies that continue to disclose internal control weaknesses, and also show that the remediation of internal control problems disclosed under US-SOX may not be fully impounded in audit fees in the year of remediation. In this paper, I examine the relation between audit fees and the remediation of internal control weaknesses disclosed under J-SOX. To the best of my knowledge, this is the first time to study the relationship between audit fees and the remediation of internal control weaknesses in Japan. The findings in this paper will help us to understand whether and how audit effort and/or audit fees are sensitive to internal control problems in Japanese audit practice.

I find that companies that remediated the internal control weaknesses have lower audit fees when compared with companies that did not remediate the internal control problems in Japan. However, companies that disclosed the internal control weaknesses in the first year and remediated the internal control problems in the second year also continue to pay higher audit fees in the second year when compared with companies that did not disclose internal control problems in the first year in Japan. Thus, these findings suggest that audit fees tend to be “sticky” for companies disclosing the internal control weaknesses in Japan, and also indicate that the auditors’ response to the internal control weaknesses disclosed under J-SOX is the same as under US-SOX. Further research can be expected to examine that how many years are necessary before the remediating companies are treated on par with companies that haven’t disclosed internal control weaknesses under J-SOX?
AUDIT REGULATION AS DISCOURSE: UNDERSTANDING STANDARD SETTING USING THE THEORY OF COMMUNICATIVE ACTION

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ABSTRACT

The processes through which regulatory institutions of auditing emerge remain under-researched although audit regulation has received significant research and policy attention over the last four decades. This study examines public comments of respondents from 40 countries on the exposure draft for the setting of International Auditing Standard (ISA) 701 on Key Audit Matter (KAM) reporting using the theory of communicative action (TCA) as a lens. The standard introduces a dramatic regulatory change to audit reporting by requiring disclosures on the hitherto “black box” of the audit process to enhance transparency on client-specific audit risk factors, and areas of significant judgement in financial reporting. Regression results show that preparers expressed reservations on the KAM reporting model whereas auditors, users and national standard setters welcome it. Further in-depth qualitative analysis of the comments and the pattern of differences in views of respondents using TCA show that discourse centred on communicative rationality of audit reporting drove the development of ISA 701. Implications of the results for understanding of auditing regulation more generally and the potential of TCA for future research in auditing regulation are discussed.
ARRANGEMENT OF FINANCIAL POSITION AND VALUE RELEVANCE

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ABSTRACT

Korean companies have used the current arrangement method (CAM) when they present the statement of financial position. Under the International Financial Reporting Standards (IFRS), however, they are allowed to select either CAM or the non-current arrangement method (NCAM). 156 samples (9.74%) among 1,602 manufacturing firms adopted NCAM after IFRS was mandatorily applied in 2011. We address two research questions motivated by the arrangement method of the financial position. Firstly, we analyze the characteristics of the companies adopting NCAM. Those companies are characterized by high percentage of non-current assets in the total assets, low debt ratio, and significantly low risk of bankruptcy. The results indicate that NCAM companies emphasize the relative advantage of information on their financial position by use of the presentation order. Secondly, we examine whether differential value relevance exists by the arrangement method. We find that the value of shareholders’ equity or non-current assets of NCAM companies is more relevant than that of firms using CAM is. The results indicate that information users are affected by the presentation order of the statement of financial position.
ACCOUNTING GOODWILL AND COST OF CAPITAL

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ABSTRACT

This study shed light the unknown economic effects of the capitalization of goodwill by focusing the relation between goodwill and cost of capital. Prior literature about the economic impact of capitalizing goodwill have focused on the value relevance of goodwill, or the relation between goodwill and shareholder value, and find there is a positive relation between goodwill and shareholder value, which means goodwill is value-relevant. Unlike these prior studies, I focus on the cost of capital, and find that there exists a positive relation between goodwill and cost of capital even after controlling already known risk factors including market beta, book-to-market ratio, firm size, and price momentum. This result implies that larger goodwill amounts lead to higher information asymmetry, and in consequence, higher cost of capital. This paper could have implications for equity investment decision. According to the findings of this research, investors could view accounting goodwill as another risk factor. Therefore, you could be required to take into account for goodwill when you estimate the firm’s cost of capital for corporate valuation.
ACCRUALS QUALITY AND DISCLOSURE QUALITY: EVIDENCE FROM INDONESIA

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ABSTRACT

This study aims to see whether the information risk, which is proxied by accruals quality and the disclosure quality, affects asset prices, resulting in cross-sectional differences in firms’ required returns. This study also examines the association between accruals quality and the disclosure quality. Using a sample of firms in non-financial industries listed in the Indonesia Stock Exchange from 2006-2012, asset pricing tests using Fama-French (1993) Three Factors Model, this study shows that both accruals quality factor and disclosure quality factor significantly explain the time series variation in portfolios’ excess returns. This finding indicates investors incorporate information risk in determining their expected returns. This study also provides evidence of a positive association between the accrual quality and disclosure quality which implies firms with higher quality of accruals will provide extensive disclosure to reduce risk compensation demanded by investors.
ABSTRACT

Two issues are investigated herein, using Japanese data: (1) the relationship between corporate governance and voluntary adoption of International Financial Reporting Standards (IFRS), and (2) market reactions to announcements of such an adoption of IFRS. Prior studies suggest that the economic benefits of IFRS adoption are limited to countries with strong enforcement of laws and regulations, generating concerns as to whether IFRS adoption would bring the intended benefits in Japan. Based on a probit model, we find that the probability of voluntary IFRS adoption is higher for the firms that are younger, larger, less leveraged, audited by a Big 4 audit firm, and have a higher foreign shareholders ratio. This result is consistent with the notion that firms that have greater incentives to provide more switching information tend to choose voluntary adoption of IFRS. In addition, an event study shows that stock prices of the firms that announce their adoption of IFRS tend to increase compared to other firms that have a similar probability of IFRS adoption, except for the firms switching from the U.S. GAAP to IFRS. Our results show that voluntary IFRS adoption is positively evaluated in Japan in that the country has transformed its economic and business environment over the past few decades.
DETERMINANTS OF EARNINGS QUALITY FOR THE UAE BANKS

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ABSTRACT

Purpose - The purpose of this study is to investigate the determinants of earnings quality for the UAE banks over the period 2005-2009.

Design/methodology/approach – Multiple regression analysis is used to test the relationship between the earnings quality as a dependent variable and certain independent variables.

Findings – Results indicate that the variables of global financial crisis, market structure, investment in IT systems, Inflation, bank risk and bank profitability have significant impact on earnings quality of the UAE banks but intellectual capital performance and bank size have not.

Research Limitations: More evidence is needed on the determinants of earnings quality before any generalisation of the results can be made. In addition, empirical tests were conducted only on UAE banks over the period 2005 to 2009 and hence the results of the study cannot be assumed to extend beyond this group of banks or to different study periods.

Practical implications – The study might attract the attention of the banking regulators to the factors which might influence earnings quality and hence be able to guide the banks to maximise their performance in this context.

Originality/value – This study adds to the literature on the determinants of earnings quality in banks. In particular, it tests the newly introduced theory that global financial crisis has impact on earnings quality.
EXTRAORDINARY LOSS EFFECTS ON MANAGEMENT FORECASTS: EVIDENCE FROM JAPANESE FIRMS

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ABSTRACT

Listed firms in Japan are mandated to provide management forecasts of earnings at the beginning of each fiscal year. Previous studies report that managers tend to provide optimistic forecasts and found systematic bias factors. The purpose of this study is to further investigate management bias by examining the effect of extraordinary losses on management forecasts. This study uses 26,087 firm-year samples of listed firms in Japan from 2003 to 2014. This paper found that managers, saddled with past extraordinary losses, provide optimistic management bias. Specifically, additional analysis find manager’s forecast behavior within a same fiscal year. The finding suggested managers initially expect a business recovery after recording an extraordinary loss, then provide overly optimistic forecasts, yet then revise their forecast downward for the same period, and finally fail to achieve their forecasted profits. This paper will contribute to the further understanding of management bias from an extraordinary loss view, a rarely-studied area of management bias.
ABSTRACT

Our study examines the drivers of tight budgetary control in carbon management in the context of a climate change regulation. Using the setting of New Zealand ETS, our study specifically explores how organisations subject to this ETS manage their carbon performance using carbon-focused budgetary control. Based on a survey to 185 New Zealand organisations, including both those with and those without an ETS compliance obligations, our results suggest that institutional pressures, perceived importance of carbon issues, and the level of integration of carbon issues in strategic and operational processes are the most significant drivers of tight carbon-focused budgetary control. The insights gained from our study can make a worthwhile contribution to the academic literature, least in the provision of the perceived use and value of carbon management accounting.
EXAMINATION OF CORPORATE SOCIAL RESPONSIBILITY DISCLOSURE OF
INDONESIAN LISTED FIRMS

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ABSTRACT

The aim of this study is to examine the CSR disclosure of listed firms in Indonesia. Based on CSR disclosure in sustainability report and annual report of 45 samples for year 2012 and 2013, we find that the level of disclosure is about 60% based on guidance issued by GRI. From three indicators (Economic, Environmental, and Social), Economic indicators have highest disclosure index, followed by Social, and Environmental is the least. This finding is not surprising given that regulators in Indonesia has not mandated listed firms to disclose CSR activities in accordance with GRI indicators. OJK as capital market regulator do require listed firms to disclose its CSR activities in annual report. However, it do not state what specific information to disclose, which guidance should be followed, and do not require firms to issued stands-alone sustainability report. We also find that all firms are more inclined to disclose positive information. Several of firms do disclose non-positive information in neutral manner.
PROFITABILITY VS SUSTAINABILITY OF FISHERY BUSINESS IN KOTA KUPANG, INDONESIA: A VALUE CHAIN APPROACH

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ABSTRACT

There are 3 actors of fishery business in Kota Kupang, they are big companies, and local fishermen, and andon fishermen, that is, fishermen who come from other islands, which most of them are financially supported by big financing companies. Recent years, there are conflicts raised up between andon fishermen and local fishermen. As a consequence, an ‘instant business, has taken place which results in unsustainable business practise of marine sector in Kota Kupang. This study aims to provide a brief description of profit gained by each actors through the value chain approach in one hand; and to point out potential impacts of this conflict regarding sustainability in another hand. To understand the situation clearly, profitability ratios were used to measure profits gained by actors based on the value chain map as provided by Kabu (2015). This study shows that andon fishermen which financed by big companies/exporter gained higher profit compared to local fishermen. Since local fisherman are only survive in caughting pelagic fish with a tiny profits, and at the same time there has been a tight competition among actors within the value chain, it has put them to start doing ‘instant business’ which lead to practise of unsustainable business of marine sector in Kota Kupang, Indonesia. It is then recommended that government’s regulation and policy regarding andon fishermen should be revised through establishment of a mutual cooperation between big companies and local fishermen.
INTERNATIONAL ACCOUNTING INFLUENCES ON CHINA: THE RISE AND FALL

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ABSTRACT

Purpose – This study aims to investigate how international institutions such as the International Accounting Standards Board (IASB), International Monetary Fund (IMF), World Trade Organisation (WTO), Big 4 accounting firms, western professional accounting bodies, and multinational enterprises, influence the development of the Chinese accounting profession. Of interest in particular, is China’s response to the expansion of western institutions and professional accounting bodies into China.

Design/methodology/approach – A qualitative research approach is employed. Data is collected using semi-structured interviews and document analysis. Twenty-nine interviews were conducted with key actors, including Ministry of Finance officials, key personnel from China’s professional accounting body Chinese Institute of Certified Public Accountants (CICPA), professional accountants and accounting academics.

Findings – The study finds evidence for a high degree of international coercion in China’s decision to converge towards International Financial Reporting Standards (IFRSs). There is also evidence that China has opened up its accounting service industry due to coercive influences from international institutions. Further, all three mechanisms of institutional isomorphism are found to have made an impact on the development of the Chinese accounting profession.

Originality/value – There has been much research on the imperialistic influence of former British colonies and the extended influences of United Kingdom (UK) accounting professional bodies on developing countries. The present study extends this literature by illustrating how international institutions influence the development of a large emerging economy’s accounting profession. Through the lens of institutional isomorphism, the results of this study will help to better understand the isomorphic changes in China’s accounting profession.
This paper reports an exploratory study of accounting practitioners’ and banking professionals’ perceptions on convergence to IFRS in India. The study uses a neo-institutional theory perspective to explain IFRS adoption in the Indian context. The study finds that the driver for India’s decision to converge to IFRS is ‘coercive pressure’ through continuous, intended or unintended economic ties between India and the rest of the world, particularly with respect to international capital inflows. As India is a large and growing economy with distinct socio-cultural features, the findings of this study could provide some insights to global issues regarding the adoption of IFRS.
ABSTRACT

Purpose: This paper aims to investigate the impact of organizational culture on the choice and development of Management Accounting and Control (MAC) practices in the United Arab Emirates (UAE).

Design/methodology/approach: Data were collected using a self-administered survey of companies operating in the UAE. Multiple regression analysis (ordinary least squares) was implemented to test the study hypotheses. Several robustness checks were conducted to ensure reliability of results.

Findings: Empirical results showed that the organizational culture, together with some firm-specific characteristics, had significant impact on the choice and development of MAC practices in the UAE business environment. Both high adhocracy (adaptive organization) and low hierarchy organizational cultures are required for the implementation of advanced MAC practices.

Originality/value: This paper provides more understanding of the internal mechanism underlying MAC practice selection in the UAE, and provides useful guidelines for domestic and international corporate managers and other stakeholders.
MODELLING THE INFLUENCE OF CEO VALUES AND LEADERSHIP STYLES ON FINANCIAL DECISION MAKING

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ABSTRACT

The influence of CEO values on financial decision-making has been questioned in relation to many high profile corporate failures. These values act as lenses, or filters that determine the amount and type of information that leaders process, with the personal values of CEOs being among the most influential leader characteristics. Values affect behavior in that they encourage individuals to act in accordance with them. To this end, instrumental values have a direct impact on CEO perceptions and behaviors, which in turn play a role in molding organizational characteristics.

It has also been recognized that organizational and broader contextual forces affect individual behavior. Thus, if the moral reasoning level of CEOs were to be evaluated, then it may be possible to assess the extent to which these external pressures influence the making of financial decisions. Furthermore, it is the leadership style adopted by CEOs that provides the means by which they communicate and display the values they hold. If the CEOs can pass their values on to their followers and achieve value congruence then the outcome of improved financial decision-making is more likely to be achieved.

This paper postulates that this triumvirate of values, moral reasoning and leadership style influence the financial decision making of CEOs. Building on a discussion of the literature, this paper presents a model that identifies the importance of each of these three components and the relationship they have to financial decision-making in the organization.
THE EFFECTS OF CORPORATE SOCIAL RESPONSIBILITY INPUT ON VALUATION AND ACCOUNTING QUALITY – BIOTECHNOLOGY AND MEDICAL INDUSTRIES

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ABSTRACT

This paper examines the effects of the corporate social responsibility input on company’s valuation and accounting quality by using the samples of biotechnology and medical industries. After considering the interaction term between the accounting quality and corporate social responsibility, this paper further examine whether the companies which input higher corporate social responsibility will not be wrong valuation from the market. The findings show that the companies with a higher corporate social responsibility, their stock prices are less likely to be under-priced by the market. The companies with higher prior period’s corporate social responsibility have better current period’s accounting quality. After controlling for the interaction between accounting quality and corporate social responsibility, the companies which input higher corporate social responsibility at current and lagged-one periods are less likely to be under-valuation by the market.
LEGAL ORIGIN AND CAPITAL MARKET DEVELOPMENT

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ABSTRACT

The relationship of the legal system of a country to investor protection and capital market development has been recognized as Legal Origin Theory in the literature. Though Legal Origin Theory is gaining popularity, some scholars are skeptical about the effect of legal origin on the economic development of a country. This paper empirically tests Legal Origin Theory using data from 142 countries. The novelty of the study is that although past studies empirically show the effect of legal origin on economic development of a county, they do not show how the legal system is linked to minority investor protection. Empirical identification of the mediating link strengthens support for Legal Origin Theory and suggests that a country draw on the legal origin route to provide protection for minority investors.
CROSS-COUNTRY DIFFERENCES IN THE APPLICATION OF IFRS – EVIDENCE FROM FAIR VALUE MEASUREMENT

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ABSTRACT

This paper analyses cultural differences in the application of International Financial Reporting Standards. Comparability is crucial for financial reporting standards, and especially for a set of standards that is intended to be applied globally. Inconsistent application of IFRS across jurisdictions can substantially impair comparability and can have adverse effects on capital markets. Despite the growing practical relevance of fair value accounting, current cross-cultural research mainly addresses cultural differences in relation to the interpretation of vague terms used in standards. The effect of culture on the application of accounting measurements is largely unexploited. We use quantitative data from 316 students enrolled in accounting and finance courses to explore cultural differences in the application of fair value measurements under IFRS 13 in a scenario focusing on investment property. The results provide evidence to suggest that differences between cultural country clusters exist. These differences seem to be grounded in different value patterns and can be explained partially by cultural dimensions. The findings are of interest to preparers, users and auditors of IFRS financial statements alike by increasing awareness of the interaction between cultural differences and application of IFRS. The findings are also informative to accounting standard-setters themselves, who might consider additional guidance to better cope with this interaction.
THE DETERMINANTS OF PERFORMANCE IN CHINA: A STUDY FOCUSED ON CULTURAL AND INSTITUTIONAL DRIVERS IN THE AREA OF SHANGHAI

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ABSTRACT

We base our work on an historical study and on interviews of Chinese managers living in the area of Shanghai. We use the institutional theoretical stream in combination with the impact of national culture, considering that organizations and managers are influenced by cultural and institutional determinants. In a first part, we describe the theoretical background to the research and our method. Then, in a second part, we present the significant cultural and institutional features of China that enable us to justify several hypotheses about our topic. In a third part, we analyze twelve in-depth interviews, trying to answer our research question. Our basic research question focuses on what “Performance” means for Chinese managers. Behind the word and its different meanings (economic, global, social), we analyze the cultural and institutional backgrounds of the managers interviewed. We end by drawing several conclusions, some of them quite non-intuitive. We show the disappearance of Confucian values behind a combination of pragmatism, and interpersonal relations. In this context, the perception of Performance would be subjective and the expression of institutional and cultural components of Chinese society. We believe that it is relevant for managers coming from Western cultures to have an understanding of this context when doing business in China.
THE EFFECTS OF NATIONALITY ON MANAGEMENT CONTROLS AS A PACKAGE

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ABSTRACT

The purpose of this study is to investigate what effects a nationality of the CEO of a foreign subsidiary has on management controls exerted by the headquarters of the multi-national companies (MNCs). The difference in the CEO’s nationality is one of important research issues concerning management controls in the cross-border hierarchical relationship between foreign subsidiaries and the headquarters. Furthermore, based on a current trend that many MNCs use various management controls over their foreign subsidiaries in order to balance competing factors such as localization vs. global efficiency, we propose a conceptual model of a management control package exerted by the headquarters. In particular, this study has two questions for empirical testing with a survey data. One is what type of controls form the package, the other is which ones out of the package are tightened or loosened; tightness of each control.

Our data were collected in 2013 as a part of a larger questionnaire study on foreign subsidiary management in Japanese MNCs. The target population is all Japanese firms operating overseas. Of the 5,410 questionnaires distributed, 659 were returned (12.18%), leaving 613 complete responses. Following the rigorous analysis method, we compared the latent means of management control constructs across the national different groups. The findings based on the results are as follows. First, Japanese MNCs are likely to develop a control package consisting of the four management controls; installing philosophy, involvement in planning, process control, and output control, regardless of the CEO’s nationality. Second, we find that the difference in the nationality influences the tightness of each management control within a package. Specifically, the mean of the output control in PCN (parent-country national) is lower than in HCN (host-country national), and the mean of installing philosophy in PCN is higher than in HCN.

In this presentation, based on our results, we will show some contributions of this study to the relevant literature and suggest directions for future research.
PERCEIVED PEER PRESSURE AND AUDIT QUALITY: EVIDENCE FROM CHINA

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ABSTRACT

This study empirically investigates the effect of perceived peer pressure via a dual audit with an international audit firm on the audit quality of a non-Big N domestic auditor. The results suggest that the audit quality of a domestic auditor in a dual audit with an unaffiliated international non-Big N auditor is higher than the audit quality of a domestic auditor without such a pressure. The audit quality is higher for a domestic auditor involved in a dual audit with an unaffiliated international non-Big N auditor than an affiliated international non-Big N auditor. Further, the audit quality for a domestic auditor involved in a dual audit with an international Big N auditor is higher than one working with an international non-Big N auditor. Overall, our study provides evidence that perceived peer pressure improves the audit quality of domestic auditors.
EFFECTS OF PROFESSIONAL SKEPTICISM TRAITS AND ORGANIZATIONAL CULTURE ON ASSESSMENT OF RISK OF MATERIAL MISSTATEMENT

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ABSTRACT

Our study investigates the effects of professional skepticism traits and culture on auditors’ assessment of risk of material misstatement. We also examine the potential moderating effects of culture on the relationship between professional skepticism trait and assessment of risk of material misstatement. This study focuses on two specific aspects of culture, in-group collectivism and power distance. We conduct a survey involving 393 auditors from three countries; Malaysia, Indonesia and Jordan. Professional skepticism traits are measured using professional skepticism scale developed by Hurtt (2010). In line with our expectation, we find that professional skepticism (as a whole) is positively related to auditors’ assessment of the risk of material misstatement. We also find that four out of six of the skepticism traits in Hurtt (2010) are positively related to the assessment of the risk of material misstatement. The four traits are; questioning mind, searching for knowledge, self-confidence and self-determining. Our findings indicate that only in-group collectivism is positively related to auditors’ assessment of risk of material misstatement. In-group collectivism also moderates the relationship between professional skepticism and auditors’ assessment of risk of material misstatement. Unlike in group collectivism, there is no significant relationship between power distance and auditors’ risk assessment. The interaction between power distance and professional skepticism in influencing auditors’ assessment of risk of material misstatement is insignificant. Except for a marginal moderation effect of in-group collectivism on the relationship between self-confidence and assessment of risk of material misstatement, none of other interaction involving specific skepticism traits is significant.
EMPIRICAL STUDY ON THE DISCLOSURE OF REASONS FOR AUDITOR SWITCHING: EVIDENCE FROM JAPAN

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ABSTRACT

This study investigates the relationship between the context of auditor switching and the reasons for the switch provided in the extraordinary reports, which constitute one of the most distinctive characteristics of the auditor switching institution in Japan. The results of the empirical analysis indicate that the firms that switched from Big N to non-Big N auditors as well as the firms that received going-concern opinions just before auditor switching tended to provide “expiration of auditors’ term of office” as the reason for the switch in the extraordinary reports. Additionally, this study empirically examines whether the reasons provided in the extraordinary reports affect investment behavior. Using cumulative abnormal returns, this study demonstrates that there are no significant market reactions to the reasons for auditor switching. Thus, it can be concluded that the disclosure system related to the reasons for auditor switching may not be useful for investors.
THE ROLE OF FINANCIAL STATEMENT COMPARABILITY IN THE RELATIONSHIP BETWEEN THE LEVEL OF IFRS ADOPTION AND INVESTORS’ HOME BIAS

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ABSTRACT

This study aims to examine the indirect effect of the IFRS adoption in reducing the investors’ home bias through the improvement of comparability of financial statements. The decrease in investors’ home bias is indicated by the increase in foreign institutional investors’ ownership. This study employs listed companies in 18 countries across Europe, Asia, Africa, and Australia with observation period between 2003 and 2012. Unlike previous studies, this study uses a continuous variable to measure the level of IFRS adoption which is measured at country level. This study includes countries that do not fully adopt the IFRS, partially adopt, make some delays in adoption or some modifications to IFRS. The results show that the level of IFRS adoption has positive effect on the comparability of financial statements. The level of IFRS adoption indirectly reduces investors’ home bias through the comparability of financial statements. These results are consistent with proponents for IFRS adoption which argue that the adoption improves the comparability of financial statements that in turn attracts greater cross-border investment.
MARKET PRICING ACCRUAL AND CASH FLOW COMPONENTS IN INDONESIA

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ABSTRACT

This research aims to know whether market pricing accrual and cash flow components, particularly cash flow from investments and cash flow from financing. Research sample was taken from 116 listed companies in Indonesian Stock Exchange from 2005 to 2011.

Cumulative return was estimated to accrual and cash flow components underlining cash flow from investment and cash flow from financing using OLS regression. We find that market prices cash flow from investment consistent with theory, but not cash flow from financing. Our result different from Livnat and Zarown (1990) and Ryan et al (2006) in describing association between security return to cash from investment activity.
AIG CASE: REVENUE PRINCIPLE, & CONSISTENCY CONVENTION

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ABSTRACT

This case study involves American International Group (AIG), one of the world’s leading international insurance and financial services organization. Violation of GAAP (generally accepted accounting principles) and misleading public regarding earnings of AIG is the focus of this paper.

Since 1998 AIG has been accused of presenting its earnings in a deceptive way. They have used more than one definition of earnings, switching back and forth among those definitions many times. These switches improved the appearance of AIG’s growth rate and made decline in earnings seem like increases. After 9/11 unfortunate terrorist attack, AIG started using a pro-forma method it called “core earnings” method which excluded underwriting losses related to the World Trade Center attack. In the next four quarters AIG made at least three more switches in the method it used to come up with its earnings figures. It seems that AIG has violated at least three important GAAP principles: Revenue Principle, Disclosure Principle, and Consistency Principle. Furthermore, the case still is not closed. In Aug. 13, 2015, the former CEO of AIG, Maurice “Hank” Greenberg alleged the U.S. government violated the Fifth Amendment of the Constitution after taking control of AIG through his firm Star International. This seems to be continuation of his bringing suit against U.S. Government in 2011, arguing that federal officials acted illegally in the initial $85 billion bailout.
FAIR VALUE VS. HISTORICAL COST ACCOUNTING MEASUREMENTS FOR REPORTING NON-FINANCIAL ASSETS: DOES FAIR VALUE ACCOUNTING MEASUREMENT PRODUCE HIGHER FINANCIAL REPORTING QUALITY?

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ABSTRACT

There is a dissonance between the views of the corporate community and accounting standards setters in regards to fair value accounting. According to the recent research, the corporate community has limited support for fair value accounting and prefers conservative accounting which is mostly based on the historical information. However, the standards setters are in favor of fair value accounting. They argue that fair value measurements in financial statements produces information that is more relevant to external users than historical cost information. The objective of this research is to determine if fair value accounting measurement produces higher financial reporting quality for reporting non-financial assets as the standard setters claim. Since the European firms could switch from depreciated historical cost (HC) to fair value (FV), following mandatory IFRS adoption in Europe on January 1, 2005, it provides a good groundwork to measure financial reporting quality of two sets of firms that has not been done in prior literature. This paper will be a valuable addition to earlier published financial accounting works and literature by investigating whether fair value accounting measurement produces higher financial reporting quality. I will determine the quality and the relevance of the fair value accounting of non-financial assets by analyzing the financial reporting quality measurements: earnings quality which is the ability of reported earnings to predict firm’s future earnings/relevance and value-relevance. Based on the recent studies, there are three categories of proxies of earnings quality: (1) properties of earnings, (2) investors responsiveness to earnings, and (3) external indicators of earnings misstatements. I focus on the first category and use “unexplained audit fees” (UAF) as a proxy of earnings quality where larger values of the residual indicate lower financial reporting quality. The results show significantly higher average UAF of HC firms than that of FV firms over the nine years from 2005 to 2013, which suggests that FV firms have a higher financial reporting quality than HC firms. However, the above finding is not supported when earnings persistence is used as another proxy for earnings quality.
THE VALUE RELEVANCE OF LOAN LOSS PROVISIONS

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ABSTRACT

This study examines the value relevance of loan loss provisions (LLP). Prior studies find that banks' discretionary LLP (DLLP) are perceived positively by the market and attribute this to greater LLP signaling to investors the soundness of the bank. However, these studies are based on data from the pre-Basel era when LLP increased Tier 1 capital and thus had positive implications. I focus on the post-Basel period in which LLP does not affect Tier 1 capital and apply a better specified model to test for the value relevance of loan loss provisions. I find that DLLP is not value relevant in the post-Basel period. This result is consistent throughout the recent financial crisis, which is contrary to Ryan’s (2011) conjecture that DLLP may be valued positively during economic downturn. In addition, LLP and non-discretionary LLP (NLLP) are perceived negatively by the market. I also show that findings in the long-window value relevance test still hold in the short-window market reaction test. Overall, in the post-Basel period, DLLP provides no value relevant information whereas NLLP conveys value relevant information incremental to earnings.
IMPACT OF FAIR VALUE MEASUREMENTS ON CORPORATE INVESTMENTS: EVIDENCE FROM JAPAN

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ABSTRACT

Fair value measurement (FVM) has been the subject of significant criticism for its pro-cyclical effect, especially during the financial crisis. In this study, we extend the concept to business firms and explore whether and how FVM affects corporate investments. Specifically, we use other comprehensive income (OCI) as an aggregated metric of fair value adjustments and regard these as potential financing constraints on investments. In a sample of Japanese listed firms, we find that negative OCI in particular, negative OCI on foreign currency translations results in lower capital investments. Moreover, we indicate that a decline in foreign currency translations is more likely to inhibit firms’ over-investments than to encourage under-investments. Overall, our findings suggest that FVM provides timely and useful information to managers in terms of their decision-making.
ARE DEPRECIATIONS FIXED COSTS? THEIR VARIABILITY AND STICKINESS IN SHORT AND LONG TERMS

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ABSTRACT

The cost structure of variable and fixed costs is an essential concept in cost and management accounting. The typical example of fixed costs in textbooks is depreciation. The purpose of this study is to empirically confirm the cost behavior of depreciation in short and long terms. The elasticity of depreciation on sales change is used to measure its variability in different time horizons. This paper used the depreciations for manufacturing as well as non-manufacturing activities data from the income statements and footnotes to comprehensively analyze depreciation behaviors. The variability of depreciations gets bigger as time horizon gets longer as expected. Depreciations behave like fixed costs with sales change in short term but they show mixed behavior in longer terms. The capital intensity decreases depreciation variability for short-term sales change and increases it for long-term sales change. The capital intensity increases the stickiness of depreciation only in one-year horizon.
THE INFLUENCE OF ECONOMIC (IR) RATIONALITY AND MANAGERIALISM ON LATE 20TH CENTURY PUBLIC SECTOR REFORMS

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ABSTRACT

The Australian Commonwealth public service has undergone a number of financial and non-financial reforms since the 1980s in an effort to improve its operations and service delivery through a focus on the guiding principles of efficiency and effectiveness. This paper explores the influence of economic rationalism and managerialism on the reform agenda of the Australian public sector. The key finding from this research is that the influence of economic rationalism and managerial has led to the adoption and implementation of various reforms which should be reviewed, at best, as rationalised myths implemented to increase the legitimacy of the public sector.
THE EFFECT OF INTERNAL CONTROL MATERIAL WEAKNESSES ON EXECUTIVE EQUITY INCENTIVES AND CORPORATE RISK-TAKING

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ABSTRACT

Prior studies take different approaches to assess the costs and benefits of SOX Section 404 internal control requirement. In this study we examine how CEO equity incentives and firms’ risk-taking behavior are influenced by the material weaknesses in internal controls. We find that the disclosure of the material weaknesses is negatively associated with vega and delta of CEO compensation, suggesting that firms with adverse SOX 404 opinions reduce equity incentives to discourage the CEO from taking excessive risks. In addition, we find that after controlling for the effect of equity incentives on risk-taking, firms receiving adverse SOX 404 opinions have less R&D and capital investments. Our empirical results are robust to controlling for the endogeneity of internal control quality as well as the selection bias.
TRANSLATION CHALLENGES AND TERMINOLOGY PROBLEMS IN
FINANCIAL REPORTING: THE CASE OF ESTONIA

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ABSTRACT

The Estonian accounting regulation has a short history compared to several other European countries. From the last 800 years, Estonia has been under foreign (Danish, Polish, Swedish, Russian, Soviet) rule for about 750 years. This has heavily influenced the Estonian accounting system: accounting has been directed by foreign authorities and organized based on foreign guidelines. After the incorporation Estonia into the USSR in 1940, and in fact after World War II during 50 years the Soviet influence on accounting development was total. In the Soviet Union, the purpose of accounting had been declared as the provision of control for the safeguarding of socialist property and control over the fulfillment of state plans. Politicization of the theory and methodology of accounting and the strict regulation and centralization of financial accounting characterized Soviet accounting. One of the main characteristics of Soviet accounting system was the absence of accounting theory due to political repressions. Another important characteristic of Soviet accounting (it would be more accurate to say Soviet bookkeeping) was usage of undefined terms.

Although accounting in the USSR, as in Western countries, fulfilled the role of stewardship, the difference in the nature of the economic system led to a difference in the determination of accounting priorities and accounting techniques. Transition from command economy to market economy was accompanying with several new terms and definitions based largely on concepts which have been (and still remain) unknown and nameless in Estonia. This cause a lack of equivalence of terminology between languages.

After restoration of independence, the IFRSs were chosen as basis of financial reporting in Estonia. Translation of terms is one of the main concerns when translating professional texts like IFRS. The primary goal of this paper is to examine the translation of five fundamental accounting terms (asset, liability, owner’s equity, income and expense) and the definitions behind of them. Our research shows that the main characteristics of the Estonian accounting terms and definitions are ill use of words and incorrect wordings. The problematics of translating IFRS are illustrated and discussed through examples from the translation from English to Estonian. For comparative purposes, IFRS terminology and the terms of Estonian legal acts are used. The authors of the current paper aim to find out the main differences and examine their origins and causes as well as problems that have arisen. In our paper, we consider the use of language in accounting rather than accounting as a language.
INFLUENCE OF BOURDIEU’S ‘HABITUS’ ON INVESTMENT DECISION MAKING: A LOCAL GOVERNMENT PERSPECTIVE

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ABSTRACT

NSW Local councils managed to lose over $350 million investing in Collaterised Debt Obligations (CDOs). This paper demonstrates that the habitus (Bourdieu 1977) of the councils played an important role in whether finance officers within councils chose to invest in CDOs or not. While Bourdieu proposes that habitus, fields and capital all play an important role in practice, this paper confines the analysis to the field of individual local councils and the capital of the players constrained within that field. The purpose of this was to demonstrate the importance of habitus on the financial investment decision making process within Local Councils. Where losses had been previously incurred and the habitus of the councils reinforced the idea of being custodians of public monies there was a significantly reduced likelihood of the councils choosing to invest in CDOs. Alternatively where high risk investments had been successful and the habitus of the councils encouraged pursuing high investment returns council officers were more likely to have participated in higher risk investments such as CDOs.
THE LONG-TERM EFFECT OF MERGERS: A SURVIVAL ANALYSIS OF JAPANESE BIG BUSINESSES

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ABSTRACT

In this paper, I will investigate the long-term effect of mergers by using the empirical data of Japanese big businesses after World War II. Existing studies have examined the effect of mergers by using firm value, profitability, or growth rate, but they have failed to find the explicit evidence of the positive effect of mergers on acquirers. In this paper, I investigated the reason, and proposed the new approach to analyze the effect of mergers, i.e. the effect on firms’ survival. Then I conduct an empirical analysis on the data of 1,831 Japanese firms for the years between 1949 and 2005. As a result, I find that mergers had a positive effect on a firm’s survival, but this effect disappeared from late 1990s. The implication of these findings is discussed.
CORPORATE GOVERNANCE DISCLOSURES IN THE NEW ZEALAND AGRICULTURAL COMPANIES

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ABSTRACT

Livestock, agriculture, and horticulture products are essential in the New Zealand economic sustainable development. Consequently performance and governance of active companies in these areas of business are constantly monitored by the public through legislators, stock market, government agencies, and media. Practically corporate governance disclosures are providing essential information for such monitoring and analysis. This paper intention includes critically evaluate corporate governance disclosures of agriculture companies. Implementation of the content analysis methodology enables this research project to present analysis of the level of compliance with the 2004 Corporate Governance Principles and Guidelines that put forwarded by the New Zealand Stock Exchange (NZX) in the compile or explain environment. The results reveal that corporate governance guidelines are not fully understood by agricultural companies. Listed agricultural companies provide inadequate corporate governance related disclosure and their non-listed counterpart are providing even less disclosure in this area. The financial and governance reports of these companies are suffering from deficient transparency in the area of corporate governance.
DISCLOSURE INFORMATION, PRESS COVERAGE, AND THEIR INFLUENCE ON MARKET LIQUIDITY: EVIDENCE FROM JAPAN

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ABSTRACT

We explore how daily information influences measures for market liquidity in terms of information asymmetry and investor recognition by utilizing unique data sets at a daily level from corporate disclosures and media coverage in Japan. Through these analyses, we conclude that information inflows affect two conventional metrics for liquidity, bid-ask spread and depth, via differential mechanisms. Specifically, our chief finding suggests that information gleaned from both corporate disclosures and mass media outlets induce a wider spread. This finding reinforces the notion that public information flows increase information asymmetries among investors, and as a result, enlarge the adverse selection risk premium that liquidity providers require. In addition, we found a positive relationship between media coverage and depth, indicating that mass media distributes corporate information for the broad public and enhances investors’ recognition. Finally, a cross-sectional comparison shows that opaque informational environments around firms, proxied by analyst coverage and management forecasts, significantly exacerbate the spread-widening effect of disclosure information arrivals.
SRI FUND FIRMS AND EARNINGS QUALITY

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ABSTRACT

As socially-responsible investing (SRI) funds have attracted interests of the capital market-participants, the SRI funds or the firms that issued the stocks included in the funds have been found to show good financial performances. This study examined the “earnings information quality” of the firms (namely, SRI firms) whose stocks have been selected into the SRI funds. CSR (corporate social responsibility) activities are socially desirable, and the SRI firms are expected to carry out their social responsibility. Therefore, this study investigates whether the managers of a company, who are seeking to enlist their company stock in SRI funds, would have a strong motivation for earnings management (thus, low information quality) when CSR firms are performing well in the capital market and when the corporate earnings are an important factor to be considered in selecting the company as an SRI firm. In order to answer these questions, the study empirically tested a formulated hypothesis based on a sample of more than two thousand year-firms, whose stocks were included in SRI funds during the years from 2007 to 2011 (SRI funds were launched in the Korean market, mainly from the year), and the discretionary accruals, the measurement for earnings information quality, was estimated by applying with the modified Jones and Kothari models. This study found that SRI firms showed higher information quality, compared to the non-SRI fund firms. The evidence implies that SRI firms appear to be interested in a long-term profitability rather than the short-term managed earnings level.
ACTIVITY-BASED COSTING AS AN ALTERNATIVE TOOL IN DETERMINING SUBIDIZED FARES OF PT PELAYARAN NASIONAL INDONESIA (PERSERO)

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ABSTRACT

This research is aimed to evaluate base fare by ABC to because each route is served by passenger vessels belonging PT. PELNI require different resources. This research was conducted by qualitative approach with a single case study through exploratory research strategy. The vessels that became the research object were two ships with 4 route network, ie K.M Leuser, route Tanjung Priok to Pontianak and Surabaya to Sampit and K.M Kelud, route Tanjung Priok to Batam and Batam to Belawan. The data used in this research was the data in 2011 due to determine fare in 2012. Data were gathered by semi-structured interviews to the informant that were five informants, and documentation by first doing a preliminary survey to the research site. This research used Miles and Huberman analysis techniques as a means of data analysis techniques. Analysis results showed cost of passenger by mile all routes that chosen by traditional costing systems higher than ABC calculation. Thus, the subsidy that had been provided by the government to PT. PELNI is not appropriate. Therefore, ABC may provide subsidy calculation more accurate.
EFFECT OF IFRS ADOPTION ON CORPORATE STRATEGY AND
PERFORMANCE MEASUREMENT: EMPIRICAL EVIDENCE OF JAPANESE
MANUFACTURING COMPANIES

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ABSTRACT

The International Financial Reporting Standards (IFRS) are becoming the leading principles
and a special driver for the convergence of financial and management accounting in over 110
countries. The purpose of this study is to examine the impact of the adoption of IFRS on
management accounting. More specifically, this study investigates the differences in the
importance of strategy goals, and financial and nonfinancial measures that have changed after
its adoption. The results of a questionnaire survey conducted on Japanese manufacturing
companies indicate that the effects of respondent firms provide with management accounting
practices and techniques before and after the adoption of IFRS. My findings suggest that there
seem to be considerable differences in the importance of strategy goals, and financial and
nonfinancial measures before and after IFRS adoption.
SHARED FINANCIAL INTEREST, FAIRNESS, AND HONESTY IN BUDGET REPORTING

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ABSTRACT

This study uses two experiments to investigate the honesty of manager’s budget reports when the financial benefit resulting from budgetary slack is shared by the manager and other non-reporting employees and when managers consider the fairness of budget participation. Drawing on moral disengagement theory, I predict that the shared financial interest in slack creation makes misreporting more self-justifiable to the manager and, therefore, leads to lower honesty. Consistent with my prediction, the result of first experiment show that managers report less honestly when the benefit of slack is shared than when it is not shared, regardless of whether others are aware of the misreporting.

The second experiment investigates whether the fairness concern will affect the honesty of manager’s budget reports in all condition as in first experiment. The result of second experiment confirming that fairness concern effects the honesty of manager’s budget reports when the financial benefit resulting from budgetary slack is shared and when others are aware of the misreporting.
HOW DO INDUSTRY SPECIALIST AUDITORS IMPROVE AUDIT QUALITY?
EVIDENCE FROM NEW AUDIT HOUR BREAKDOWN DISCLOSURE FROM KOREA

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ABSTRACT

From 2014 fiscal year, Korean auditors are required to provide audit hour breakdown disclosure by engagement partners, auditors, staffs and other experts. Exploiting this dataset, we examine how industry specialist auditors improve audit quality. We provide the following three findings: (1) industry specialist audit firms’ engagement partners, auditors, staffs and other experts with spending more time charge audit fee premium, (2) audit quality, proxied by performance adjusted abnormal accruals, is improved when industry specialist audit firms’ partners and auditors spend more time, but not when they are staffs or other experts. These results suggest that industry specialist auditors improve audit quality by their audit efforts and industry knowledge.
THE EFFECTS OF THE MANDATORY AUDIT PARTNER ROTATION ON AUDIT QUALITY IN KOREA: FOCUSED ON THE IMPACT OF REGULATORY CHANGE

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ABSTRACT

This study explores whether Korea’s mandatory audit partner rotation regime is effective in improving audit quality. Korea reformed the External Audit Act in 2009 to include a 3-yearcooling-off period provision in the mandatory audit partner rotation regime while abolishing mandatory audit firm rotation. This additional 3-year cooling-off period, to existing audit partner rotation, is deemed to have been introduced to mitigate negative effects on audit quality, if any, to abolish mandatory audit firm rotation.

This study tries to explore the effects of the current mandatory audit partner rotation rule on audit quality for the period right before rotation and right after rotation -- when it was reinforced by the 3-year cooling-off provision -- respectively. This is expected to work strictly the year before rotation, because the audit partners are on their third year of auditing a client, which they knew would be their last year of auditing before rotation. Hence, they would like to "clean-up" any significant errors or misstatements in the financial statements for which they are responsible before finishing their tenure.

Moreover, it tries to explore whether the regulatory changes in mandatory audit partner rotation have any impacts on its effectiveness, specifically in the recent years after the introduction of the 3-year cooling-off provision. The 3-year cooling-off regime is also expected to work on the quality of audit because partners could genuinely rotate in the 3-year cooling-off period.

Because of the difficulty in measuring audit quality directly, this study uses discretionary accruals (DA, henceforth) as an alternative. Based on the review of related literature, utilization of DA for earnings management is restricted by high quality audit.

Results show that in the year right before the implementation of the mandatory audit partner rotation, DA was significantly reduced, which is the evidence of higher audit quality. The rotated partners knew that the period before the rotation would be their last year to audit, and so they would not be allowed to get involved in the auditing process in the succeeding years. Hence, they did their best to clean up any errors or misstatements that they made as best as they could, so that it would remain unnoticed in the succeeding auditing processes, wherein they would no longer be involved.

However in the year right after the rotation, such phenomena was not observed which was not surprising because of the new partner's lack of knowledge, a result of an overshadowing positive effects of an increased independence.

Also, by comparing before and after the regulatory change, it turned out that the regulatory changes, specifically the 3-year cooling-off system, has positive impacts on the audit partner quality. That is, results show that the 3-year cooling-off provision helps to improve audit quality as a result of reinforced partner rotation. In addition, comparison of the effects of partner rotations between mandatory and voluntary do provide justification of the current mandatory partner rotation regime. Results also show that mandatory has more positive effects on audit quality than voluntary.

This study has made contributions academically because it proves, for the first time, the effects of the current mandatory audit partner rotation system on audit quality, and the positive impact of the 3-year cooling-off provision on the effectiveness of the partner rotation system. Despite that it is too early to generalize, this study has its implications on both regulatory bodies – who consider enforcing partner rotation regulation in the future – and those who put them in place at present.
IMPACT OF ABNORMAL AUDIT FEE TO AUDIT QUALITY: INDONESIAN CASE STUDY

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ABSTRACT

This study investigates the economic bonding between auditor and client by examining the association between abnormal audit fee and audit quality with Indonesian setting where there is high audit market competition and strong client bargaining power because of regulation on mandatory audit firm rotation. Using a sample of 126 firm-year observations for the period from 2012 to 2013, we separate abnormal audit fees into positive and negative components to better capture the different economic effects of the two fee constructs on audit quality. Our empirical results demonstrate that positive abnormal audit fees are negatively associated with audit quality and imply that the audit fee premium is a significant indicator of compromised auditor independence due to economic auditor–client bonding. Audit fee discounts due to the high bargaining power of clients also could increase audit quality. This result is likely due to the mandatory rotation of audit firm and audit market competition is high, so that the auditor must keep their independency and high audit quality to maintain good reputation.
This paper makes the case for the greater regulation of auditors. It argues that the courts are too sympathetic to the use of disclaimers to escape liability to investors, individual shareholders and third parties. The approach is to review the relevant court cases which established the concept of “opinions” and disclaimers as a means of protection and argue for greater recognition of the wider impact of the audit role.

The paper finds that the best explanation as to why auditors use disclaimers is Social Darwinism. The application of professional ethics as adumbrated in various codes is not relevant to this practice.

The paper is original in that it draws on a recent (2015) court case involving the audit firm Grant Thornton. Its value is that it argues for greater state audit regulation. The grounds being that adherence to legal form ignores the substance of the wider implications involved. As it is state regulation of auditors is largely a form of licensing to limit competition.
AUDITOR REAPPOINTMENT AND RELATED PARTY TRANSACTIONS: CROSS-COUNTRY EVIDENCE FROM EAST ASIA

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ABSTRACT

We investigate the association between auditor reappointment in short or long tenure and firm’s engagement in related-party transactions (RPTs) of four countries in East Asia. Using a hand-collected sample of 423 listed companies comprising 1,220 firm-year observations from Hong Kong, Malaysia, Singapore and Thailand during 2008-2010, we find that firms that reappoint auditor in short-tenure have significant and negative association with firms’ engagement in RPTs. In contrast, we find the auditor reappointment in long tenure extensively increase firms’ engagement in RPTs. Additionally, we find further evidence suggesting that a long tenure auditor reappointment among Big 4 audit firms plays an effective monitoring role by reducing firm’s engagement in RPTs. Based on a sub-sample of RPTs’ firms that consist of 783 firm-year observations, we find the results for auditor reappointment in short or long tenure relationships are consistent with the whole observations. However, the Big 4 auditor reappointment in lengthy tenure substantially encourages firms engages in RPTs. We also find the auditor reappointment in long tenure, including Big 4 increases firm’s engagement in different types of RPTs except for RP complex derived from all observations. We find that reappointment of the auditor in short-tenure increase firm's involvement in RPTs Inflows, but the magnitude of RPTs Inflows reduces as the tenure of auditor reappointment become longer. In contrast, magnitude of RPTs Outflows decrease when the auditor is reappointed in short tenure but the magnitude of RPTs outflows substantially increases when the relationship between the auditor-client become longer (close). The reappointment of Big 4 audit firms in long tenure increase firms’ engagement in RPTs Inflows but reduce magnitude of RPTs Outflows. In overall, these results are consistent in the conflict of interest view, which the reappointment of the auditor in long tenure relationship reflects a likelihood of close relationship between auditor and client that lead to opportunistic wealth expropriation.
WHOSE AUDIT QUALITY IS HIGHER: BIG FOUR VERSUS MID-TIER FIRMS? EMPIRICAL EVIDENCE FROM INDONESIA

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ABSTRACT

Our study is based on a rapid growth of the Mid-tier audit firms in Indonesia recently. Is audit quality of Mid-tier firms equal to Big 4 firms? Audit quality is measured by the tendency of the Big 4 and Mid-tier firms to issue going-concern opinion, and by the reporting accuracy of the going-concern opinion issued. By using 1,057 firm-year observations from 2004-2011, we found evidence that the Big 4 firms have a lower tendency to issue going-concern opinion than the Mid-tier firms. Further, by using 928 firm-years from 2004-2010, we found that the Big 4 firms and Mid-tier firms do not differ in their reporting accuracy. We conclude that the audit quality of Mid-tier firms is considerable equal to the Big 4 firms. Our results suggest that Mid-tier audit firms may be considered as an alternative of higher audit quality in addition to the Big 4 firms. Our findings are robust after considering the sensitivity tests we have done.
AN EMPIRICAL STUDY OF THE CHARACTERISTICS OF COMPANIES DELISTING THROUGH A MANAGEMENT BUYOUT IN JAPAN

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ABSTRACT

In Japan, the number of companies voluntarily going private has increased over the past several years through management buy-outs (MBO). This study aims to shed light on the effects of MBO by examining Japanese companies. An analysis is conducted of their shares prices at the time of the MBO announcements, their financial characteristics, and the factors behind the delistings. In this study, data is collected between 2000 and 2012 on 68 cases of MBO in Japan. The characteristics of MBO companies in Japan that differ from those identified in earlier research conducted overseas are also clarified.
THE DARK SIDE OF DELEGATION OF DECISION RIGHTS: THE INFLUENCE OF DISPLACEMENT OF RESPONSIBILITY AND INCENTIVE-BASED COMPENSATION SCHEME ON MISREPORTING

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ABSTRACT

This paper examines the dark side effect of delegation of decision rights on employees’ misreporting, relying on the fraud triangle which consists of three factors, namely, incentive, opportunity and rationalization. We employ a firm’s incentive-based compensation scheme as the incentive element, employees’ delegation of decision rights as the opportunity element, and displacement of responsibility as the rationalization element for the fraud triangle. An online survey method was conducted involving 136 middle-level managers from US manufacturing firms. Partial least squares (PLS) approach was used to assess the psychometric properties of the theoretical model and proposed hypotheses. Data analysis was conducted using WarpPLS Version 5.0. Our results show that the opportunity element of the fraud triangle (i.e., delegation of decision rights) provides employees the opportunity to engage in misreporting. Our results reveal that the rationalization element of fraud triangle (i.e., displacement of responsibility) exacerbates employees’ motive to engage in unethical behavior. Our results, however, show that there is no evident of the direct effect of incentive-based compensation scheme on employees’ misreporting. Instead, the effect of incentive-based compensation scheme on employees’ reporting is indirect through (1) delegation of decision rights, and (2) displacement of responsibility. Our findings have important implications related to the design of effective management control systems or de-biasing techniques to curtail or deter employees to engage in unethical behaviors (i.e., misreporting).
A MULTIPLE-STAKEHOLDER PERSPECTIVE ON BANK PERFORMANCE MEASUREMENT

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ABSTRACT

The dominance of financial ratios used by market analysts and the absence of a more holistic approach to evaluating bank performance motivates this study. The primary objective of the article is to illustrate how to develop a multiple stakeholder perspective (MSP) on a common set of financial ratios using a cross-country survey and reflect this information in a single comparative bank performance estimate. Data Envelopment Analysis (DEA) brings together the varying perspectives of five key stakeholders, namely, regulators, shareholders, customers, bank managers and employees. We develop the MSP approach by taking advantage of a recent online survey of stakeholder perceptions on key financial ratios across the major trading partners Australia, China and Japan. We focus on publicly quoted commercial banks. Key research questions demonstrated are (1) which banks are considered efficient by all the stakeholder groups? (2) which banks are considered inefficient by all the stakeholder groups? (3) which stakeholder group is most frequently evaluating the banks as inefficient? (4) which stakeholder group is most frequently evaluating the banks as efficient? (5) how does the ranking of Australian banks change when their performance is viewed from the perspectives of Chinese or Japanese stakeholders? (6) how does the ranking of Chinese banks change when their performance is viewed from the perspectives of Australian or Japanese stakeholders? (7) how does the ranking of Japanese banks change when their performance is viewed from the perspectives of Australian or Chinese stakeholders? Insights gained through MSP can guide regulatory vigor, promotional or public relations activities, raising of equity capital in overseas markets and other cross-border operations such as positioning a bank’s international presence in a host country.
NEGOTIATING DOUBLE TAX AGREEMENTS BEFORE THE OECD MODEL AGREEMENT: NEW ZEALAND’S EARLY DOUBLE TAX AGREEMENTS

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ABSTRACT

Since WW II there has been a rapid expansion in the number of bilateral double tax agreements (DTAs) concluded between countries. A feature of modern DTA negotiations has been the adoption of internationally accepted models or templates from which most DTAs are negotiated from. Although such models were in existence prior to WW II, it was not until the OECD released its Draft Model Convention in 1963 did one particular model achieve a pre-eminence in DTA negotiations which is the case today.

New Zealand did not negotiate its first comprehensive DTA until 1947. In the following three decades New Zealand extended its DTA network to an additional eight countries in a rather slow and haphazard way. During this period none of its DTA negotiations were based on any internationally accepted model, even after the release of the OECD Draft Model Agreement in 1963. New Zealand did not negotiate any DTA based on a recognised international model until after it joined the OECD in 1973 and adopted the 1977 version of the OECD Model Agreement.

This paper reviews New Zealand’s early DTAs negotiated prior it adopting the OECD Model in 1977. An analysis reveals that New Zealand’s early DTAs did not have the degree of uniformity found today in modern DTAs based upon the OECD Model. In addition, they contained fewer articles than are found in modern DTAs today and contained some provisions which were substantially at variance with what are now international tax norms or benchmarks.

The analysis in this paper of these early DTAs also provides insights as to the benefits flowing to New Zealand in the tax area since it joined the OECD and also to other countries from the adoption of internationally recognised models (including the UN Model) as a starting point in DTA negotiations.
ABSTRACT

This paper examines the association between tax avoidance and the cost of equity capital and the moderating effects of institutional investors’ monitoring on the association between tax avoidance and the cost of equity capital in Korean stock market. We find that tax avoidance is positively associated with the cost of equity capital. It implies that investors take risk premium on these tax avoidance activities due to information asymmetry. Additional tests show that the positive association between tax avoidance and the cost of equity capital still holds in weaker information environment. Moreover, tax avoidance is negatively associated with the cost of equity capital when institutional investor’s ownership is high. It implies that investors would take risk discount on manager’s tax avoidance under the strong external monitoring system because there is little possibility on managerial opportunism or resource diversion. This paper is the first study to examine the association between tax avoidance and the cost of equity capital with the moderating effect of institutional investors’ monitoring role in Korea. This paper extends the prior research that investors take risk premium on tax avoidance activity due to an agency perspective. Moreover, we suggest that institutional investors play their role as the strong external monitoring mechanism which can reduce managerial opportunism. Lastly, we can conclude that tax avoidance is one of the determinants that affects the cost of equity capital, which extends the related accounting and finance literature.
THE EFFECT OF ENVIRONMENTAL PERFORMANCE AND SUSTAINABILITY DEVELOPMENT ON FIRM PERFORMANCE WITH INSTITUTIONAL OWNERSHIP AS A MODERATING VARIABLE: INDONESIAN EVIDENCE

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ABSTRACT

This study aims to investigate the influence of environmental performance and sustainability development on firm performance with the institutional ownership as a moderating variable. This study used purposive sampling method and obtained 75 samples for ROA as the firm performance measurement and 52 samples for Tobin’s q as the measurement of firm performance. To test the hypotheses, this study uses multiple regression analysis.

The results of the study indicated that sustainability development and environmental performance do not influence firm performance if ROA used as firm performance measurement. When the firm performance measurement was using Tobin’s q, sustainability development have positive and significant effect on firm performance. Institutional ownership doesn’t have any effect on the relationship between environmental performance and ROA and Tobin’s q. While the institutional ownership have a negative effect on the relationship between sustainability development and Tobin’s q but have no effect on the relationship between sustainability and ROA.
INFLUENCES ON ACCOUNTING ETHICS: A NEW MODEL OF ETHICAL DEVELOPMENT

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ABSTRACT

In the every changing business environment, there is a demand for accountants to act both professionally and ethically. This paper outlines a new model of ethical decision-making that specifically applies to professional accountants. Our model predicts that ethical decision-making is a function of the individual’s philosophical and religious orientations. However, actual behaviour is moderated by both external and internal factors. A strong organizational culture as well as rules of professional conduct encourage professional accountants to act in an ethical manner, while the decision-maker’s specific cultural norms and personal moral maturity can moderate ethical behaviour. We develop a set of propositions and explain how our model can be tested and its implications for both the accounting profession and the teaching of business ethics.
THINK LOCAL, ACT GLOBAL: AN AUSTRALIAN CASE STUDY OF THE ROLE OF NATIONAL ACCOUNTING STANDARD-SETTERS

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ABSTRACT

This study uses interviews with technical staff at the Australian Accounting Standards Board (AASB) (supplemented with interviews from retired IASB members) to explore the perceived role of a National Accounting Standard-Setter (NASS) in a context where International Financial Reporting Standards (IFRS) have been adopted as the national accounting standards. The study demonstrates that accounting standard-setters have an agenda of technical topics (both formal and informal) and a strategic agenda and that interviewees perceived accounting standard-setting as being fundamentally a change management process rather than being primarily a process for rule promulgation. The technical agenda is employed as a tool in implementing the strategic agenda. Unlike most prior empirical studies which have explored accounting standard-setters’ technical agendas through the lens of competition amongst organisations for dominance in a specified regulatory space, this study shows the significant influence that individual persons have (especially a standard-setter’s Chair) on the promulgation of accounting standards. For example, changes in the Chair at the AASB over the decade following Australia’s adoption of IFRS drive changes in the strategic agenda of the AASB. These strategic changes are a result of the differences in the personalities and motivations of the respective Chairs and move the AASB from being a standards ‘taker’ to a ‘missionary’ for promoting and influencing IFRS in the Asian Oceanian region. The individuals who form the technical staff of the AASB also form part of a regional epistemic community that promotes shared values and objectives that support the strategic agenda. The findings of the paper suggest that our understanding of the behaviour of standard-setting organisations can be considerably deepened by studying the characteristics and motivations of the individuals within those organisations rather than via the abstraction of treating standard-setting organisations as though they were a ‘black box’, ignoring the complex sub-systems that drive their internal functioning.
THE FRAUD DETECTION TRIANGLE: A NEW FRAMEWORK FOR SELECTING VARIABLES IN FRAUD DETECTION RESEARCH

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ABSTRACT

The selection of explanatory (independent) variables is crucial to developing a fraud detection model. However, the selection process in prior financial statement fraud detection studies is not standardized. Furthermore, the categories of variables differ between studies. Consequently, the new Fraud Detection Triangle framework is proposed as an overall theory to assist in guiding the selection of variables for future fraud detection research. This new framework adapts and extends Cressey’s (1953) well-known and widely-used fraud triangle to make it more suited for use in fraud detection research. While the new framework was developed for financial statement fraud detection, it is more broadly applicable to fraud detection in general.

Cressey’s (1953) original fraud triangle is a useful conceptual model for studying and understanding the precursors to fraud. The fraud triangle states that instances of fraud share three common factors: an opportunity to commit fraud, a pressure to commit fraud and a rationalisation for committing fraud that is consistent with the perpetrator’s ethics. Although Cressey’s (1953) fraud triangle has been widely used, it has been criticized for being inadequate, and modifications to the model have been proposed in prior research. The original fraud triangle and each of the well-known alternative models are analysed in order to develop a new Fraud Detection Triangle framework. This framework incorporates modifications suggested in prior research as extensions to the pre-existing opportunity, pressure and rationalisation factors. It also includes a new Suspicious Information factor that adapts the framework for use in fraud detection. The new factor acknowledges that unusual patterns in figures can occur as a consequence of fraud, which is separate from the precursors of fraud measured in the existing fraud triangle.
ABSTRACT

The objective of this study is to explore how rapid changes in technology affect to Audit Information System. The study is done on the case of Office of internal audit of Chulalongkorn University experiencing insufficient time to conduct an audit on the financial report. Moreover, summary reports take high effort to prepare because of too many manual steps and large amount of data to be analyzed. As Thailand moving to Digital Economy country, Chulalongkorn University responses to this project by supporting all departments to improve working processes with high technology. The Office of internal audit is also looking for solution which ensures the financial report is accurate and on time deliverable. The university has used ERP system for several years so the possibility of implementing Data Warehouse is higher than other solutions. The Data Warehouse system is separated from ERP system but the data is synchronized so auditors can access and analyze the data any time without disturbing production data. The new database technology is developed to support Big data analysis and improve performance of database having more efficiency than ever. Existing database might be not available and Data Warehouse must be reimplemented if the university plans to use this technology. While waiting for this decision, the additional reports are developed to help audit work faster and complete within timeframe. Meanwhile, pushing the departments which currently prepare financial reports manually to use ERP system is another way to help reducing time for consolidating the financial report. However, project of Data Warehouse is listed as important project and the university should push it for next implementation plan whenever the budget is available. Finally, the change of technology is an external factor that could not be controlled. The impact will be more or less depends on how well the organization prepares action plan to handle it. The rapid change of technology accelerates internal auditors to learn new technology continuously that make accounting profession to be an acceptable International Professional.
THE IMPACT OF DEFERRED TAX CREDIT IN BRAZILIAN BANKS’ EQUITY: A STUDY OF CAUSALITY OF DEFERRED TAX ASSETS VARIATIONS IN SHAREHOLDERS' EQUITY VARIATIONS

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ABSTRACT

This article reveals and brings to discussion the results of an empirical research on materiality and causality of deferred tax credit (DTC) in net equity (NE) of banks in Brazil, based on a sample of the 10 largest banks, according to capita control, from 2009 to 2014 in six-month periods, from the adoption of IFRS (International Financial Reporting Standards) required by Brazilian Corporate Law. The deferred tax asset arises from temporary differences, impacting the current tax liabilities, and negative taxable income, also having an impact on equity. The research investigated how significant is the deferred tax assets in relation to equity, in order to analyze the variations of deferred tax assets related to the changes in equity and the representativeness of the stock of deferred tax assets in equity. A positivist methodology was applied, sustained in specific equations and simple linear regression model with panel data, run by ordinary least squares. Results have shown that, in the case of private banks, with 90% confidence, the relationship among changes in deferred tax assets and changes in equity is reverse causality and the stock materiality DTC in NE is of the order of 35%. As for public banks, it was not found statistically significant, but the materiality of the inventory of deferred tax assets in equity is on the order of 38%. Finally, the results are presented in both the relevant evidence of financial fixed asset of deferred tax assets as a signal of reverse causality, and may subsidize further research. However, since it only addresses 11 semesters, it would be interesting to conduct further research with greater temporal scope so as to compare with the results hereby achieved.
USE AND DISTORTION OF GRAPHS IN JAPANESE FINANCIAL REPORTING

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ABSTRACT

The purpose of this study is to address the issue of impression management using graphs in Japan in a comparative international context. The main objectives of the survey are to assess the type and number of graphs presented in annual reports issued by Japanese firms, to identify the locations of the graphs in those reports, and to summarize the nature of information in the graphs.

In recent years, the use of graphs in financial reporting practices has become widespread. Most Japanese public firms include graphs in their annual reports. Financial graphs in annual reports play an important role in creating perceptions of the firm and in interpreting its financial performance. However, there has been little systematic study related to both graphs and annual reports in Japan.

This study investigated use of graphs in the 2009 annual reports of 79 Japanese firms. It documented the incidence of graph use and graph distortion. Results showed that graphs were used widely in Japanese financial reports and annual reports. However, results did not find that Japanese firms were selective in using graphs or that graphs were distorted or used to misrepresent the facts. In addition, the study found no statistical evidence to support the hypothesis that graphs were included in annual reports when they could present a favorable view of performance rather than an unfavorable view. These findings suggest that Japanese firms are not attempting to manage impressions by means of graphs used in their financial reports and annual reports.
ACCOUNTING EXPERTISE AT GRADUATION: CONTRIBUTION TO THE TRAINING OF EXPERTS COUNTERS IN THE CITY OF RIO DE JANEIRO, FROM THE APPLICATION OF THE CONTINGENCY MODEL VROOM MOTIVATION

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ABSTRACT

The subject of Forensic Accounting one does protagonist on the motivation of learners. Vroom conceives that the strength of the particular person motivating corresponds to the product of the value predicted by themselves to an assigned probability of achieving the goal. This study aimed to assessing how the subject can exert influence in the choice of Skill activity. Your sample is limited to hundred and twenty counters in whose motivation analysis follows the contingent model of Vroom. The data collection aims at analyzing the profile of the respondent while the second comes to the motivation. As collection instrument, is used made available via Internet questionnaires and as a way of tabulation and analysis, the importation of data obtained into Excel. Together with returns identifies himself in emphasized form the main result of this research, with the low motivation influences that subject has been exercising for expert activity. Lastly, this study intends, from the analysis of motivating factors, evaluating the motivation influence teaching the Forensic Accounting at graduation in the city of Rio de Janeiro has to the formation of accountant expert. The conclusion signals to the degree of positive motivation, but low frequency for the remaining subjects’ vocational training center.
THE INFLUENCE OF THE STANDARDIZATION PROCESS IN ACCOUNTING AND AUDITING SYSTEMS UNDER A GLOBAL FRAMEWORK: A NARRATIVE-DESCRIPTIVE APPROACH

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ABSTRACT

In recent times, the move towards globalization of accounting standards has been rapid. On the other hand, related accounting systems, like those for corporate laws, taxation laws, and capital market regulations, are still at the discretion of each country; hence, we do not expect material action towards their convergence globally.

The international standardization of accounting systems in Japan is progressing but, at the same time, local accounting systems remain. The Japanese government is balancing international standardization and its adaptation to local situations as are other countries. The experiences of other countries imply that this type of balanced policy is a reasonable response to international standardization. Accepting international standardization may cause conflicts with localities. Refusing internationalization may also cause problems adapting to globalized markets. A balance must be achieved between international standardization and locality.
DID THE FIRST-YEAR DISCLOSURE OF ARO AFFECT INVESTORS' DECISION-MAKING? – CASE OF IFRS CONVERGENCE IN JAPAN

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ABSTRACT

In this paper, we do the fact-finding survey and examine the economic consequences of Asset Retirement Obligation (ARO) focusing on the first year application of the standard. ARO has been applied as part of the IFRS convergence to help investors decision making. Since FY2010 end, all Japanese listed companies have to account for ARO in their financial reports. First, we surveyed ARO-related subjects and footnote disclosure. From this fact-finding survey, the effect of ARO to reported earnings is not small but the possibility has been suggested that some companies can avoid the disclosure of ARO because of the uncertainty of a reasonable estimate. Next, we investigate the economic consequence of these disclosure focusing on extraordinary loss from adjustments with ARO accounting standards application. The reason is because this extraordinary loss is new information for the investors. Based on a sample of non-financial companies listed on the Tokyo Stock Exchange for the period FY2010, we did not obtain any significant results. Although there is a need for further verification, in a situation where discretion of these companies are allowed, information resulting from accounting standards for ARO might be difficult to help investors in decision-making.
DO IFRS ADOPTION IMPROVE FOREIGN DIRECT INVESTMENT IN IRAN?

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ABSTRACT

Economic development for any country vastly depends on its communications, a factor that is deemed to be very critical. In other word, economic expansion and inflow of foreign direct investments funds calls for a high level of international trade. Now this question arises that how this level of interaction can happens unhindered and in this matter what is the role of accounting, as a language of business?

In this paper, we intend to approach this issue by adding the case of Iran with regards to its peculiar condition in foreign direct investment and its stance towards admitting of International Financial Reporting Standard. We will wrap up by reviewing the correlation between the admittance of International Financial Reporting Standard and foreign direct investment. Previous studies have shown that it is of great value to shift toward adopting international standard and this measure can ease the commercial interactions and boost the investing. Moreover, behavioral biases are discussed as a factor that scratch the relationship between IFRS adoption and FDI attraction.
AUDIT RISK FROM MULTIPLE DIRECTORSHIPS: A NEW ZEALAND ANALYSIS

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ABSTRACT

Non-arms-length transactions may be more common between ‘related’ parties who are associated in one way or another with two or more businesses. The courts reveal how auditors can be caught up in such arrangements should the related party risk not be identified in the financial statements or should the implications of related party transactions not be properly disclosed. Multiple directorships are one type of related party relationship. The purpose of this study is to analyse the audit risk that exists due to the presence of interlocking directorships in New Zealand listed companies. An integrated framework of risk, drawn from prior studies and the governance literature, determines the theoretical structure for analysis. An archival study of annual reports identifies all director associations in New Zealand listed companies as at December 2009. Findings indicate that, while most directors are on only one company board, 112 serve on more than one, creating a range of interlocking associations. Analysis reveals ‘related party’ audit risks from cross-industry, finance, and within-industry interlocks and the potential for gender influence. Conclusions offer implications for audit planning and suggestions for further research and regulation.
AUDITING AND THE DETERMINANTS OF VALUATION ALLOWANCE FOR DEFERRED TAX ASSETS IN JAPAN

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ABSTRACT

This paper investigates the determinants of valuation allowance for deferred tax assets, especially focusing on the effects of audits. We find that companies with Big-N auditors, larger abnormal audit fees, auditors with higher bargaining power report larger valuation allowances for deferred tax assets. These results suggest that audit firms affect the level of valuation allowance, despite difficulty of audit for judgements about the realizability of the deferred tax assets. In addition, we find that companies with optimistic managerial estimates of future profitability report smaller valuation allowances for deferred tax assets which suggest that management bias affect the level of valuation allowance. In additional analysis, we find that the valuation allowance reflects management bias, as managers must record a valuation allowance by estimating the firm’s future profitability. In addition, the results suggest that audits mitigate the management bias reflected in the valuation allowance.
WHO IS AUDITED? EXPERIMENTAL STUDY ON RULE-BASED TAX AUDITING SCHEMES

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ABSTRACT

In this study, we employ a game theoretic framework to formulate and analyze tax audit schemes. We test the theoretical predictions in a laboratory experiment. We compare audit schemes based on three audit rules: random audit rule, cut-off audit rule, and lowest income reporter audited rule (LIRA). While the cut-off audit rule is known to be optimal in theory, it has not been examined in a controlled laboratory experimental setting. The primary experimental finding is that LIRA rule yields the highest degree of truthful reporting among the rules, contrary to the theory. Moreover, the regression analysis shows that individual social norms regarding tax payment as well as the cut-off rule and the LIRA significantly increase the degree of truthful reporting. Our experimental finding that the LIRA yields the highest degree of truthful reporting is practically important because the tax authority in most countries assigns higher priority for enhancing tax compliance.
ABSTRACT

The aim of this study is to analyze Corporate Governance (CG) disclosures, particularly Audit Committee and Internal Audit disclosures, by listed firms in Indonesia. We compare the disclosures in the 2012 and 2013 Annual Report with the prevailing Regulations set by Indonesia Capital Market Authorities. We find that the level of disclosure in 2012 and 2013 on Corporate Governance, particularly Audit Committee and Internal Audit, is relatively low for Indonesia listed firms. The level of disclosure is only 39.5% in 2012 and 43.9% in 2013. The old regulation lack detailed requirement, so that the disclosure varies greatly across firms. The revised version of Regulations that are released in 2012 contains more detailed requirement, so that firms’ Annual Report for 2013 is expected to have richer information about firms’ CG practice. However, the increase in 2013 is only 4.4%. This result shows that the revised regulation do not automatically increase the disclosure level. Maybe due to it is new regulations and the enforcement is not in place yet.
FORENSIC ACCOUNTING: FACTORS EMPLOYED IN SELECTING AND RETAINING FORENSIC ACCOUNTANTS AS COURT SPECIALISTS, IN THE OPINION OF MAGISTRATES IN THE STATE OF RIO DE JANEIRO

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ABSTRACT

Expert investigations within the judicial authority play an extremely relevant role, as their use is required when called on to resolve conflicts involving topics of a technical or specific nature, and to this end magistrates will need to retain a forensic accountant in order to serve as assistant to the court. Selecting these professionals aims at providing magistrates with an assurance of the truth of facts, as they are experienced in and endowed with specific knowledge on the topic under consideration. This article seeks to cast a light on the factors employed by magistrates when selecting and retaining forensic accountants as court specialists. Other articles published exploited approaches on knowledge, skills, qualities and results that sought to place such professionals in the labor market. Field surveys were applied to this end in a number of Civil Courts in the State of Rio de Janeiro, covering the state’s metropolitan, northern and mountain regions. Samples were in the form of interviews with 27 magistrates. The results obtained pointed to the items that follow as chief selection factors: specialists’ resumes in the Rio de Janeiro judicial authority’s website with 77.77% and quality in the submission of previous assignments with 62.96%, with reference also to particulars, track record and several specific criteria. With regard to retaining forensic accountants in the courts of law to serve as court specialists, 100% of the magistrates interviewed mentioned the appraisal’s efficiency as the chief reason for such. Furthermore, it may be concluded that 92.59% of magistrates render sentences on proceedings based on appraisals submitted by court specialists.
THE EFFECT OF ACCRUAL QUALITY TO THE LEVEL OF BANK DEBT WITH CONTROLLING OWNERSHIP AS MODERATING VARIABLE

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ABSTRACT

This research aims to study the effect of accrual quality earned by firm to its bank debt level. This research also aims to analyze whether expropriation effect of controlling ownership will influence the relation between accrual quality and bank debt level. By using 252 firm-year observation listed in Indonesia Stock Exchange from 2010 to 2012, this research finds positive association between accrual quality and bank debt level. Higher accrual quality reduces information asymmetry between firm and bank and thus reduces information risk for bank, which caused firm whose accrual quality is higher will have higher bank debt level. This study also proved that expropriation effect by controlling ownership does not influence the relation between accrual quality and bank debt level.
THE MARKET-WIDE COST OF CAPITAL IMPACTS ON THE AGGREGATE EARNINGS-RETURNS RELATION: EVIDENCE FROM JAPAN

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ABSTRACT

Prior studies have observed a significantly positive relation between earnings changes and the contemporaneous stock returns at the firm level. However, when they are cross-sectionally aggregated, even a negative relation can be observed. To clarify this puzzling aggregate earnings-returns relation, Kothari et al. (2006) propose that changes in the market-wide cost of capital cause an omitted variable bias. Consistent with this hypothesis, U.S. studies have shown that the risk-free rate and expected inflation bias the aggregate earnings-returns relation as important components of the market-wide cost of capital. On the other hand, the economic impacts of these components are trivial in Japan due to the “zero-interest-rate policy” and stable prices, such that the market-wide cost of capital can be weak. Therefore, we test whether changes in the market-wide cost of capital still have a strong bias against the aggregate earnings-returns relation in the Japanese stock market. Our tests indicate two evidences for the existence of this bias in Japan. First, aggregate earnings changes are positively correlated to the contemporaneous changes in the market-wide cost of capital. Second, although this significant earnings-returns relation is not observed by a simple regression, a significantly positive aggregate earnings-returns relation appears after controlling for changes in the market-wide cost of capital. These results suggest that even if the economic significance of the risk-free rate and expected inflation are small, the market-wide cost of capital affects the aggregate earnings-returns relation.
VENTURE CAPITAL INVESTMENT, CORPORATE GOVERNANCE AND TECHNOLOGY FIRMS PERFORMANCE

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ABSTRACT

We investigate whether venture capital investment, venture capital representatives and corporate governance have an impact on the post listing investee firms’ performance. We manipulate Malaysian context in order to test the effectiveness of the types of venture capitalists (formal, corporate or informal) and venture capitalist’s retained interests, where the role of government is important. While venture capitalist’s retained interests could have positive effect on firm performance, emergence of other interests in the investee firm might constrain the strength of the monitoring. Thus, good corporate governance is important for the firm to be sustainable. The results reveal that venture capital investment, the types of venture capitalist and the presence of venture capitalists on the board of directors are not related to firm performance. Results also indicate that there is a marginal positive influence of external director and top management team composition on investee firm performance. It is also observed that board composition is not playing an important role in improving the performance of investee firms. The results imply the change in the locus of control from venture capitalists to other investors should be followed by strong top management team to ensure sustainable firm performance.
INVESTMENT FORECAST DISCLOSURE AND THE COST OF EQUITY CAPITAL: EVIDENCE FROM THE TREATMENT EFFECT ESTIMATIONS

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ABSTRACT

In this study, I examined the economic effectiveness of investment forecast disclosures. In particular, the relationship between such disclosures and a decrease in the cost of capital is addressed. Disclosures of future investments are of significance because these business activities relate directly to future cash flows and operating incomes, both of which are foundational for firm valuations. Japan seems especially suited for an analysis of this kind, given that Japanese firms voluntarily disclose their capital and R&D investment forecasts.

Using Japanese manufacturing firm data for the period 2004 to 2011, I show that firms with investment forecast disclosures enjoy a greater reduction in the cost of capital than do firms without disclosures. Research on voluntary disclosures inevitably faces problems of selection bias and endogeneity. To deal with these problems, I applied the treatment effect estimates model. The estimation results show a negative association between investment forecast disclosures and the cost of capital, even when potential determinants and other variables pertaining to the cost of capital are controlled for. The change in the cost of capital is 0.71% and 0.40% significantly lower, respectively, if firms disclose capital investment and R&D investment forecasts. Furthermore, sensitivity analyses results do not vary even when the change in the cost of capital is compared with matching firms based on propensity scores and the change in the cost of capital is measured in a different time period.
EFFECTIVENESS OF ONLINE TEACHING OF ACCOUNTING AT UNIVERSITY LEVEL

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ABSTRACT

Introduction - In recent years, online education has opened new educational environments and brought new opportunities and significant challenges for students, lecturers and educational institutions (Duncan, 2012). It brings capacity to overcome geographic and time constraints typical of traditional class room teaching (Neuhauser 2010). The purpose of this paper is to find how increased use of technology by both teachers and learners associates with student achievement in accounting courses.

Literature review/research gap - Johnson et al. (2013) conducted a comparative study of motivation between face-to-face and online courses using the data of university students in south-eastern USA. They recommended further research into what would encourage students to study online. Calafiore and Damianov (2011) employed a quantitative approach and used an online tracking tool which records the real time that each student spent online in Economics and Finance courses.

In Australia, Duncan, Kenworthy and McNamara (2012), used qualitative and quantitative approaches in post-graduate Accounting courses and found links between participation and success. This action research study (Omura 2015) attempts to explore both teacher and student use of technological tools by examining the effect of the frequencies of engagement in online learning resources, on the academic achievement of undergraduate accounting students.

Research method – The hypothesis is set that increased monitoring of progress combined with student participation online would improve their results. This paper employs OLS model and the Panel regression based on the Random Effect Model, to analyse how the frequencies of student online access on the discussion forums have an effect on the final results or/and overall pass rate. The data is collected from one regional university in Australia which provide the accounting courses for the undergraduate and the postgraduate students.

Limitation - An important limitation is that the time students spend learning through offline activities cannot be assessed.

Findings - Tracking data needs to continue to establish definite trends but early signs of the combination of teacher and student use of technology are very encouraging. Participation on the discussion forum especially seems to have a statistically significant effect on the pass rate.
EXPLORING THE OVERVIEW OF FORENSIC ACCOUNTING AND THE DEMAND FOR BUSINESS AND EDUCATION TRAINING IN VIETNAM

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ABSTRACT

In the process of development of the global economy, along with the achievements and successes in many fields, it has still existed many uncertainties and fraud that occurring in a lot of organizations or individuals and they are illegal activity which is going on. Most of these circumstances are related to the financial data and accounting information, or concerned to the physical and valuable elements. Currently, Vietnam has not had any firms or staffs who have specialized experience in the investigation or lawsuit events associated with the court or other disputes. So, the education of students who are able to do the investigation professionally and help the governmental agency to detect the errors or frauds of companies or public sector entities’ financial data is significant for present economy conditions in Vietnam nowadays. Therefore, the main purpose of this article is to provide an overview picture about the history, main content and role of forensic accounting, a relatively new field in Vietnam, and needs of human resources in this field. Based on that information, this paper also proposed four requirements for business and education that Vietnam should identify and establish for law enforcement personnel to accounting. The results indicated the cycle of establishment forensic accounting onto education in Vietnam in the following years.
INCORPORATING UNOBSERVABLE CONSTRUCTS INTO STATISTICAL ANALYSIS BY USING STRUCTURAL EQUATION MODELS

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ABSTRACT

This paper demonstrates how accounting researchers can operationalize unobservable (and thus unmeasurable) concepts (e.g., management’s intention) into statistical analysis as latent variable(s) using structural equation model (SEM). By re-examining a resent oft-cited article, we demonstrate alternative causal models that are at least as well supported by the data. One distinct feature of using SEM in re-examination is that it can be performed using only the variance-covariance matrix of the original paper.
EFFECT OF MANAGEMENT COMPENSATION AND AUDITOR REPUTATION ON TAX MANAGEMENT IN THE LISTED BANKING COMPANIES IN INDONESIA

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ABSTRACT

This study aims to examine how management compensation and auditor reputation effect on corporate tax management in banking using a sample banking companies listed in Indonesia Stock Exchange. At first this study examines how the influence of management compensation on the implementation of tax management that may be made by management in order to improve the performance of the company. Second, this study also examines the effect of auditor reputation conducting audit on the implementation of the tax management. The population used in this study is the banking companies listed in Indonesia Stock Exchange. The method used was purposive sampling because the sample of this study have certain criteria that are tailored to the purpose of the study. Based on purposive sampling method, the number of samples in this study of 28 samples. Hypothesis testing using multiple regression analysis. The results of this study indicate that on the 5% significance level, compensation management significantly influence tax management as measured using the proxy book tax gap. While management compensation does not significantly affect the tax management that measured using a proxy GAAP effective tax rate. In addition the auditor's reputation does significantly influence tax management as measured using the proxy book GAAP effective tax gap and tax rate.
TAX COMPLIANCE WITH STRATEGIC AUDITORS: AN EXPERIMENTAL STUDY

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ABSTRACT

The purpose of this paper is to experimentally investigate an analytical model of tax compliance, assuming a game theoretic situation between a taxpayer and a tax auditor. Specifically, we focus on the following three research questions. First, what would happen to the taxpayer’s behavior if the tax auditor is a human or a computer, ceteris paribus? Second, how do the changes of the tax rate affect the taxpayer’s behavior? Third, what influence does personality have on the tax compliance of taxpayers?

The main results of this paper are as follows. First, the taxpayer evades less when the tax auditor is a human than when that is a computer. Second, a decrease in a tax rate can increase the taxpayer’s tax compliance behavior. Third, we find that a compliance rate increases among taxpayers who are younger, more trustworthy, and have a lower level of strategic reciprocity.
THE EFFECT OF GOVERNMENT INTERNAL AUDITOR’S ROLE ON AUDIT OPINION AND FINDINGS

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ABSTRACT

This article is made to analyze the role of government internal auditor (BPKP) that influences audit opinion and findings of The Audit Board of Indonesia (BPK) on Local Government Financial Statements. The parameters used are assistance; performance and operational audit; monitoring and evaluation; socialization and technical guidance, as well as the improvement of financial statement quality and follow-up of audit findings. The sample used in this research is Local Government Financial Statement Fiscal Year 2012. This is a quantitative research with cross section data and regression model. This research considered lag effect for some variables such as performance and operational audit, monitoring and evaluation, and also the improvement of financial statement quality and follow-up of audit findings. The results show that performance and operational audit and also the improvement of financial statement quality and follow-up of audit findings affects the audit opinion. While performance and operational audit, itself affects the audit findings. This result proves that the role of BPKP as government internal auditor to Local Government especially the performance and operational audit has worked effectively.
WHAT IS IMPORTANT IN PMS? KEY FACTORS IN THE SUCCESS OF PMS

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ABSTRACT

The assessment of the success of a Performance Management Systems (PMS) is difficult because success factors are many, mutually dependent on each other, and located at different levels of organization. Therefore, there is need to describe the complete logical chain which makes PMS successful for an organization and to find out a comprehensive list of check points (key factors, KF) which affect the successfulness of PMS.

Because the success of PMS is based on the completeness of the logical chain, each KF of PMS should 1) exist and 2) work properly. Even one missing KF in the chain can lead to failure of PMS. Therefore, each KF in the chain forms a kind of necessary condition for success and the chain should be complete to make it possible for PMS to be successful.

The ultimate measure of success of PMS is how it affects the performance of an organization. PMS is failed if it affects negatively or does not at all improve organizational performance (failure). It is successful if it improves performance (success). The more PMS improves performance, the more successful it is (level of success). In the paper, the logical chain with fourteen KFs in PMS, are determined and tested their existence according with organizational performance.

The fourteen KFs constitute the logical chain. Eight KFs constitute the core of PMS in the form of the structural outputs of building/design process. Three KFs ensure that the users of PMS are committed to the system using it properly and intensively. Then, one KF reflects the role of PMS as an incentive system while the next KF assesses the quality of information produced by PMS. Finally, the last KF closes PMS as the chain as cycle ensuring that the system is continuously updated.
MEASURING BOILERPLATE MD&A DISCLOSURE LEVELS OF JAPANESE FIRMS

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ABSTRACT

In Japan, management discussion and analysis (MD&A) has been a required disclosure for annual reports since 2004. The MD&A represents narrative information on a firm’s profile, performance, strategy, financial state, and other information related to business activities. After 10 years, the Ministry of Economy, Trade and Industry (METI) (2014) has noted that MD&A information in Japan has become boilerplate disclosure. In the US, the Securities and Exchange Commission (SEC) has concerns with boilerplate disclosures in the MD&A (Pozen[2008]). Then, is the boilerplate disclosure bad?

This paper examines whether management discussion and analysis information of Japanese firms becomes boilerplate disclosure using the modification score generated from Term Frequency - Inverse Document Frequency. During the years 2008 to 2009, I find increasing MD&A length and decreasing MD&A scores. This finding indicates that with the exception of the years 2008 and 2009, MD&A information in Japan does not become boilerplate disclosure. Financial crisis occurred during the 2008 to 2009 may affect the firm’s disclosure activity. Information about financial crisis may be written as the form of template.

This study also analyzed the determinants of boilerplate disclosure for MD&A. An analysis of the determinants of boilerplate disclosure in MD&A shows that firms with aggressive forecasts may utilize the MD&A information. Firms with long MD&A information do not engage in aggressive modification. Additionally, firms that have adopted the SEC standard show aggressive modification. It is not the number of segments that determine the MD&A information in some cases but the positive aggressiveness of firm disclosure, indicated by management forecast innovation. So, in Japan, MD&A may be functioned as the proxy of aggressiveness of firm disclosure.
A STUDY ON ISSUES OF PUBLIC SECTOR ACCOUNTING IN JAPAN

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ABSTRACT

The purpose of this paper is to clarify the issues of public sector accounting in Japan and demonstrate measures to overcome these issues. Different accounting standards-setting bodies were established by each competent authority, for each category of reporting entities, such as the government, local governments, and other public institutions. Therefore, each standards-setting body has made its own standards. In addition, even though all standards-setting bodies claim that their standards are based on accrual accounting of private sector, they have made some rules that are completely different from those rules of private sector accounting. Moreover, financial statements issued by each category of reporting entities are similar but quite different, having different names. Ishida (2014) examined accounting standards of independent administrative institutions and pointed out that there are some accounting treatments remarkably different from those in private sector. This paper first conduct an analysis of the financial statements issued by the institutions and revealed that their understandability is extremely low. Furthermore, the paper undertakes a comparative analysis of the qualitative characteristics of useful financial information in the conceptual frameworks of IASB (2010), GASB (1987), and IPSASB (2013). As a result, the paper points out that the importance of “Understandability” in public sector accounting is high compared to private sector accounting. This paper concludes that public sector financial reporting in Japan should be comprehensible to not only Japanese people but also for all non-Japanese users of financial reporting such as overseas investors. To achieve this goal, a singular accounting standards setting board for Japanese public sector accounting must be established, and a single set of public sector accounting standards need to be made. It is also concluded that the single set of standards for public sector accounting should not differ largely from the standards for private sector accounting.
CSR DISCLOSURE OF THE INDIAN COMPANIES: A STUDY

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ABSTRACT

Good ethics ensure good business. A growing sense of awareness about the importance of social responsibility has struck the entire world and it is seen that India is no longer lagging behind. All the companies are responsible to contribute to the social needs of its economy. Social needs refer to the liability that a company owes to its employees, shareholders, consumers, economy, environment and other groups. The corporate sector must retain a long term relationship of value with the customers, economy and environment is required in order to ensure sustainability and at the same time focus on attaining the ‘triple bottom line’ – people, planet and profit. In this regard, The Ministry of Corporate Affairs had released Voluntary Guidelines on CSR in 2009 that encompasses social, environmental and economical responsibilities of the business. Nevertheless, the Government of India has implemented the concept of Corporate Social Responsibility in the new Companies Act, 2013 in order to encourage the corporate sector to contribute to the development of the society by notifying the rules for CSR spending u/s 135 of the new Companies Act 2013 along with Companies (Corporate Social Responsibility Policy) Rules, 2014 w.e.f. 1st April, 2014. Based on these two events the current study aims to find out the disclosure of the issues on Corporate Social Responsibility of the various Indian companies. To analyze this, the study is divided into three parts viz. the disclosures made by the companies before the Voluntary Guidelines on CSR in 2009 by the Ministry of Corporate Affairs, the disclosures made by the companies after the release of the Voluntary Guidelines but before the guidelines issued by the Companies Act, 2013 and, the disclosure made by the companies after the issue of the guidelines of the Companies Act, 2013.
FRONTIER OF ACCOUNTING EDUCATION: LAUNCHING INTERNATIONAL GRADUATE SCHOOL OF ACCOUNTING POLICY

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ABSTRACT

OBJECTIVES
The objectives of this paper are following.
(1) To introduce a new accounting education program:
The International Graduate School of Accounting Policy School (IGSAP) is intended to train “accounting and financial professionals” that will lead the resolution of problems faced in Asian and African countries and the local economy, uniting universities and partner institutions in Japan and overseas by jointly running a master’s degree program, based on the sense of responsibility as accounting and financial professionals with highly specialized knowledge. We will introduce the mission, framework, curricula of IGSAP.
(2) To demonstrate the future of IGSAP:
This program is a pioneering attempt unprecedented in the world, aimed at producing accounting and financial professionals from Japan to assist Asian and African countries by implementing graduate education with domestic and international partner universities and institutions, with Tohoku University playing a key role. As the collaboration will develop year by year, we will show IGSAP’s future.

FUTURE
(1) Bilateral Exchange Program: IGSAP accepts foreign students according to the exchange agreement and MOU. This exchange will be one way for some period maybe 5 years. We will send IGSAP students to collaborating universities and they can study there any time.
(2) Mobility of Students: In a globalized environments, students will get a big advantage by studying in different culture and society. They will recognize and respect the diversity of community.
(3) Free Dormitory (Boarding): By the financial supports of the Japanese Government and sponsors, we wish to have a free dormitory in Tokyo. It will become a boarding school like Hurry Potter.
(4) International Faculty: The number of faculty of IGSAP will be 20 and 7 of them are foreigners. Some of them will have an intensive course in IGSAP. We are planning to increase the number of foreign professors.
(5) Professional Schools in many fields: IGSAP has 3 major fields but main focus is accounting. Other fields of profession can have an international school like IGSAP. It is our pleasure to cooperate with other fields. IGSAP will become a consolidated professional school in many fields.
ACCOUNTING AND CORPORATE GOVERNANCE IMPACT OF CORPORATE GOVERNANCE ON CAPITAL MARKETS OF LISTED PSUS: A REVIEW

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ABSTRACT

Corporate Governance has been a much debated issue in the western world. In India the Corporate Governance Code has been largely modeled on the lines of the Cadbury Committee (1992) in the United Kingdom. SEBI issued a circular in 2003 revising Clause 49 of the listing agreement and Sarbanes Oxley report were considered for new regulations which were the major key in bringing reforms in capital markets in India. The capital market reforms is based on improving two fundamental aspects. First, the improvement in the legal reporting framework and second the improvement in the technology framework which became possible through the strict implementation of corporate governance norms and SEBI regulations. In this paper the studies conducted on impact of CG on capital markets of listed companies in India is reviewed and examined and an attempt is made to understand the problems still persisting in these companies in constituting board, disclosure and transparency related regulations, and accountability. Even though companies are ready to incorporate CG mainly issue related to constituting the board with true Independent directors there are certain obstacles faced by the board in successfully implementing it, Solving internal problem is the need of the hour to all listed companies to come under a structured corporate governance framework. Thus in this study a review of few conceptual studies done in India and abroad are studied to arrive at the outline of the internal problems faced by companies in complying with the regulations.
AUDIT FIRMS AND DISCLAIMERS: IS THE BAR SET TOO LOW?

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ABSTRACT

This paper makes the case for the greater regulation of auditors. It argues that the courts are too sympathetic to the use of disclaimers to escape liability to investors, individual shareholders and third parties. The approach is to review the relevant court cases which established the concept of “opinions” and disclaimers as a means of protection and argue for greater recognition of the wider impact of the audit role.

The paper finds that the best explanation as to why auditors use disclaimers is Social Darwinism. The application of professional ethics as adumbrated in various codes is not relevant to this practice.

The paper is original in that it draws on a recent (2015) court case involving the audit firm Grant Thornton. Its value is that it argues for greater state audit regulation. The grounds being that adherence to legal form ignores the substance of the wider implications involved. As it is state regulation of auditors is largely a form of licensing to limit competition.
Introduction

The purpose of the paper is to consider the case for greater regulation of auditors in the light of the recent decision by the UK courts (Barclays Bank v Grant Thornton [2015] EWHC 320) to uphold auditors’ use of disclaimers to avoid liability for their opinions. The Economist (2014) in an article entitled “Dozy watchdogs” supplies several recent examples of audit failure without liability and draws the conclusion that, as defined, it is a job at which it is impossible to fail. None of these audit failures would matter if the losses impacted only on those responsible, but this is seldom the case and it is the public and economy that suffers. In New Zealand, from 2009 some 24 Finance companies collapsed entailing losses on thousands of small investors and creditors. All of these Finance companies enjoyed unqualified audit opinions, and most involved fraud or gross mismanagement by the directors.

The paper begins with an outline of the problem of audit failures and the courts response to the use of disclaimers to avoid liability. The case for greater regulation is then put forward in terms of the business case, the public benefit and the ethical obligations of the profession, if any. The latter is further examined in respect of where the ethical context of auditing mostly applies: as a deontological duty; a utilitarian exercise; or, if it is simply justifiable as a deterministic Social Darwinist activity.

Audit failure and the courts response

When Warren Buffet increased his stake in Tesco, a British Supermarket, to 5% it told the world that Tesco was a safe investment. Tesco had a clean audit from PWC but it was later found that Tesco’s income was overstated by $US 408m. According to the Economist (2014), PWC’s failure to detect the problem is hardly an isolated case. The Big 4 accounting firms receive an income in audit fees, it is estimated, of some $50 billion a year to give opinions. While auditors are not expected to uncover every crime, it is worth asking has there been a dilution of responsibility. That is, have the courts in common law countries allowed auditors too much sympathy for error in their opinions. Courts outside the common law countries are arguably even more sympathetic to auditors where, as in China, auditors are seldom subject to litigation (Economist, 2014).

A dilution of audit responsibility came about when the wording of reports ceased to provide that financial statements were correct and became instead opinions. In other words, the profession preferred to define their reports as opinions, which did not need to provide accuracy. As far back as 1896, a British judge supported this dilution of responsibility, “An auditor is not bound to be a detective …he is a watchdog not a bloodhound”. (Lord Justice Lopes, The Law Times, Volume LXXIV, Court of Appeal, 11 July 1896).

More recently, there have been judgements which have led to the use of disclaimers by accounting firms, to protect themselves from claims by third parties. The most notable of these are Caparo Industries Plc (Caparo Industries plc v Dickman and others, 1990 2 AC 605) and Royal Bank of Scotland (RBS) vs Bannerman Johnstone MacLay [2003] SLT 31 (OH). The first of such judgements citing a duty of care to third parties was in the Caparo case. The claim against the auditors was unsuccessful. The House of Lords concluded that the accounts were prepared for the existing shareholders as a class for the purpose of exercising their class rights and that the auditor had no reasonable knowledge of the purpose that the accounts would be put to by Caparo (ACCA, 2009).
In 2003, judgement in the Bannerman case reinforced for auditors protection from third parties who rely on their opinions. The RBS alleged to have lost over $13m in unpaid overdraft facilities to an insolvent client APC Ltd. They claimed that Bannerman had been negligent in failing to detect a fraudulent and material misstatement in the accounts of APC. The judge in the Bannerman case also, and crucially, concluded that the absence of any disclaimer of liability to third parties was a significant contributing, factor to the duty of care owed to them. One of the outcomes of the Bannerman case was the potential exposure of auditors to litigation from third parties to whom they have not disclaimed liability. As a result it became common to include a disclaimer of liability to third parties in the wording of the audit report (Taylor, 2015).

Thus, recent news that the Grant Thornton (Barclays Bank v Grant Thornton [2015] EWHC 320) has escaped action over a $51m claim for negligence damages brought by Barclays Bank following an auditor’s report which did not identify fraudulent activity at the Von Essen Hotel Group reinforces a trend. Justice Cooke ruled the bank had no case (Faculty, 2015).

Under the headline: “Bannerman clause an effective disclaimer against third parties” Taylor (2015) states that “Auditors will welcome the important decision of the Commercial Court in Barclays Bank plc v Grant Thornton UK LLP [18 February 2015] which is the first authority on a Bannerman disclaimer negating duties to third parties arising out of audit work”. The court made clear that sophisticated commercial parties relying on an auditors’ report are bound by a third party disclaimer. It is not unreasonable for auditors to include a disclaimer stating that auditors do not accept or assume a responsibility to anyone other than the addressees of the audit report (Taylor, 2015).

Grant Thornton sought summary judgment on the claim on the basis that Barclays had no real prospect of success because the reports contained a Bannerman disclaimer. Barclays argued that the disclaimer had not been brought to the bank’s attention (although it was included in the audit report) and that it constituted an unreasonable exclusion clause caught by the Unfair Contract Terms Act 1977 (UCTA). The High Court found in favour of Grant Thornton. Cooke J held that the claim had no realistic prospect of success “in the face of the disclaimer” and there was “no good reason” why the action should proceed to trial.

As to bringing the disclaimer to Barclays’ attention, the judge said it was “hard to see what else Grant Thornton could be expected to do save for capitalizing underlining or red lining that part of the report, something which would be considered wholly unnecessary when dealing with sophisticated bankers and business people who can be expected to read documents put before them and to be familiar with notices of disclaimer in auditors’ reports.

Further, the disclaimer was reasonable under UCTA. Cooke J concluded that there was “nothing unreasonable in that stance, as between two sophisticated commercial parties, where the approach of auditors limiting their responsibilities is well known and, in the statutory context, is the subject of a standard form ICAEW clause” (Audit - Bannerman disclaimer here to stay?, 2008).

This is a significant decision for the profession. It confirms the importance of Bannerman disclaimers to protect auditors against the risk of third party claims. There may be scope for arguments as to UCTA reasonableness for small companies or consumers, but certainly sophisticated third parties (such as banks) can expect to be bound by their terms (ACCA, 2014).
The Business Case Argument

There are three main objections to the courts offering protection to auditors who armour themselves with disclaimers. First, there is the business case. If investors and individual shareholders stop trusting financial statements because they offer no reliable endorsement by way of audit, then the cost of capital rises as a function of risk. Free of concern for third parties, auditors may more readily bow to the demands of management and be more easily swayed when only their fees are at stake. The long term result will reduce the funds available for investment and slowing of economic growth. For this reason as the Economist (2014) observes, “Only substantial reform of the auditors’ perverse business model can end this cycle of disappointment” (p. 21). Recognising the potential reputational hazard, the UK professional accounting body, ACCA declares that it does not encourage the use of standard disclaimer clauses in audit reports. Such clauses could have the effect of devaluing the report in the eyes of many and should not be necessary in order to protect auditors’ interests if the audit has been properly carried out. Paradoxically, while it follows from these rulings that the auditors in question did not owe a duty of care either to individual shareholders or to potential investors, auditors will continue to have a duty to shareholders as a group, presumably as represented by the company. In other words, shareholders are not protected - only the company as a class – meaning in practice the management. Thus, in practice the most likely plaintiffs are blocked from action by disclaimers.

The Public benefit

The second objection relates to the aspect of supplying a public benefit or a social contract argument. In many countries, governments regulate to restrict the audit market to members of the accounting professions. Such restrictions by governments usually, when conferring a monopoly, involve an expectation of a public benefit. In New Zealand, more recently a licensing system for auditors has been introduced, which arguably further advantages the Big 4 monopoly of audit work among first tier companies and public entities. According to Dellaportas (2005) the social contract concept should be perceived to be a duty of the professional accountant. So what is the public benefit? In the case of doctors, nurses, teachers, and lawyers the public benefit from restricting these occupations to members of a profession is obvious. But, for auditors it is less obvious when their work is restricted to those who can pay, and any negative impact to the general community is excluded by disclaimer. The courts by upholding disclaimers of a duty of care to third parties are excluding the public benefit aspect of auditing from the wider community. The recent collapses of many finance companies in New Zealand provide suitable exemplars of this denial of a wider public benefit. Hanover Finance collapsed after receiving a clean audit to the benefit its few shareholders, while its thousands of “Mum and Dad” investors lost their savings. The few shareholders were happy as the auditors did what they had paid them to do, that is endorse inflated reports to gull unsophisticated investors (Erikesen, 2008).

Ethical Considerations

The final objection to the courts upholding the practice of auditors’ disclaimers is ethical and philosophical and holds the least prospect a providing an acceptable legal argument based on legal form and practice. Griffiths (2002) observes, with respect to the use of disclaimers by PWC, “Privately, some senior accountants say the PWC move could be interpreted as an
attempt by auditors to protect their backs in the post-Enron environment …There has to be a worry that this will be taken the wrong way. It may be seen as devaluing the integrity of the accounts. The timing is not good" (http://www.theguardian.com/business/2002/dec/06/10). If professional audit ethics are driven by either deontological, consequential or Social Darwinist goals, then disclaimers fall most easily into the latter.

The Deontological position

The philosopher Immanuel Kant argued that rational beings should abide by the maxim, “Act only on that maxim through which you can will that it should become a universal law for all rational beings” (Kant, 1993, p. 30). In other words, according to Russell (1947), Kant maintains an ethical position of “Do as you would be done by” (as cited in Russell, 1947, p. 737). Kant argues that certain actions or behaviour cannot be justified as moral based on the outcomes from such actions. For example, an auditor is honest because he knows that it will attract more customers and increase profits. He is not genuinely moral because his intention to be honest is to increase profits (Kant, 1993, p. 36). Kant’s ethics are non-consequentialist. It is a deontological approach, which focuses on duties rather than consequences. Kant’s maxim is thus a law which applies to everyone. No one should exempt himself from the maxim but expect others to abide by it. In other words, Kant’s deontological approach emphasised a sense of duty. In other words, auditors should work as if they were the shareholder or investor and not be swayed by the arguments of managers, who on behalf of shareholders pay them.

From Kant comes the element of reason necessary to understand issues, think, and arrive at an ethical judgement, while virtues add ethical motivation, allowing individuals to place the interest of others before themselves. Mintz (1995) believes that virtues in accounting are linked to the requirements of accounting professional codes: trustworthiness, benevolence, altruism, honesty, integrity, impartiality, open-mindedness, reliability, dependability and faithfulness. Thus, the concept of “duty”, become virtue in practice.

Consequentialist ethics

In contrast to Kant’s deontological perspective, Jeremy Bentham (1748 – 1832) developed utilitarianism. Utilitarianism introduces the idea that whether an action is ethical is based on the outcomes resulting from that action. Using the same example as above, an auditor is honest because he knows that is the way to increase profits. Because the consequence is to increase profits and acting honestly is a way to achieve this consequence, the auditor is considered to be morally right. In contrast to Kantian ethics, the intention of being honest is irrelevant as long as it achieves the ends. Mill (1861) declares: “Utility, or the Greatest Happiness Principle holds that actions are right in proportion as they tend to promote happiness, wrong as they tend to produce the reverse of happiness ” (p. 257). If the outcomes of action or behaviour lead to greatest happiness, which is calculated as the sum of the happiness of all affected people in a given situation, that action or behaviour is ethical. Under utilitarianism, consequences can justify the means. For example, in the iconic New Zealand case of Hanover Finance, the large audit firm involved gave an unqualified audit shortly before its collapse. It subsequently emerged that large dividends had been paid to Hanover’s seven shareholder/directors when the company was insolvent and revenues had been boosted by interest from loans to the directors that were due but not received. Thousands of small
investors lost their savings making the actions of the audit firm from a utilitarian perspective unethical.

The concept of utilitarianism relies on legislators, who prescribe sanctions, knowing what is in the community’s interests while ignoring their own interests or desire for pleasure (Preuss, 1998). But, this paper questions whether legislators and the courts will act in the community interest. Moreover, will auditors ignore the interests of their own paymasters to pursue a community’s interest (Tinker, 1991).

The Social Darwinist Perspective

From the context of this paper it seems that the Social Darwinist perspective best suits the current position of the use of disclaimers by auditors and their endorsement by the courts. Herbert Spencer (1820-1903), a liberal utilitarian, first enunciated the concepts of Social Darwinism. Social Darwinism may be defined as “the attempt to justify or promote human competition for scarce resources as a necessary, natural phenomenon fostering biological progress” (Weikart, 2009, p. 21). It has two central assumptions. First, it suggests that there are underlying and irresistible forces acting in societies, which are like natural forces that operate in the animal and plant kingdoms. Second, these social forces are of a deterministic kind to produce evolutionary progress through natural conflict between social groups. The best adapted and most successful groups survive these conflicts (Abercrombie, Hill, & Turner, 1994). Indeed, to support those unfit to survive can be argued to be morally incorrect (Hawkins, 1997). Social Darwinism introduces a laissez-faire approach to business (Weikart, 2009). “The business of business is business” is a quote attributed to Milton Friedman, an advocate of laissez-faire economics. Taking this observation as the hallmark of Social Darwinism, the relevance of this philosophy is that it justifies ruthless competition and argues that it is both natural, in a deterministic sense, and such natural determinism progresses by taking from the weak (Bergman, 2001). Echoes of Social Darwinism arguably resound whenever the concept of “the business of business is business” is used to reject suggestions of business social responsibility and may be applied to audit firms who justify disclaimers to third parties on the grounds that they owe only a duty of care to those who pay them. Again, the exemplar provided by the failed New Zealand finance company Hanover illustrates the concept of Social Darwinism in audit practice. The clean audit served the interest of the directors but failed to alert the thousands of investors to the company’s insolvency. On deontological or utilitarian grounds the audit cannot be justified but viewed as natural product of deterministic behaviours competing for scarce resources, then it is explainable. Social responsibility or a duty of care does not apply any more to audits than it does to a fox entering a chicken coop.

Neimark (1995) observes that, “What constitutes ethical behaviour at any time is socially constructed; it is a product of time and place” (p. 94). Such behaviour may be constructed from concepts of legitimacy, whether pragmatic, moral or cognitive according to current values. To explain the dominance of Social Darwinism today, Neimark (1995) argues that social, economic and political structures, collectively and inevitably, produce patterns of behaviour that are not ethical even by contemporary Western standards:

“We must consider the relationship between what individuals do and the institutional structures and the ideological underpinnings of capitalism, including its emphasis on Social Darwinism, individualism, competition, and material acquisitiveness” (p. 93).
The use of disclaimers by auditors to avoid a duty of care other than to care for what their paymasters require, mostly reflects Social Darwinism (Stackhouse, 2004).

Discussion and Conclusion

The courts have held that use of disclaimers by auditors relieves them of a duty care to third parties including individual shareholders. The 2015 case outlined, involving the audit firm Grant Thornton, establishes that a clear disclaimer in the audit report will provide protection from actions by third parties, individual or groups of shareholders seeking remedies for negligence. The paper argues that such auditor protection is unjustified when the wider implications of the business case, the community interest and some ethical positions are taken into account. It is admitted that these wider implications have little bearing on legal form and practice but that is not to say they are irrelevant.

The wider implications are not irrelevant because licensed auditors occupy a privileged position granted to them, in many countries by state sanctioned regulation. Such regulation, as applies in New Zealand removes possible competition and creates an oligopoly for the major audit firms. If the audit profession has only a duty of care to those who pay for their services, why should they enjoy restricted entry to the market by a state sanction? Ostensibly, the licensing is to protect the public from under-qualified practitioners, in the same way that teachers, nurses and doctors are regulated. But, the latter professions do have a duty of care to those who do not pay them: students, patients, etc. There is discussion in New Zealand about licensing brothels and massage parlours and such licensing would have more in common with the licensing of auditors as the oldest profession does not have a duty of care other than to those who pay them. It is difficult to see how a respectable profession can operate with state sanction and have no duty of care to the wider public or should even want to be seen to have no duty of care. The disclaimers not only advertise this fact but, as ACCA observes, somewhat undermine confidence in the audit.

In defence of the audit firms, it may be advanced that shareholders, investors or others seeking compensation for any consequent losses, may target the audit firm, who may be asset rich and possess professional indemnity insurance, for financial compensation. This may be unfair when the company involved may be just as responsible for an inadequate audit but not unexpected when companies are facing financial difficulties, as any individuals involved are unlikely to possess insufficient assets to settle the liabilities.

From an ethical and philosophical perspective, the paper argues that the position taken by auditors who use disclaimers and the courts that endorse their use is one of Social Darwinism. As evolved animals, Dawkins (2006) explains, we are the product of blind, deterministic forces. Moreover, Crick (1995) writes that humans are mere collections of fundamental particles of nature. “You, your joys and your sorrows, your memories and ambitions, your sense of personal identity and free will, are in fact no more that the behaviour of a vast assembly of nerve cells and their associated molecules” (p. 3).

From such established scientific conclusions, Polkinghorne (1998) asks, that as deterministic beings, what can validate the claim that our utterances constitute rational discourse? “Would not the sounds issuing from mouths, or the marks we made on paper be simply the actions of automata” (p. 58). The consensus of science is that our pretence at being rational beings with free choice is an illusion, and, as a consequence, the professions’ code of ethics, which suggest an ethical choice, is an illusion. In other words, accountants and auditors as products
of Darwinist evolution will do whatever is in their best interest to corner scarce resources and the pretence to be otherwise amounts to no more than a veneer of hypocrisy. Only regulation can hope to curb the excesses of the market.

By licensing auditors in New Zealand, the state is imposing some kind of regulation in the market but as the objective is narrowed to making sure they are suitably qualified to do the job, the regulation falls short in that there is no further protection for shareholders, investors, third parties or the public interest. The licencing system introduced restricts the supply of auditors while adding no ostensible public benefit. Unchanged by regulation, the marketplace will continue be subject to what Keynes (1936) called “animal spirits” and in that respect a jungle (p. 161).

However, the practical point that this paper argues is that the 2015 finding in the Grant Thornton case sets the bar too low. Existing government regulations ignores the problem of auditors being all “but impossible to fail at their jobs, as they define them” (Economist 2014, p. 20). Disclaimers provide an escape clause against the most likely plaintiffs and such protection can lead to a situation where, what the Economist (2014) describes as having “dozy watchdogs” prevails and that defeats the point of having an audit (p. 22).
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CORPORATE GOVERNANCE DISCLOSURES IN THE NEW ZEALAND AGRICULTURAL COMPANIES

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ABSTRACT

Livestock, agriculture, and horticulture products are essential in the New Zealand economic sustainable development. Consequently, performance and governance of active companies in these areas of business are constantly monitored by the public through legislators, stock market, government agencies, and media. Practically, corporate governance disclosures are providing essential information for such monitoring and analysis. This paper intention includes critically evaluate corporate governance disclosures of agriculture companies. Implementation of the content analysis methodology enables this research project to present analysis of the level of compliance with the 2004 Corporate Governance Principles and Guidelines that put forwarded by the New Zealand Stock Exchange (NZX) in the compile or explain environment. The results reveal that corporate governance guidelines are not fully understood by agricultural companies. Listed agricultural companies provide inadequate corporate governance related disclosure and their non-listed counterpart are providing even less disclosure in this area. The financial and governance reports of these companies are suffering from deficient transparency in the area of corporate governance.

Key words: Corporate Governance, Agricultural Companies, NZX Corporate Governance Codes, Corporate Governance Compliance Index
Introduction
New Zealand economy is an agricultural based economy that more than 95% of the companies are SMEs while big agricultural companies are leading the industry. According to Statistic New Zealand in February 2014 about 70,000 companies were active in agriculture, forestry and finishing that is the second largest group of companies after retail, hiring and real estate services (Statistics New Zealand factsheet, 2014). Nonetheless, small and big agriculture companies are active in exporting agricultural product while big companies are act as role model for SMEs and are in many cases are the sole buyer of SMEs’ products. Consequently the prospect of big companies (listed, non-listed, or government owned) have direct impact on SMEs and the New Zealand economy. While the financial reports and therefore financial analysis providing an insight into companies effectiveness and efficiency, non-financial information about corporate governance (CG) offering a complete picture of how companies equipped to maintain and implement developmental plans for further effectiveness and efficiency in the sustainable development of the country.

In the small common law New Zealand jurisdiction, CG is important since the country is involve in free-trade agreement with Australia in one hand and with the United States in the other hand while Australia has the same agreement with the USA. This implies that New Zealand companies CG compliance and disclosures are closely scrutiny by foreign investors and potential export competitors which agricultural companies are main players.

This research project is developed to put some shade on how big agricultural companies in New Zealand are considering corporate governance rules. The study first look at the state of CG in the agricultural sector of the New Zealand from institutional perspective then at the micro level consider the implementation CG rules in the listed and non-listed agricultural big companies. For listed companies unlike non-listed companies providing CG disclosure is one of the listing prerequisites. To be comprehensive big non-listed companies that prepare and published financial statements are also considered in the study.

Following this introduction, literature review including the research questions is presented in the section two and methodology in the section three of the paper. Section four is results presentation and discussion while the last section concluded the research project and providing recommendations.

Background of the Study
Corporate governance literature is well documented in the literature, but literature of CG in New Zealand is limited to some research studies in the recent years. When it comes to CG in agriculture companies, no research study is found suggesting the need of fundamental research studies in this area. Considering the importance of sustainable development in agricultural products which is vital to New Zealand economic development via sustain exporting agricultural products. Agricultural product while vulnerable to climate changes and international competition are vigorous for human beings life. Agriculture companies must adopt an ingenious CG system to win the indigenous and international competition and grantee their sustainable development. In the following section a literature of CG New Zealand is explained.

Corporate Governance in NZ
In the literature basically two types of companies are distinguished, listed and non-listed. In the New Zealand context while a majority of registered companies (about 95%) are SMEs,
the limited number of big companies are listed in New Zealand Stock Limited (NZX) main board (NZSX), Alternative Market (NZAX), or the Debt Market (NZDX). Those companies that are not listed are a vast spectrum of micro companies (family owned, less than 5 employee), to SMEs (less than 100 employee) and some big state owned companies. The financial market required listed companies to adopt CG rules on the basis of compile or explain regime. It is assumed that many SMEs and big non-listed companies will follow the stock market CG guidelines on the voluntary basis.

Nonetheless based on agency theory, CG disclosure receive more attention where ownership and managerial control are separated. Looking at the New Zealand companies’ ownership structure, reveals that owners managers are common practice with an increasing level of majority shareholders controlled in non-listed companies. This group of companies that includes securities issuer companies are not bond to implement CG rules and regulations.

CG studies appear in the literature considering the unique socio-economic environment of New Zealand. Fox, Walker and Pekmezovic (2013) that have presented a literature review of CG disclosure papers confirming that CG is good in listed companies while non-listed counterparts (i.e. debt securities issuers) are not in the same position. It is documented that in 2010 New Zealand is ranked as the fifth in the world for corporate governance according to GMI ranking (GMI, 2010). Fox, Walker and Pekmezovic (2013) believe that “comply or explain” installed by NZX in complying with CG rules strength the status of CG in New Zealand, something that may not possible by strict regulatory regime. This approach have developed entrepreneurial boards that contribute in mitigating managerial risk from CG perspective.

It is concluded by Van der Walt, Ingley, and Townsend (2006) that of the boards of New Zealand companies are more homogenous than a diverse board. Homogenously is in gender, age, ethnicity, and functional may link to the board configuration, strategic context and corporate decision quality. In the same area Ahmed, Hossain and Adams (2006) consider the effect of board composition and size on the information usefulness of financial reports. They concluded that information usefulness is negatively related to the aforementioned variables even when the board include outside directors.

The effect of CG mechanisms on finance policies in the listed companies reveals companies with weak CG mechanisms have a tendency to rely more on financial leverages than their counterpart with strong mechanisms in CG (Koerniadi and Tourani-Rad, 2012b). The weak CG is considered as the cause of finance company failures in New Zealand (Wilson, Rose, and Pinfold, 2010).

Fox, Walker and Pekmezovic (2013) provide a good discussion on the impact of factors such as type of control and insider ownership which is the proportion of ordinary shares held by board of directors. As they illustrated, listed companies in New Zealand, historically were less controlled by majority of shareholders than managers while an increase in the international ownership is observable from 1985 to 2001 (Fax & Hamilton, 1994 and Fax & Walker, 2002). As Fox and Hamilton (1994) indicate, they did not find a statistical relationship between ownership diversification and structural control, furthermore companies’ profitability are not related to managerial or ownership control (Fox et al., 2013). In this area Watson and Hirsch (2010) studied the relationship of different type of control from CG perspective with corruption. They concluded that week CG implementation coupled with unjustifiable corporate structure are sources to of corporate corruption. In the same area, research results of Hossain, Prevost and Rao (2001) shows that insider and shareholder ownership are 6.8% and 76.3% respectively. They exhibit a strong relationship between...
insider ownership and firm performance and concentrated ownership has adverse impact on performance. However, a contradict results is reported by Reddy, Locke, and Scrimgeour in 2010. Study of Jiang and Habib (2009) concluded that corporate disclosure differently impacted by various shareholding control. It seems in two decades before the effect of different type of ownership on firm performance and consequently on firm value as Navisi and Naiker (2006) observed was different. They found that firm value decreases as a result of increasing in the level of institutional investing to a certain level, at the higher levels this relationship exhibit reverse impact. Getting back to the study core focus in the protection of investors by CG rules, Chiu and Monin (2003) advocate that CG guidelines should be considered on the basis of case-by-case rather than one fit all. Considering CG compliance and ownership concentration research results of Bhuiyan, Roudaki and Clark (2013a) reveal that CG compliance enhance managerial accountability while mitigate management financial discretion decision making. In the same way CG compliance promote firm value of due to enhanced internal control and consequently surrounded managerial opportunistic behaviour (Bhuiyan, Roudaki and Clark, 2010).

Using a sample of New Zealand companies in the period of 2004-2008, Koerniadi and Tourani Rad (2012b) study CG mechanisms from the financing policies stand point. Based on administered CG index they found that companies with strong CG mechanisms have less leverage than firms with week CG mechanisms. They reported that companies implemented different levels of CG mechanisms to obtain CG quality. In Another paper Koerniadi and Tourani Rad (2012a) examine the impact of independent director/s’ presence on firm value. The results indicate that when the independent directors are in majority they are able to influence firm value otherwise their presence negatively influence the firm value. Considering the stewardship theory results obtained by Koerniadi and Tourani Rad (2012a) is justifiable while minority independent director is not a successful experienced in the New Zealand socio-economic environment.

The relationship of institutional investors and role of executive committee has been investigated in the study of Gunasekarage and Wilkinson (2002) which the results indicate that as predicted CEO compensation exhibited a statistically influence by firm performance. Jiang, Habib and Smallman (2009) extent this literature to report a nonlinear relationship between ownership concentration and top managerial compensation.

Continuing with the discussion of control in the New Zealand companies, Murray (2001) said that controlling power is compromise when one member of directors’ board is the member of other company or companies’ board that information may flow into a wider business environment. Empirical research of Bhuiyan and Roudaki (2013) questioned the effectiveness of CG in the light directorship interlocking in the New Zealand business context. They show that company to company interlock (company has interlocking, through the board member, with other companies) and board interlock (directors of one company sit in other boards) has an adverse effect on firm performance. Nonetheless, interlock directorship has no effect on CG and negative impact on ownership concentration (Bhuiyan & Roudaki, 2013).

Board composition including board size, presence of independent directors, CEO duality, and board diversity are centre of interest of many scholars in CG related research studies. While NZSX required minimum 3 directors on board, a typical board size in New Zealand that is reported to be 7.5 by 1985 (Fox et al., 2013) decreased to 6.23 in 2010 as reported by Bhuiyan, Roudaki and Clark (2013b). More number of directors can be translated more diverse expertise combine in the boards for decision making (Hillman, 2000) while increasing possibility interlock in the managerial labour market that suffers from lack of independent expert directors (Bhuiyan & Roudaki, 2013). CEO duality that was about 11.4%
in 1984 (Fox et al., 2010) has fallen to less than one percent in 2010 (Bhuiyan, et al., 2013a). However, different and controversial findings about CEO duality is reported in the literature.

Gender diversity, experience, and expertise of the board are other characteristics that formed core of some papers, of board. Presence of woman on the board of directors of companies (i.e. diversity on board) has been increased from 4.1% in 1997 to 5.7 in 2001 (Van der Walt, Ingley & Townsend, 2006) and then increased to 7.7% in 2009 (Fox et al., 2013). Re-appointment of directors is encouraged by the New Zealand CG rules, but there is no suggested threshold for number of time of re-appointment and tenure, Bhuiyan (2010) reported that 31 years of combined tenure of his sample listed companies during 2000 to 2007.

Board committees (i.e. audit, remuneration, and nomination) are strength of means for board of directors to maintain control over the companies’ activities and development in the New Zealand companies. In the recent years number of companies that formed audit committee has increased dramatically as in 1982 about 15% of companies have active audit committees (Bradbury, 1990) that this figure has increased to 22% in 1989 (Lukkassen, 1998). In the beginning of 1990’s the percentage of companies with audit committee increased to 63% (Porter & Gendall, 1998) that increased to around 73% in 2007 (Bhuiyan, 2010). The size of audit committee that reported to be on average 3.5 (included 2.9 non-executive directors) in 1996 (Fox & Walker, 1998) has increased to average of 4 members in 2007 (Bhuiyan, 2010). It is considered that audit committee qualification, frequency of meeting and composition are a good indicator of decent CG practice. Vineeta, Naiker, and Lee (2009) prove that as the managerial ownership increasing the frequency of audit committee increasing. They reported that 78% of audit committees in New Zealand have an independent director as chairperson and 67% include at least one professional accountant attending the audit committee.

According to New Zealand CG rules establishment of a remuneration committee is recommended and the member of such committee should be introduced in the annual reports (Securities Commission, 2004, 2011). Fox and Walker (1996) reported an average of 3.6 members, while three were non-executive directors, member of the remuneration committee of the listed companies.

The composition of nomination committee is explained in the listing rules that required companies to establish rigours formal and transparent charter for nomination and appointment of new directors (NZX Listing Rules, 2013). Ingely and Walt (2001) found five factors contribute selection of directors, these factors are related to shareholder interests’ representation, industry and business community reputation, and recognised strategic competences.

Research Question
Based on the above literature review following research questions are developed for the research project.

1) What is the status of corporate governance in the New Zealand agricultural companies?

The above question investigate implementation of CG rules in the agricultural companies including horticulture and fishery companies. In the compile or explain of CG rules in New Zealand socio-economic environment only those companies that are listed are required to implement CG rules and include CG disclosure in their annual reports as non-financial
information. As some big non-listed companies are preparing such disclosure on the voluntary basis it would be possible for this research project to include these companies in the study. The second question of the research project is:

2) What is the quality of CG disclosure provided by Agricultural companies?

The same as above all listed and a group of big non-listed agricultural companies financial and CG reports are considered for the qualitative research in this study to provide a respond to the above question. A Corporate Governance Index is developed to examine the quality of CG disclosure provided by agricultural companies. Explanation of development of the CG Index is included in the methodology section of the paper.

Methodology
This research uses qualitative research methodology to examine the quality of corporate governance disclosure included in the published material by agricultural companies in the New Zealand. The quantitative information about CG implementation is collected and analyses to expand the qualitative CG discussion. The following sections explain population of the study and development of CG Index to investigate the quality disclosures presented by the sample companies.

Population of the Study
Agricultural companies including all listed in NZX and those big non-listed but provide disclosure about implementation of CG is considered as population of the study. NZX Listed companies including agricultural companies are required to adapt NZ Corporate Governance Principles Guidelines published by Securities Commission in 2004 and NZX Listed Rules provided in the website of NZX. Some of non-listed agricultural companies selected to report CG disclosures as part of their annual reports while others prefer to publish such disclosures in their website, as a separate section of their financial reports, or as an independent report next to it. The non-listed companies are selected to find a comparison base between CG compile or explain regime and voluntary environment. It is anticipates that listed companies provide more quality and quantity of CG disclosure than their non-listed counterparts; however as expected not all non-listed companies have published a complete or partial CG disclosure. To satisfy the objectives of the study all 11 agricultural listed companies and a group of 10 not-listed companies that provide CG disclosure are selected, few of these companies are government owned or affiliated to government agencies. However there are many agricultural companies that are excluded from the sample of this research due to lack of financial information. These companies are not providing any report to the public therefore not fall into the study sample companies.

CG Compliance Index
To examine the quality and quantity of CG disclosure published by New Zealand agricultural companies, a CG Index is developed and administered. The Index is developed based on 2004 New Zealand Corporate Governance Principles and Guidelines. The other source of CG compliance index development was a comprehensive literature review of those scholarly papers that develop and use CG check list or index such as Sapovadia (2011), Varshney, Kaul and Vasal, (2012), Juniarti, and The (2012), Grimminger, and Benedetta (2013) and Thanh Tu, Khanh and Quyen (2014).
Content analysis is implemented in this research project for examination of the quality of CG disclosure by sample companies. As recommended in the literature, in the content analysis a coding system and unite/s of analysis should be adopted for examination of each item of the index. Extant literature has adopted different coding system form binary to five or more level to reveal the quality of each item of the index individually and collectively. The analyses embrace from using a single word, symbol, phrase, or clause to a complete sentence or paragraph. Based on the needs of the study and or availability of the data researchers preference in some cases have extended to consider a page, themes or even the whole text as unit of examination and analysis (Petty & Guthrie, 2000; Barako, Hancock & Izan, 2006; Vandemaele, Vergauwen, & Smits, 2005; Collett & Hrasky, 2005; Coy & Dixon, 2004).

Unit of analysis in this research is considered as an informative paragraph, phrase or sentence. This method considered as an effective approach to reveal the quality of CG disclosure. As the first step a descriptive statistical data analysis implemented to analyse data obtained from reviewing the quantity (i.e. number of pages) of CG disclosure provided by agricultural companies. In the content analysis phase of the study individual company score is calculated as proxy for the quality of each item of CG compliance index. This indexed which is developed based on New Zealand Corporate Governance Principles and Guidelines (2004) includes nine sections, 46 criteria, and 64 best practice codes as explained in Table 1. Each best practice code is scored two if completed information is provided, and considered as score one for partial information, otherwise zero. For data analysis two horizontal and vertical scores are calculated in a matrix of data collected. As the companies are in the first column of the matrix each row provides Company CG Compliance Disclosure Score (CDS) that indicates the quality of disclosure compliance with CG Best Practice Codes within all sections, criteria, and best practice codes. In the same way as CG sections, criteria, and best practice codes are in the first two top rows of the matrix therefore each column calculates the best practice codes score. In analysis the best practice codes scores within each criterion is added together to reach the Section CG Compliance Score (SCS). This score shows the coverage that each section and criterion has received from the company’s managerial team to disclose about CG guidelines.

Table 1 presents the number of best practice codes included in the developed CG compliance index. Based on this table the maximum score for each of nine sections of CG guideline would be the last column of Table 1 (best practice code) multiplied by two. Following this calculation, the maximum total Company CG Compliance Disclosure Score is 128 (64X2).

<table>
<thead>
<tr>
<th>Section</th>
<th>Criterion</th>
<th>Best Practice Code</th>
<th>Max. SCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Ethical Standards</td>
<td>5</td>
<td>11</td>
<td>22</td>
</tr>
<tr>
<td>2 Board Composition and Performance</td>
<td>11</td>
<td>14</td>
<td>28</td>
</tr>
<tr>
<td>3 Board and Audit Committees</td>
<td>5</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>4 Reporting and Disclosure</td>
<td>7</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>5 Remuneration</td>
<td>5</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>6 Risk Management</td>
<td>3</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>7 Auditors</td>
<td>6</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>8 Shareholder Relations</td>
<td>4</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>9 Shareholder Interest*</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>47</td>
<td>64</td>
<td>128</td>
</tr>
</tbody>
</table>

* Shareholder Interest section has three best practice codes in the original index, since two of the codes were extremely subjective, data collection was impossible therefore omitted form data analysis.
As recommended in the literature (for example Garcia-Meca & Martinez, 2005) in the context of asymmetric information, the CG disclosures are considered to be a highly asymmetric information, the costs (including financial, non-financial, and social cost) of providing such information in some cases surpassed the benefits (including financial, non-financial, and social) drives from disclosure of such information. However, considering legitimacy and signalling theories justifying the unfavourable outcomes. This research considers this environmental factor into consideration to reveal the quality of CG disclosures provided.

**Result Discussion**

The results are presented into two sections of quantitative that explain the number of pages and quality of CG disclosure.

**Quantitative Results**

Table 2 shows number of pages that each of the 21 companies provided as part of their CG disclosure. As all agricultural companies have been considered as population of this study, there were five agricultural companies that they did not prepare any information related to CG as separate or part of financial information. This table provide general information about the status of CG implication by New Zealand agricultural companies that provide partially answer to the first question of this research.

As it is appear from Table 2, CG disclosure presented as a part of financial report is the most common approach in the agricultural companies. The quantity (i.e. number of pages) of presented information is varied from 12 pages to one page while the average pages of this type of reporting is 5.7 and 4.2 for listed and non-listed companies respectively. Preparation of a separate CG report is less common in the listed companies and only two out of 10 non-listed companies that provide CG disclosure prepare such separate report; the number of pages are very different. Other component of good practice in corporate governance that have recommended by CG guidelines received less attention from listed companies. Disclosures related to board of directors code of ethics and board of director charter are prepared by eight listed and three non-listed companies. When it comes to remuneration and nomination board committees the number of companies and the number pages drop dramatically to few pages of disclosures and only four listed companies and one not listed companies prepared separate information about their remuneration committee information while one and none listed and not listed companies prepared information related to remuneration. Audit and risk management committee is in the same boat that only three listed and one not listed company provided some information about this section of CG. The empty boxes in Table 2 are due to the fact that the study was not able to find published related information.

<table>
<thead>
<tr>
<th>Num</th>
<th>Listing Status</th>
<th>Financial Report</th>
<th>CG Report</th>
<th>Board Code Ethics and Board Charter</th>
<th>Remuneration Committee</th>
<th>Nomination Committee</th>
<th>Audit &amp; Management Risk Committee</th>
<th>Shareholder relation and Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>NZX</td>
<td>11</td>
<td>4</td>
<td>1.5</td>
<td>2</td>
<td>2</td>
<td>2.5</td>
<td></td>
</tr>
<tr>
<td>L2</td>
<td>NZX</td>
<td>12</td>
<td>1</td>
<td>11</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Quantitative Information about CG Disclosure by Agricultural Companies
Consider the level of published GC disclosure material included in Table 2, it is interesting to look at the external auditors of these companies. As included in Table 3, all of these companies are audited by Big 4 auditors while two of auditors are more actives than others. PWC and KPMG audited five and three of listed companies and one and seven not listed companies respectively.

### Table 3: External Auditors, Number of Companies

<table>
<thead>
<tr>
<th></th>
<th>Listed</th>
<th>Not Listed</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWC</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>KPMG</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Deloitte</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Ernst &amp; Young</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

**Quality of CG Disclosure**

In the qualitative data analysis phase of the study, implementing the CG compliance index two vertical and horizontal scores are calculated. The horizontal score, the Company CG Compliance Disclosure Score (CDS) for each listed (ALC) and none listed (ANC) company is calculated. The vertical score of Section CG Compliance Score (SCS) for each ALC and ANC is calculated. The CDS reveals the level of compliance or extended of adaptation of the CG guidelines that recommended by NZX in the “compile or explain” environment by the sample individual agricultural companies. The SCS indicates the usage of each the nine sections of the CG compliance index from holistic view point. In the other words this score shows the popularity of the each section, criteria and best practice of the CG guidelines in comparison. In order to compare the companies CDSs the percentage of the scores on the basis of maximum score of each criterion or best practice code is calculated. To observed anonymously of companies eleven agricultural listed companies are numbered as L1 to L11.
and in the same way 10 non-listed companies named as N1 to N10 in the data analysis and result presentations.

As explained in the CG Compliance Index section, the maximum score for each company is 128, table 4 shows each company CG compliance disclosure score (CDS) by the ALC and ANC. This table also presents the CDS for each company considering nine sections of the CG guidelines. Due to the fact that CG codes are required for ALC while volunteer for ANC therefore CDS of listed and not listed are presented separately while arranged from the highest CDS in Table 4.

While the average of CG Compliance Disclosure Scores (CDS) in the ALCs column of Table 4 is much higher than ANCs (40.6% and 21.6% respectively), both scores are much lower than the maximum scores of compliance which is 128 (see Table 1). The highest percentage of required CG compliance by the ALCs indicates that at the best 76.5% of required disclosures are publicly available. Interestingly the highest percentage of CG compliance of ANCs which are not required to present such disclosures is 65.9%, with the average of 21.6%. In addition the skewness of CDS for ALCs is close to 0.5 indicating that the scores are distributed approximately symmetric, while the skewness of the same scores for ANCs is more than two saying that scores are skewed towards to the lowest. Results presented in Table 4 indicate that while ALCs did not fulfil the requirements of CG disclosures, they are almost homogenous in providing of such disclosures.

<table>
<thead>
<tr>
<th>Company</th>
<th>CDS</th>
<th>Percentage</th>
<th>Company</th>
<th>CDS</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>L7</td>
<td>101</td>
<td>76.5%</td>
<td>N4</td>
<td>87</td>
<td>65.9%</td>
</tr>
<tr>
<td>L3</td>
<td>80</td>
<td>60.6%</td>
<td>N8</td>
<td>40</td>
<td>30.3%</td>
</tr>
<tr>
<td>L6</td>
<td>77</td>
<td>58.3%</td>
<td>N2</td>
<td>35</td>
<td>26.5%</td>
</tr>
<tr>
<td>L8</td>
<td>68</td>
<td>51.5%</td>
<td>N7</td>
<td>29</td>
<td>22.0%</td>
</tr>
<tr>
<td>L1</td>
<td>62</td>
<td>47.0%</td>
<td>N1</td>
<td>21</td>
<td>15.9%</td>
</tr>
<tr>
<td>L9</td>
<td>50</td>
<td>37.9%</td>
<td>N6</td>
<td>20</td>
<td>15.2%</td>
</tr>
<tr>
<td>L10</td>
<td>49</td>
<td>37.1%</td>
<td>N9</td>
<td>17</td>
<td>12.9%</td>
</tr>
<tr>
<td>L11</td>
<td>27</td>
<td>20.5%</td>
<td>N10</td>
<td>15</td>
<td>11.4%</td>
</tr>
<tr>
<td>L2</td>
<td>27</td>
<td>20.5%</td>
<td>N5</td>
<td>13</td>
<td>9.8%</td>
</tr>
<tr>
<td>L4</td>
<td>26</td>
<td>19.7%</td>
<td>N3</td>
<td>8</td>
<td>6.1%</td>
</tr>
<tr>
<td>L5</td>
<td>22</td>
<td>16.7%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>53.55</td>
<td>40.6%</td>
<td>Average</td>
<td>28.5</td>
<td>21.6%</td>
</tr>
<tr>
<td>STD</td>
<td>26.41728085</td>
<td></td>
<td>STD</td>
<td>22.8533975</td>
<td></td>
</tr>
<tr>
<td>Skew</td>
<td>0.345165488</td>
<td></td>
<td>Skew</td>
<td>2.14853942</td>
<td></td>
</tr>
</tbody>
</table>

Table 5 presents the total of SCSs and corresponding percentage for each of the 9 CG sections of the compliance index. Again listed and not listed are reported separately due to the nature of required compliance and volunteer disclosure. This table present an all-inclusive picture of status of CG compliance in the New Zealand agricultural companies.

As it is appear from Table 5 all SCSs are not high, on average only 37.6% of possible disclosure is provided by ALCs while ANCs the average is 19.5% to build the overall average of 29%. Disclosure about Board and Audit Committee section of CG has the maximum percentage that are 61.1% and 49.7% by two groups of the companies, while this section is the only section that obtain a little above fifty percentage of required disclosure by
ALCs. While the trend of disclosure follows the same pattern in both group of companies, two sections have stood above others have the percentage of close to 50% in the ALCs. They are Composition and Performance and Remuneration sections. The level of disclosure about Shareholder Interests is low due to the fact that the best practice codes that are suggested by CG codes of best practice are very subjective while companies was not good at presenting evidence for this section. Apart from this section, disclosure about Auditors section of the compliance index is low (27.3% by ALCs and 21.1% by ANCs) indicating that while companies are providing marginal information about their audit committees, they are not following the same manner in providing information about auditors of the company.

Table 5: Section of CG Compliance Score (SCS)

<table>
<thead>
<tr>
<th>Section</th>
<th>Listed Companies</th>
<th></th>
<th>Not-Listed Companies</th>
<th></th>
<th>All Companies</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SCS</td>
<td>Percentage</td>
<td>SCS</td>
<td>Percentage</td>
<td>SCS</td>
<td>Percentage</td>
</tr>
<tr>
<td>Ethical Standards</td>
<td>91</td>
<td>37.6%</td>
<td>21</td>
<td>9.5%</td>
<td>112</td>
<td>24.2%</td>
</tr>
<tr>
<td>Board Composition and Performance</td>
<td>141</td>
<td>45.8%</td>
<td>83</td>
<td>29.6%</td>
<td>224</td>
<td>38.10%</td>
</tr>
<tr>
<td>Board and Audit Committees</td>
<td>121</td>
<td>61.1%</td>
<td>67</td>
<td>37.2%</td>
<td>188</td>
<td>49.7%</td>
</tr>
<tr>
<td>Reporting and Disclosure</td>
<td>60</td>
<td>39.0%</td>
<td>35</td>
<td>25.0%</td>
<td>95</td>
<td>32.3%</td>
</tr>
<tr>
<td>Remuneration</td>
<td>51</td>
<td>46.4%</td>
<td>29</td>
<td>29.0%</td>
<td>80</td>
<td>38.1%</td>
</tr>
<tr>
<td>Risk Management</td>
<td>26</td>
<td>39.4%</td>
<td>4</td>
<td>6.7%</td>
<td>30</td>
<td>23.8%</td>
</tr>
<tr>
<td>Auditors</td>
<td>42</td>
<td>27.3%</td>
<td>20</td>
<td>14.3%</td>
<td>62</td>
<td>21.1%</td>
</tr>
<tr>
<td>Shareholder Relations</td>
<td>51</td>
<td>33.1%</td>
<td>20</td>
<td>14.3%</td>
<td>71</td>
<td>24.1%</td>
</tr>
<tr>
<td>Shareholder Interests</td>
<td>6</td>
<td>9.1%</td>
<td>6</td>
<td>10.0%</td>
<td>12</td>
<td>9.5%</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>37.6%</td>
<td></td>
<td>19.5%</td>
<td></td>
<td>29.0%</td>
</tr>
<tr>
<td>Skew</td>
<td>-0.56334</td>
<td></td>
<td>0.418231</td>
<td></td>
<td>0.212212041</td>
<td></td>
</tr>
</tbody>
</table>

**Ethical Standards**

The first section of CG guideline is ethics which includes 11 best practice codes which the scores are presented in Table 6 for both groups of the companies. Based on research scoring system of the quality of disclosure, 24 is the maximum of the compliance score for this section. Further enquiry to the level of disclosure indicates that four ALCs and seven ANCs are not providing any disclosure about ethics in the period of the study. Ironically ALCs are required by NZX listing rules to disclose CG compliance while they are all audited by Big 4 auditors (see Table 3). As the companies are sorted by the heights level of disclosure, the maximum of 90.9% is a good score for L7 (company number 7) that is followed by two other counterparts with level of disclosure of 86.4% and 81.8%. The level of disclosure is dropped dramatically from company four in the ALCs column. In the ANCs group apart from the first
one which provides a good level of disclosure other either provides very low disclosure or nothing at all. Considering that four ALCs and seven ANCs are not providing any disclosure about ethical standards, average of disclosure scores are 8.3 and 5.0 for both groups respectively. Moreover CDSs skewness of ALCs is between zero and 0.5 that indicates the distribution is approximately symmetric while there are companies that produce high quality of disclosure with companies produce nothing at all.

Table 6: Ethics Standards CDS

<table>
<thead>
<tr>
<th>Agricultural Listed Companies</th>
<th>Agricultural Not-Listed Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company</td>
<td>CDS</td>
</tr>
<tr>
<td>L7</td>
<td>20</td>
</tr>
<tr>
<td>L3</td>
<td>19</td>
</tr>
<tr>
<td>L6</td>
<td>18</td>
</tr>
<tr>
<td>L1</td>
<td>12</td>
</tr>
<tr>
<td>L8</td>
<td>12</td>
</tr>
<tr>
<td>L10</td>
<td>8</td>
</tr>
<tr>
<td>L2</td>
<td>2</td>
</tr>
<tr>
<td>L4</td>
<td>0</td>
</tr>
<tr>
<td>L5</td>
<td>0</td>
</tr>
<tr>
<td>L9</td>
<td>0</td>
</tr>
<tr>
<td>L11</td>
<td>0</td>
</tr>
<tr>
<td>Average</td>
<td>8.3</td>
</tr>
<tr>
<td>STD</td>
<td>8.295672</td>
</tr>
<tr>
<td>Skewness</td>
<td>0.291102</td>
</tr>
</tbody>
</table>

From another angle a detail Ethical Standards scores in each of the 11 best practices by all companies are presented in Graph 1. In this Graph companies are sorted by size (log of total assets as proxy). As appear in this Graph the mean of CDSs that indicate the CG disclosure compliance following the same pattern in the ALCs and ANCs while the line of related to ANCs except for few companies is much lower. As the companies in Graph 1 are sorted by size, it seems that larger ALCs are relatively provided more ethics disclosure than their counterpart from ANCs group. When it comes to smaller companies, listed firms relatively provides less ethics disclosures than smaller not listed firms because the distance of the two lines is relatively narrower in the smaller area.
This section of the CG compliance index consists of 11 criteria and 14 best practice codes. Table 7 presents Board Composition and Performance CDS for ALCs and ANCs which ranked from the highest scored company for two groups separately. Unlike the previous section of the CG guidelines (i.e. Ethics Standard) although the disclosure scores are lower, but all companies of two groups are providing some disclosure. Nevertheless as expected the ALCs provide more disclosure than ANCs, but the CDS percentage of the highest ALCs and ANCs are very close (78.6% and 71.4% respectively) while the same percentage for least ALC is much lower than ANC counterpart. The average of disclosure scores about board composition and performance 12.8 and 8.3 for both groups respectively. Skewness of CDS of ALCs indicating that scores are approximately symmetric, while skewness of ANC scores is highly skewed towards the low level of disclosure for board composition and performance disclosure.

**Table 7: Board Composition CDS**

<table>
<thead>
<tr>
<th>Agricultural Listed Companies</th>
<th>Agricultural Not-Listed Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company</td>
<td>CDS</td>
</tr>
<tr>
<td>L7</td>
<td>22</td>
</tr>
<tr>
<td>L8</td>
<td>20</td>
</tr>
<tr>
<td>L9</td>
<td>19</td>
</tr>
<tr>
<td>L1</td>
<td>15</td>
</tr>
<tr>
<td>L3</td>
<td>13</td>
</tr>
<tr>
<td>L2</td>
<td>12</td>
</tr>
<tr>
<td>L6</td>
<td>12</td>
</tr>
<tr>
<td>L10</td>
<td>12</td>
</tr>
<tr>
<td>L11</td>
<td>9</td>
</tr>
<tr>
<td>L4</td>
<td>6</td>
</tr>
<tr>
<td>L5</td>
<td>1</td>
</tr>
<tr>
<td>Average</td>
<td>12.82</td>
</tr>
<tr>
<td>STD</td>
<td>6.177672</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.32855</td>
</tr>
</tbody>
</table>

Graph 2 shows the scores for each of 14 the best practice codes of Board Composition and Performance. The levels of disclosure for all SCSs of this section of the CG index for both groups of companies are very close. While the level of disclosure about three best practice
codes (i.e. 2.1 - An appropriate balance of executive and non-executive directors, 2.3 - Monitoring that directors act in the best interests of the entity, ahead of other interests, and 2.13 - Disclosure that identifying which directors are independent) are high; they are almost the same for both groups of companies. The score of CEO duality disclosure and formal criteria for independent directors are satisfactory but not enough; the total scores are slightly above 50% by ALCs while ANCs are reluctant to provide disclosure about these two best practice codes (scores are around 20%). However, the two lines of trend of the level of disclosure especially for smaller companies are very close while the lines for bigger companies are exhibiting a mix match trend when considering two lines.

Graph 2: Board Composition and Performance Section of the CG Compliance Index

**Board and Audit Committees**

Table 8 shows the scores and percentages of Board and Audit Committee Disclosures for all companies. In this table companies are arranged by their CDS from the highest. Unlike the previous three tables company number 7 (L7) which was in the top in those tables in this table takes the first position. The second and third companies (L3 and L6) move to the first position with the same CDSs that are 100% disclosure. Interestingly, one company from two groups is providing no disclosure about Board and Audit Committee codes of best practice. However, score of ALCs are higher than ANCs. There is a credibility gap between the highest score (100%) and the lowest score which is zero in the ALC column. The skewness is approximately symmetric indicate a unique condition for the average of disclosure (i.e., 11) about Board and Audit Committee of CG compliance index. The average of ANC scores is as low as 6.7 out of maximum score of 18 while distribution is skewed towards the maximum indication that few companies provide good quality of disclosure on oppose to those are lagging behind.

**Table 8: Board and Audit Committee Disclosure CDS**

<table>
<thead>
<tr>
<th>Agricultural Listed Companies</th>
<th>Agricultural Not-Listed Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company</td>
<td>CDS</td>
</tr>
<tr>
<td>L3</td>
<td>18</td>
</tr>
<tr>
<td>L6</td>
<td>18</td>
</tr>
<tr>
<td>L7</td>
<td>16</td>
</tr>
<tr>
<td>L9</td>
<td>15</td>
</tr>
<tr>
<td>L4</td>
<td>12</td>
</tr>
<tr>
<td>L1</td>
<td>10</td>
</tr>
<tr>
<td>L8</td>
<td>10</td>
</tr>
<tr>
<td>L10</td>
<td>10</td>
</tr>
</tbody>
</table>
Considering Graph 3 that includes SCS for Board and Audit Committee Section of the research CG Compliance Index. Most of the best practice codes of this section are received high attention by ALCs. However, ANCs as in the previous CG section follow the same pattern but in the lower level of disclosure. In comparison to other best practice codes disclosure about two of them (manly: 3.4 - audit committee recommend the appointment of external auditors and 3.6 - audit committee promote integrity in financial reporting) are very low in both groups, it could be related to the nature of these codes that too subjective therefore companies was not able to present documentation about implementing of them. These two codes are classified as audit committee duty which is one of the five criteria of Board and Audit Committees section. As the two groups of companies are sorted by size (Log of total assets as proxy) therefore fluctuation of two lines in Graph 3 could be considered as an indicator of that company size may explain the level of disclosure in this section.

Graph 3: Board and Audit Committee Section of the CG Compliance Index

Reporting and Disclosure
Low averages of Reporting and Disclosure CDSs that are presented in Table 9 indicating that both groups of companies are not good at in providing enough evidence for this section. On the other hand the best practices indicators of this section are have some aspects of subjectivity that undermine the result of qualitative research that considers published disclosure as source of data collection. Data to prove that companies are compiled with the best practice of this section may collected through focus group brain storming of knowledgeable in this area and those people involve in using the published financial reports as part of their decision making process. CG scores of the best practices (i.e. SCS) of this section flow the same trend of disclosure therefore presentation the related graph is not adding much to the discussion of the results.
Table 9: Reporting and Disclosure CDS

<table>
<thead>
<tr>
<th>Agricultural Listed Companies</th>
<th>Agricultural Not-Listed Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company</td>
<td>CDS</td>
</tr>
<tr>
<td>L3</td>
<td>11</td>
</tr>
<tr>
<td>L6</td>
<td>11</td>
</tr>
<tr>
<td>L7</td>
<td>11</td>
</tr>
<tr>
<td>L8</td>
<td>7</td>
</tr>
<tr>
<td>L5</td>
<td>6</td>
</tr>
<tr>
<td>L10</td>
<td>5</td>
</tr>
<tr>
<td>L1</td>
<td>4</td>
</tr>
<tr>
<td>L9</td>
<td>3</td>
</tr>
<tr>
<td>L4</td>
<td>1</td>
</tr>
<tr>
<td>L11</td>
<td>1</td>
</tr>
<tr>
<td>L2</td>
<td>0</td>
</tr>
<tr>
<td>Average</td>
<td>5.45</td>
</tr>
<tr>
<td>STD</td>
<td>4.156047</td>
</tr>
<tr>
<td>Skewness</td>
<td>0.26974</td>
</tr>
</tbody>
</table>

Remuneration

As Table 10 shows the averages disclosure scores about Remuneration provided by of two groups of companies are below 50%. This supporting the idea that listed companies are not fully compile with financial market requirement of adoption of CG regulations. Voluntary environment of CG adoption in the non-listed companies is not suggesting any quality disclosure about management remuneration as well. Analysis of the five best practices of this section is following the same pattern. While the trend of disclosure scores of ALCs is above but near the ANCs scores trends, both trends are very low.

Table 10: Remuneration CDS

<table>
<thead>
<tr>
<th>Agricultural Listed Companies</th>
<th>Agricultural Not-Listed Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company</td>
<td>CDS</td>
</tr>
<tr>
<td>L11</td>
<td>8</td>
</tr>
<tr>
<td>L2</td>
<td>6</td>
</tr>
<tr>
<td>L3</td>
<td>6</td>
</tr>
<tr>
<td>L7</td>
<td>6</td>
</tr>
<tr>
<td>L10</td>
<td>6</td>
</tr>
<tr>
<td>L1</td>
<td>5</td>
</tr>
<tr>
<td>L6</td>
<td>5</td>
</tr>
<tr>
<td>L8</td>
<td>5</td>
</tr>
<tr>
<td>L4</td>
<td>3</td>
</tr>
<tr>
<td>L5</td>
<td>1</td>
</tr>
<tr>
<td>L9</td>
<td>0</td>
</tr>
<tr>
<td>Average</td>
<td>4.64</td>
</tr>
<tr>
<td>STD</td>
<td>2.377929</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.94338</td>
</tr>
</tbody>
</table>
As presented in Graph 5, the disclosure scores of *setting policy for remuneration of executive* and disclosing remuneration policy in the annual reports are higher than other best practice codes in this section of the CG compliance index. Disclosure about *non-executive director receive a retirement payment* has the least score indicating that companies are reluctant to disclose much about personal aspects of their non-executive directors. Ironically while two lines of SCS are very close for almost half of the codes of best practice, these lines meet each other at the end indicating there is no different between two groups of companies.

Graph 5: Remuneration Section of the CG Compliance Index

**Risk Management**

Risk Management includes three best practices recommended by CG compliance index. As Table 11 shows only two ALCs are providing quality disclosure about this section (CDS percentages are 100% and 83.3%) other companies in this group disclosure scores are below 50% that make the average of score as low as 2.4 out of maximum of six. Except two ANCs that provide some disclosure others did not bother themselves to provide any sensible disclosure about risk management in their companies.

From another angle looking at the individual CG score of the three best practice of risk management. Although the first best practice of this section of CG compliance index (Rigorous processes for risk management and internal control) is received some attention to be considered to prepare disclosure about it but the other two best practice codes (i.e. *Risk Management Report* and *accountability*) of this section stimulate very low level of attention for providing disclosures.

<table>
<thead>
<tr>
<th>Agricultural Listed Companies</th>
<th>Agricultural Not-Listed Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company</td>
<td>CDS</td>
</tr>
<tr>
<td>L7</td>
<td>6</td>
</tr>
<tr>
<td>L8</td>
<td>5</td>
</tr>
<tr>
<td>L1</td>
<td>3</td>
</tr>
<tr>
<td>L6</td>
<td>3</td>
</tr>
<tr>
<td>L3</td>
<td>2</td>
</tr>
<tr>
<td>L5</td>
<td>2</td>
</tr>
<tr>
<td>L10</td>
<td>2</td>
</tr>
<tr>
<td>L2</td>
<td>1</td>
</tr>
<tr>
<td>L9</td>
<td>1</td>
</tr>
<tr>
<td>L11</td>
<td>1</td>
</tr>
<tr>
<td>L4</td>
<td>0</td>
</tr>
</tbody>
</table>
Auditors

Only one company (L7 CDS, 92.9%) in Table 12 exceptionally has the highest, except this company others are not interested to provide sensitive disclosure about their auditors, or in the very optimistic view point they consider it as given. CDS of ANCs in this area is too low, except the first three companies that provide some disclosure about their auditors; others provide either nothing or very low disclosures for this section. Notably auditors play an important in promoting to restore a sound internal control. The scores presented in Table 8 indicating mixed results about disclosure about Audit Committee. Putting together these results one can conclude that sample companies re not good in restoring internal control systems.

### Table 12: Auditors CDS

<table>
<thead>
<tr>
<th>Agricultural Listed Companies</th>
<th>Agricultural Not-Listed Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company</td>
<td>CDS</td>
</tr>
<tr>
<td>L7</td>
<td>13</td>
</tr>
<tr>
<td>L1</td>
<td>7</td>
</tr>
<tr>
<td>L3</td>
<td>5</td>
</tr>
<tr>
<td>L6</td>
<td>5</td>
</tr>
<tr>
<td>L9</td>
<td>5</td>
</tr>
<tr>
<td>L8</td>
<td>4</td>
</tr>
<tr>
<td>L10</td>
<td>3</td>
</tr>
<tr>
<td>L2</td>
<td>0</td>
</tr>
<tr>
<td>L4</td>
<td>0</td>
</tr>
<tr>
<td>L5</td>
<td>0</td>
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<tr>
<td>L11</td>
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<tr>
<td>Average</td>
<td>3.82</td>
</tr>
<tr>
<td>STD</td>
<td>3.970345</td>
</tr>
<tr>
<td>Skewness</td>
<td>1.148364</td>
</tr>
</tbody>
</table>

Considering company scores as explained above, one can expect that individual best practices scores (i.e. vertical analysis) for each best practice codes of Auditor section should not be high. Among six criteria and seven best practice codes of this section of the CG guidelines only the code related to evidence that shows external auditor and the entity are independent gain rather high score when it comes to consider individual codes scores. Other codes of best practice of this section are not receiving properly disclosures. Ironically the code about 1) report annually to shareholders and stakeholders about Audit Fees and 2) differentiate between fees for audit and fees for individually identified non-audit work are among the lowest scores indicating less transparency in the area of what companies are paid to auditor’s professional and related exertions.
### Shareholder Relations

Table 13 presents Shareholder Relation CDSs for the listed and non-listed sample companies. As appear from this table all scores are low. The highest percentage of scores for this section is 50% while others scores indicating low disclosures and consequently insufficient transparency. The average of 4.6 and 2 out of maximum of 14 for ALC and ANL respectively are another indication that this section of CG compliance index is not popular among agricultural companies. However sample companies are either listed or big agricultural companies that cannot be considered as fully family owned business to conclude that due to family ownerships transparency reporting is neglected.

<table>
<thead>
<tr>
<th>Company</th>
<th>CDS</th>
<th>CDS %</th>
<th>Company</th>
<th>CDS</th>
<th>CDS %</th>
</tr>
</thead>
<tbody>
<tr>
<td>L9</td>
<td>7</td>
<td>50.0%</td>
<td>N4</td>
<td>5</td>
<td>35.7%</td>
</tr>
<tr>
<td>L1</td>
<td>6</td>
<td>42.9%</td>
<td>N7</td>
<td>3</td>
<td>21.4%</td>
</tr>
<tr>
<td>L2</td>
<td>6</td>
<td>42.9%</td>
<td>N10</td>
<td>3</td>
<td>21.4%</td>
</tr>
<tr>
<td>L3</td>
<td>5</td>
<td>35.7%</td>
<td>N2</td>
<td>2</td>
<td>14.3%</td>
</tr>
<tr>
<td>L7</td>
<td>5</td>
<td>35.7%</td>
<td>N3</td>
<td>2</td>
<td>14.3%</td>
</tr>
<tr>
<td>L8</td>
<td>5</td>
<td>35.7%</td>
<td>N8</td>
<td>2</td>
<td>14.3%</td>
</tr>
<tr>
<td>L4</td>
<td>4</td>
<td>28.6%</td>
<td>N1</td>
<td>1</td>
<td>7.1%</td>
</tr>
<tr>
<td>L5</td>
<td>4</td>
<td>28.6%</td>
<td>N6</td>
<td>1</td>
<td>7.1%</td>
</tr>
<tr>
<td>L6</td>
<td>4</td>
<td>28.6%</td>
<td>N9</td>
<td>1</td>
<td>7.1%</td>
</tr>
<tr>
<td>L11</td>
<td>4</td>
<td>28.6%</td>
<td>N5</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>L10</td>
<td>1</td>
<td>7.1%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average</td>
<td>4.64</td>
<td>33.1%</td>
<td>Average</td>
<td>2</td>
<td>14.3%</td>
</tr>
<tr>
<td>STD</td>
<td>1.566699</td>
<td>0.111907</td>
<td>STD</td>
<td>1.414214</td>
<td>0.101015</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.97555</td>
<td>-0.97555</td>
<td>Skewness</td>
<td>0.883883</td>
<td>0.883883</td>
</tr>
</tbody>
</table>

From individual seven best practice codes (vertical analysis) of shareholder relations the first code (Have clear published policies for shareholder relations and regularly review practices) is received some attention from companies, other codes either exhibit low attention or none therefore there is no point for graphical presentation.

### Stakeholder Interests

Disclosure about Shareholders Interest as included in Table 14 has the lowest CDSs. Only four ALCs and three ANC provide low quality of disclosures while other does not bother to do so. Interestingly the highest score and CDS average of ANC is not higher than the ALC scores that assumed to provide compulsory disclosures as listing requirement. From individual best practice codes (vertical analysis) all codes have very low scores that graphical presentation is not providing values to result presentation.
### Table 14: Shareholder Interest CDS

<table>
<thead>
<tr>
<th>Agricultural Listed Companies</th>
<th>Agricultural Not-Listed Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company</td>
<td>CDS</td>
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### Conclusion and Remarks

This paper investigates the status and implementation of New Zealand CG 2004 guidelines in the listed (ALC) and non-listed (ANC) agricultural companies. The content analysis of the survey considers all nine sections including 47 criterion and 64 best practices of CG guidelines that have been suggested by NZX. The results indicating low compile with these guidelines in both groups of companies. However, as expected ALCs implement CG guidelines much more extensively than ANCs. All companies considered to include if not much but few CG disclosures in their published financial reports, however the general trend indication low level of disclosure while ALCs are providing more disclosure than their non-listed counterpart. As required by listing rules a majority of ALCs provided a separate CG report while ANCs were not active in this voluntary task. Considering that all companies were audited by Big 4 Auditors, one can assume that all ALCs observed listing requirement of complying with CG guidelines but neglected publishing complying reports. Nevertheless auditors’ report is silent about this uncompliant.

Two scores were calculated to rank the companies’ level of complying with GC criterion and best practices (i.e. Company CG Compliance Disclosure Score - CDS) and extended of each CG criterion adopting (Section CG Compliance Score - SCS). Ranking companies by their CDS indicating that although all the scores are low but a group of three big ALCs stay on the top for the level of quality disclosures about almost all nine sections and 47 criterion of CG guidelines. They are chased by a group of two ANCs. A group ALCs select not to comply their percentage of compliant even are less than voluntary provided disclosure by ANCs.

Contrasting and comparing the Section CG Compliance Scores indicating that the highest percentage of disclosure provided by the ALCs is about Board and Audit Committees, while the ANCs highest percentage of disclosure is about Board Composition and Performance. Disclosure about Shareholder Interests has the lowest percentage by both groups of agricultural companies.
It may be in the interest of legislators and NZX authorities that agricultural companies are paying less attention to implementation of CG guidelines that increase their risk management consequently fading their domestic and international competitiveness positions. Considering the importance of agricultural product in the exporting and GNP pushing away this risk is an important task. The results of this paper contribute in curving risk management imposing by uncompliant with CG guidelines.

Like other content analysis studies this survey suffers from some limitations such as lack of verifiable published material, long list of variables (i.e. items of CG index) to be examined by checking the available texts. Preparing and implementing a complete list of required CG disclosures remain a challenge in this survey.
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EMPIRICAL STUDY ON THE DISCLOSURE OF REASONS FOR AUDITOR SWITCHING: EVIDENCE FROM JAPAN

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ABSTRACT

This study investigates the relationship between the context of auditor switching and the reasons for the switch provided in the extraordinary reports, which constitute one of the most distinctive characteristics of the auditor switching institution in Japan. The results of the empirical analysis indicate that the firms that switched from Big N to non-Big N auditors as well as the firms that received going-concern opinions just before auditor switching tended to provide “expiration of auditors’ term of office” as the reason for the switch in the extraordinary reports. Additionally, this study empirically examines whether the reasons provided in the extraordinary reports affect investment behavior. Using cumulative abnormal returns, this study demonstrates that there are no significant market reactions to the reasons for auditor switching. Thus, it can be concluded that the disclosure system related to the reasons for auditor switching may not be useful for investors.
1. Introduction

Auditor switching has been frequently discussed in recent years. In April 2014, the European Parliament enacted new rules requiring public companies to switch auditors after a maximum of 10 years. Meanwhile, in the United States, the Public Company Accounting Oversight Board (PCAOB) reportedly halted a 3-year effort to establish mandatory auditor rotation. While companies are not allowed to switch auditors without certain justifiable reasons in the European Union (EU), auditor switching itself is not limited by specific reasons in the United States.

Given this background, the present study focuses on the reasons that are reported for auditor switching. Similar to the case in the United States, auditor switching is not limited by specific reasons in Japan. Moreover, from April 2008, any company in Japan that switches auditors is required to disclose the relevant information pertaining to the reasons for and the background to auditor switching in an extraordinary report. Thus, the objective of this study is to investigate the relationship between the context of auditor switching and the reasons provided in the extraordinary reports, which are one of the most distinctive characteristics of the auditor switching institution in Japan. In the extraordinary report, many companies that switched auditors (henceforward, “switchers”) have claimed the “expiration of auditors’ term of office” as the reason for the switch; only a few switchers have provided specific reasons. However, the phrase “expiration of auditors’ term of office” does not clearly represent the reality. Ordinarily, the current auditor could continue auditing a firm, and firms do not switch auditors frequently: “unless otherwise resolved at the annual shareholders meeting under the preceding paragraph, accounting auditors shall be deemed to have been re-elected at such annual shareholders meeting” (Companies Act Article 338 (2)) in Japan. Hence, the phrase “expiration of auditors’ term of office” does not explain the reasons for and the background to the switching of auditors in the true sense.

Therefore, this study specifically examines whether switchers of a certain kind with a probable motive for not publicly disclosing the true reasons for auditor switching simply tend to provide
“expiration of auditors’ term of office” as the reason for the switch in the extraordinary reports. Using audit firm size and going-concern opinions (GCO) to examine problematic cases of auditor switching, this study demonstrates that both the switch from Big N auditors\(^3\) to non-Big N auditors (“downgrading”) as well as GCO is associated with the use of the reason “expiration of auditors’ term of office.”

The rest of this paper is organized as follows. Section 2 reviews the extant literature and develops the study’s hypotheses. Section 3 outlines the sample and data and describes the research models. Section 4 reports the empirical results. Section 5 summarizes the results of the robustness check. Section 6 presents the conclusions and directions for future research.

2. Prior Research and Hypotheses

(1) Literature Review

A preliminary survey did not reveal any prior empirical studies related to the reasons for auditor switching in the context of Japan. Therefore, this section mainly reviews prior studies conducted in the context of the United States, whose audit institution is similar to that in Japan. Unlike in Japan, however, in the United States, the details related to auditor switching—including the reasons for and the background to switching auditors—are disclosed only when there is (i) a disagreement or a difference of opinion between the predecessor auditor and the manager or (ii) a reportable event in Form 8-K of the institutions.\(^4\) Therefore, most of the studies on the reasons for auditor switching in the United States focus on identifying the true reason for the switch through interviews and/or questionnaires or by using financial data.\(^5\) Additionally, several

\(^3\) The Big N auditors in Japan include the largest audit firms: Deloitte Touche Tohmatsu LLC, Ernst & Young ShinNihon LLC, KPMG AZSA LLC, and PricewaterhouseCoopers Aarata. The non-Big N auditors include the other audit firms.

\(^4\) According to the Securities and Exchange Commission (SEC (1989)), a switcher should state whether the former accountant resigned, declined to stand for re-election, or was dismissed, and the date thereof; whether the principal accountant's report on the financial statements for either of the past two years contained an adverse opinion or a disclaimer of opinion, or was qualified/modified as to uncertainty, audit scope, or accounting principles; whether the decision to change accountants was recommended or approved by (A) any audit committee or similar committee of the board of directors, if the issuer has such a committee, or (B) the board of directors, if the issuer has no such committee; etc. The details (including the reasons for and/or the background to auditor switching) are disclosed only when there is a disagreement or a reportable event.

\(^5\) Burton and Roberts (1967); Eichenseher and Shields (1983); Williams (1988); Kluger and
empirical studies examine why switchers voluntarily disclosed their reasons for switching. The Securities and Exchange Commission (SEC) encourages firms to voluntarily include information about the reasons for auditor switching in the Form 8-K filings in cases other than those involving a disagreement or difference of opinion between the predecessor auditor and the manager. Prior studies reported that 26 percent of the switchers voluntarily disclosed the reasons for auditor switching in their Form 8-K filings (Sankaraguruswamy and Whisenant, 2004). Thus, in the context of the United States, “the majority of the documented causes of why clients switch auditors comes from indirect evidence” (Fontaine and Letaifa (2012) p.6); moreover, the results reported in these prior studies appear to be contradictory. Therefore, this study mainly surveys the prior empirical studies that used voluntarily disclosed reasons for auditor switching in their analyses. The relevant prior studies are summarized in Table 1.

(Insert Table 1 here)

Prior studies have reported a greater variety of reasons for auditor switching in the United States compared to those reported in Japan; moreover, the Form 8-K disclosures are found to have information content. However, because of data limitations, some of the prior studies used samples that included mandatorily disclosed reasons (disagreements) and other voluntarily disclosed reasons. In addition, the preliminary survey did not reveal any prior empirical study that investigated whether switchers report the specific reasons for switching in certain contexts. This is because there are different institutions for the disclosure of auditor switching in Japan and in the United States.

(2) Hypotheses Development

It is expected that substantial descriptions of the reasons for and the background to switching auditors would be mentioned in the extraordinary reports when the disclosure of reasons is mandatory. However, it is found that many switchers simply claim “expiration of auditors’ term of office” as the reason for switching auditors.

Shields (1989); Haskins and Williams (1990); Beattie and Fearnley (1995), (1998); Tate (2007); Brazel and Bradford (2011); Fontaine and Letaifa (2012); Fontaine, Letaifa, and Herda (2013).

6 Refer to Turner, Williams, and Weirich (2005) for more details.

7 However, Sankaraguruswamy and Whisenant (2004) report different reasons for auditor switching according to auditor firm size in the case of auditor dismissal.
Under the Japanese Companies Act, “an accounting auditor's term of office shall continue until the conclusion of the annual shareholders meeting for the last business year which ends within one year from the time of their election” (Companies Act Article 338 (1)). Further, “unless otherwise resolved at the annual shareholders meeting under the preceding paragraph, accounting auditors shall be deemed to have been re-elected at such annual shareholders meeting (Companies Act Article 338 (2)).” Therefore, under ordinary circumstances, auditors cannot be switched simply because of their term of office expired. Thus, the reason “expiration of auditors’ term of office” is a cosmetic explanation that is far from the actual situation, and it is a material misstatement. In this context, it is suspected that the instances of auditor switching for which the reason provided in the extraordinary report is the “expiration of auditors’ term of office” are different from those for which a specific reason is provided. That is, certain kinds of switchers seem to have motives to not publicly disclose their true reasons for auditor switching, and they tend to provide “expiration of auditors’ term of office” as the reason for the switch in the extraordinary reports. Therefore, this study analyzes two issues: downgrading of audit firm size and going-concern opinions.

**Downgrading of Audit Firm Size**

According to DeAngelo (1981), a large audit firm has better resources for providing high-quality audits compared to smaller audit firms (theoretically). Thus, “when a client switches to a smaller auditor, the quality of the client’s financial reporting could be expected to decline” (Carver et al. (2011) pp. 37-38). Therefore, investors often consider the downgrading of audit firm size as a “red flag” (Eichenseher et al. (1989); Knechel et al. (2007)). However, several prior studies report that there are hardly any differences in the audit quality of large audit firms and that of smaller audit firms (Choi et al. (2008)); further, they report that switchers tend to not have

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8 The extraordinary report submitted when auditor switching has occurred has to include the opinion of the auditor who is subject to the switch in relation to the matters specified in the items of Article 4(1) of the Ordinance on Audit Certification or to the matters listed in the items of Article 6(1) of the Ordinance on Internal Control with regard to the decision for the switch or the grounds and the particulars that led to the switch (Cabinet Office Ordinance on the Disclosure of Corporate Affairs, etc. Article 19 (ix)-2 (c) 5). Therefore, the auditor who is subject to the switch must check the reasons for and the background to switching auditors in the extraordinary report. Hence, clients cannot provide whatever they want to as the specific reasons for auditor switching.

9 In fact, in the case of the fraud committed by Olympus, which is one of the biggest accounting scandals in Japan, auditor switching occurred in the defective fiscal year because of the disagreement between the auditor and the manager. However, the publicly disclosed reason for auditor switching was “expiration of auditors’ term of office,” initially.
success in opinion shopping\textsuperscript{10} (Chow and Rice (1982); Krishnan (1994); Krishnan and Stephens (1995); Geiger et al. (1998)). Moreover, in Japan, there is no empirical evidence to suggest the existence of successful opinion shopping. However, it seems to be conventional practice that smaller audit firms agree to work with the former clients of large audit firms (Machida (2010)). For instance, Riso Kyoiku Co., Ltd., whose accounting fraud was revealed in 2014, was found to have switched its auditor from one of the Big 4 auditors to a small audit firm when the manager had committed the accounting fraud.\textsuperscript{11}

According to signaling theory,\textsuperscript{12} switchers may disclose their reasons for auditor switching if the reasons are beneficial, i.e., if the reasons could assist in the search for better services and/or a lower audit fee (Chang et al. (2010) p.84), from the perspective of the asymmetry of information. In contrast, switchers may not provide any specific reasons for the switch when they have certain problems and are motivated to hide the problem. Therefore, it is assumed that the downgrading of audit firm size involves auditor switching where the switchers do not want to disclose the true reason for the switch because of a certain problem; in such situations, the switchers would tend to provide “expiration of auditors’ term of office” as the reason for auditor switching in their extraordinary reports. This leads to the following hypothesis.

\textbf{HYPOTHESIS 1-1:} The switchers involved in instances of \textit{Downgrading of audit firm size} will provide “expiration of auditors’ term of office” as the reason for auditor switching in the extraordinary reports more frequently compared to the switchers involved in instances of \textit{Upgrading of audit firm size} and \textit{Lateral switching}.\textsuperscript{13}

\textit{Going-Concern Opinion}

The second focus of this study is related to the instances of auditor switching after the client receives going-concern opinions (GCO) from the auditor. “Explanatory notes regarding the

\begin{itemize}
  \item \textsuperscript{10} Opinion shopping is defined as “shopping for an improved audit opinion from a new auditor” (Krishnan and Stephens (1995) p. 179).
  \item \textsuperscript{11} Similar to the case of Olympus (Note 9 in this paper), the publicly disclosed reason for auditor switching in the case of Riso Kyoiku was “expiration of auditors’ term of office.”
  \item \textsuperscript{12} Refer to Ijima (2011) for more details on the signaling function of auditing in Japan.
  \item \textsuperscript{13} In this study, \textit{Upgrading} refers to a switch from a non-Big N auditor to a Big N auditor; \textit{Lateral switching} refers to a switch from a Big N auditor to another Big N auditor or from a non-Big N auditor to another non-Big N auditor; and \textit{Downgrading} means a switch from a Big N auditor to a non-Big N auditor.
\end{itemize}
going concern assumption” are provided by the clients; however, “if events or conditions are identified that may cast significant doubt on the entity’s ability to continue as a going concern, the auditor shall determine whether or not a material uncertainty regarding the going concern assumption exists, with regard to the management’s assessment and plans for future actions for a reasonable period of time.”

Thus, in the difficult economic environment, receiving GCO is a matter of life and death for clients (Machida (2010) p.136). That is, clients have a strong incentive to avoid GCOs as much as possible.

However, receiving a GCO is in itself neither considered a rational reason for auditor switching nor approved by stakeholders. Accordingly, receiving a GCO may correlate with the use of the reason “expiration of auditors’ term of office” in extraordinary reports. This leads to the following hypothesis.

**HYPOTHESIS 1-2**: Switchers who received a GCO in the fiscal year just before switching will provide “expiration of auditors’ term of office” as the reason for switching auditors in their extraordinary reports more frequently compared to other switchers.

Moreover, it is assumed that the market reactions vary according to the reason for auditor switching if the disclosed reason in the extraordinary report has information content and is useful for investors. Specifically, investors may suspect the possibility of a negative true reason for auditor switching when “expiration of auditors’ term of office” is disclosed as the reason for the switch in the extraordinary reports. Thus, it is likely that the reason “expiration of auditors’ term of office” in the extraordinary reports is one of the aspects of “bad news” related to auditor switching from the investors’ perspective; therefore, the cumulative abnormal returns (CAR) in such cases would tend to be lower than in other cases of switching. Therefore, this study additionally investigates the following hypothesis.

**HYPOTHESIS 2**: Firms that provide “expiration of auditors’ term of office” as the reason for auditor switching in their extraordinary reports will experience more negative abnormal returns around the announcement of auditor switching compared to firms that provide specific reasons for the switch.

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14 Auditing Standards Board Report No.22.
In Japan, switchers do not have to disclose whether a particular instance of auditor switching involves the dismissal of the auditor or the auditor’s resignation. Thus, it is difficult to clearly categorize instances of auditor switching into cases of dismissal and resignation. Therefore, this study investigates both these cases together to avoid subjectivity problems.

3. Research Design

(1) Sample and Data

The sample for this study was selected from cases of auditor switching involving all the listed companies in Japan from April 2008 to March 2012. The initial sample included 623 instances of auditor switching. Subsequently, banks, securities companies, and insurance companies (38 observations), accounting term alterations (19 observations), delisted companies (77 observations), cases that did not involve actual switching (e.g., mergers and acquisitions of audit firms; changes in the name of audit firms) (22 observations), auditor switching during the term (64 observations), and cases that lacked data (including companies that did not submit an extraordinary report) (39 observations) were excluded from the sample. The final sample contained 364 observations. The sample selection process is presented in Table 2.

(Insert Table 2 here)

The data pertaining to auditor switching used in this study were extracted from the auditors’ reports contained in financial reports, extraordinary reports, and investor relations (IR) reports using an eol database because Japan has no exhaustive database on auditor switching. Simultaneously, the dates when the companies disclosed the extraordinary report and/or IR report for auditor switching were collected. The data source for the accounting variables was the NIKKEI NEEDS-Financial Quest from Nikkei Media Marketing; the stock price data were extracted from the Stock Price CD-ROM released by TOYOKEIZAI DATA Service.

15 Since the accounting items in banks, securities companies, and insurance companies differ widely from those in other operating companies, they were excluded from the final sample in this study.

16 In the case of auditor switching during the term, a switch is made and a temporary auditor is appointed without the approval of the annual shareholders’ meeting. In such cases, it is theoretically impossible to provide “expiration of auditors’ term of office” as the reason for the switch in the extraordinary report. Therefore, such cases of auditor switching are excluded from the final sample in this study.
To test hypotheses H1-1 and H1-2, this study estimates Model (1) using logistic regression.

\[
REASON = \alpha + \beta_1 DOWN + \beta_2 GCO_{t-1} + \beta_3 SIZE_{t-1} + \beta_4 NI_{t-1} + \beta_5 AFEE + \beta_6 TEAM + \\
\beta_7 NONAUDIT + \beta_8 EMP_{t-1} + \beta_9 MULTI + \beta_{10} MG + YEAR + INDUSTRY + \epsilon
\]

(1)

**REASON**  
A dummy variable, coded 1 if the switcher provides “expiration of auditors’ term of office” as the reason in the extraordinary report, and 0 if the switcher provides any other specific reasons

**DOWN**  
A dummy variable, coded 1 if the predecessor auditor is among the Big N auditors and the successor auditor is among the non-Big N auditors, and 0 otherwise

**GCO**  
A dummy variable, coded 1 if the auditor reported a going-concern opinion for year \( t-1 \), and 0 otherwise

**SIZE**  
The natural logarithm of the total assets for year \( t-1 \)

**NI**  
The net income divided by the total assets for year \( t-1 \)

**AFEE**  
Difference between the audit fee before and after auditor switching

**TEAM**  
Difference between the number of audit team members before and after auditor switching

**NONAUDIT**  
A dummy variable, coded 1 if the predecessor auditor or the successor auditor provides non-audit and attestation services, and 0 otherwise

**EMP**  
A dummy variable, coded 1 if there are the additional paragraphs in the auditors’ reports except for GCO, and 0 otherwise

**MULTI**  
A dummy variable, coded 1 if the company switched auditors more than once, and 0 otherwise

**MG**  
A dummy variable, coded 1 if the company is listed in Japan’s new stock markets

**YEAR**  
Year dummy

**INDUSTRY**  
Industry dummy

\( \epsilon \)  
Error term (subscript \( t \): accounting period)

The dependent variable of Model (1) is **REASON**, and the independent variables are **DOWN** and
GCO. Some variables are used to control for the factors influencing the disclosure of the reason(s) for switching auditors. AFEE is a control variable for audit fee as the reason for auditor switching. The expected sign for AFEE is positive because the audit fee may not increase after auditor switching if the switch was initiated because of audit fee. If the reason for the switch is service-related, the number of audit team members and/or whether the auditor provides non-audit and attestation services may change after the switch. However, as each client has different demands for the services provided by audit firms, the expected sign for TEAM and NONAUDIT is positive/negative. Further, SIZE and NI are variables controlling for the financial factors, and EMP controls for the factors related to the auditors’ reports. In addition to controlling the factors associated with reasons for auditor switching, MULTI, MG, YEAR and INDUSTRY are used in model (1).

Next, to test hypothesis H2, this study estimates Model (2) using multiple regression.

\[
CAR[-1, +1] = \alpha + \beta_1 \text{REASON} + \beta_2 \text{REASON} \times \text{DOWN} + \beta_3 \text{REASON} \times \text{GCO}_{t-1} + \\
\beta_4 \text{SIZE}_{t-1} + \beta_5 \text{NI}_{t-1} + \beta_6 \text{LEV}_{t-1} + \beta_7 \text{LIQ}_{t-1} + \beta_8 \text{GROWTH} + \\
\beta_9 \text{EMP}_{t-1} + \beta_{10} \text{FORECAST}_t + \beta_{11} \text{SURPRISE}_t + \beta_{12} \text{MULTI} + \\
\beta_{13} \text{MG} + \text{YEAR} + \text{INDUSTRY} + \epsilon
\]

\(2\)

- **CAR(-1, +1)**: 3-day cumulative abnormal returns around the date of an auditor switching announcement
- **REASON**: A dummy variable, coded 1 if the switcher provides “expiration of auditors’ term of office” as the reason for the switch in the extraordinary report, and 0 if the switcher provides any other specific reasons
- **DOWN**: A dummy variable, coded 1 if the predecessor auditor is among the Big N auditors, and the successor auditor is among the non-Big N auditors, and 0 otherwise
- **GCO**: A dummy variable, coded 1 if the auditor reported a going-concern opinion for year \(t-1\), and 0 otherwise
- **SIZE**: The natural logarithm of the total assets for year \(t-1\)
- **NI**: The net income divided by the total assets for year \(t-1\)
- **LEV**: Total debt divided by total assets for year \(t-1\)

\(17\) The correlation between DOWN and GCO is 0.148; thus, they hardly overlapped.
LIQ: Current assets divided by total assets for year t-1

GROWTH: Growth rate of total assets

EMP: A dummy variable, coded 1 if there are the additional paragraphs in the auditors’ reports except for GCO, and 0 otherwise

FORECAST: The net income forecast by managers divided by the total assets for year t-1

SURPRISE: (The actual net income minus the net income forecast) divided by the total assets for year t-1

MULTI: A dummy variable, coded 1 if the company switched auditors more than once, and 0 otherwise

MG: A dummy variable, coded 1 if the company is listed in Japan’s new stock markets

YEAR: Year dummy

INDUSTRY: Industry dummy

ε: Error term (subscript t: accounting period)

The dependent variable of Model (2) is CAR(-1, +1), and the independent variable is REASON; the interaction variables involve REASON and DOWN, and REASON and GCO. These three variables are tested simultaneously to control their effect on one another. Additionally, LEV, LIQ, and GROWTH are used to control the financial factors influencing CAR (Eichenseher et al. (1989); Klock (1994); Knechel et al. (2007)). FORECAST and SURPRISE control some cases in which the earnings information was announced (e.g., the brief financial result) within the event window.18

In this study, the event date was taken as the earliest announcement date when the switchers published the extraordinary report, IR report, and press release(s) on their websites (the Tokyo Stock Exchange (TSE), Rules on the Listing of Securities Article 402 (1)). If the announcement date was a non-service day for the TSE, the next day was regarded as the event date. The CAR is calculated using Model (3) and Model (4).

\[ AR_{it} = R_{it} - R_{mt} \] 

18 If there is no earnings surprise because the earnings information is not announced during the event window, SURPRISE is coded 0; therefore, the expected sign is positive/negative.
\[ CAR(S,T) = \sum_{t=S}^{T} (AR_{it}) \] (4)

where \( t = 0 \) is the announcement date of auditor switching; \( R_{it} \) is the return of the sample company \( i \) on day \( t \); and \( R_{mt} \) is the Tokyo Stock Price Index (TOPIX) on day \( t \). \( CAR_{it} \) is calculated by cumulating \( AR_{it} \) from \(-1 \leq S \leq T \leq +1\).

4. Results

(1) Descriptive Statistics

The disclosed reasons for auditor switching are classified into four categories according to the size of the predecessor and the successor auditors (i.e., Big N or non-Big N auditors), as shown in Table 3. For the case of switching from a Big N to a non-Big N auditor, the most common reason is “expiration of auditors’ term of office”; the second most common reason is audit fee.

(Insert Table 3 here)

Table 4 displays the descriptive statistics for the variables used in the models in this study. Panel D of Table 4 indicates that \( DOWN, GCO, LEV, \) and \( MG \) for the switchers that provided “expiration of auditors’ term of office” as the reason for the switch were significantly (at the 5% level) higher than those for the other switchers, using both mean and median. The result for the variable \( MG \) is significant at the 1% level; this result suggests that the switchers listed in Japan’s new stock markets tend to provide “expiration of auditors’ term of office” as the reason for the switch more frequently compared to the other switchers.

(Insert Table 4 here)

(2) Empirical Results

The logistic regression results of estimating Model (1) are reported in Table 5. The coefficients of \( DOWN \) and \( GCO \) have a significant positive association with \( REASON \) \((p < 0.05)\), which is consistent with hypotheses H1-1 and H1-2. With regard to the other control variables, the coefficient of \( MG \) has a strongly significant positive association with \( REASON \) \((p < 0.01)\). This implies that the companies that are listed in Japan’s new stock markets tend to provide
“expiration of auditors’ term of office” as the reason for the switch in their extraordinary reports; however, further research is required to validate this finding.

(Insert Table 5 here)

The multiple regression results of Model (2) are reported in Table 6. The coefficients of REASON, REASON×DOWN, and REASON×GCO have no significant association with CAR, which is not consistent with hypothesis H2; this finding is similar to what was reported in Aldhizer III et al. (2009).  

(Insert Table 6 here)

There are some possible explanations regarding why there is no significant difference in the market reactions to the different disclosed reasons for auditor switching. First, the positive and negative market reaction might be offset as both positive reality as well as negative reality is associated with the phrase “expiration of auditors’ term of office.” However, if the auditor switch took place because of a positive reason, the switchers would disclose the reason without any hesitation, according to signaling theory. Thus, it is difficult to determine whether the switchers conceal positive reasons for auditor switching, and whether the positive and negative market reactions are offset. Second, investors might find it difficult to comprehend the actual situation about auditor switching even though it is negative for them. In this case, the disclosure content could be useless for the investors, since the investors are not able to grasp the actual situation from the disclosed reasons for auditor switching. Third, it is possible that the disclosure of reasons does not lead to any investment behavior either because the content has no information value for the investors, or because the investors have already obtained the information about the reasons for auditor switching from other sources. In these cases, the disclosure could not be regarded as beneficial for the investors (from the perspective of this institution’s main purpose).

Thus, the current disclosure system associated with auditor switching has several issues related to the explanation of the reasons for and the background to switching auditors. Hence, it can be

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19 Aldhizer III et al. (2009) investigate whether required and voluntary Form 8-K auditor switching disclosures in 2004 and 2005 convey information content to investors in a post-Sarbanes-Oxley act (SOX) era. They find that voluntary disclosures such as fee disputes do not convey information content. The present study investigates the difference between the market reactions to the reason “expiration of auditors’ term of office” and specific reasons for auditor switching.
concluded that a reconfiguration of the disclosure system that reflects the realities of auditor switching is necessary.\textsuperscript{20}

5. Additional Tests

Further analyses were conducted to verify the robustness of the results reported in the previous section. These analyses included additional and/or different variables, involved sample cutting, and paid attention to endogeneity issues.

First, $TAFEE$ (difference between the total fee for auditors before and after switching auditors), $TEAM\_CPA$ (difference in the number of certified public accountants in the audit team before and after auditor switching), and $LOSS$ (a dummy variable, coded 1 if the net income for year $t-1$ is negative, and 0 otherwise) are used in the models instead of $AFEE$, $TEAM$, and $NI$, respectively. Second, $REASON$, $REASON\times DOWN$, and $REASON\times GCO$ are separately set in Model (2). Third, the companies that announced the earnings information in the event window (108 observations) were removed from the sample to exclude the impact of the earnings information announcement. Fourth, both Model (1) and Model (2) are tested after the variables $YEAR$ and $INDUSTRY$ are removed to take sample size into consideration. These regression results are consistent with the original results.

Further, Model (2) is estimated using the treatment effect model to solve the endogeneity issues. The results are reported in Table 7.

(Insert Table 7 here)

The results of the treatment effect model are consistent with the results of the original model (presented in Section 4). Thus, the results are robust when different attributes are considered.

6. Summary and Conclusion

This study investigated the relationship between the context of auditor switching and the reasons

\textsuperscript{20} Theoretically, the possibility of abolishing the extraordinary report can be debated because it is quite useless. However, to abolish it would be against the current movement of Japanese institutions, which have been trying to expand the scope of disclosure related to auditor switching recently.
for the switch provided in the extraordinary reports. Dealing with downgrading and GCO just
before auditor switching revealed that switchers tend to use “expiration of auditors’ term of
office” as the reason for the switch in their extraordinary reports when the auditor switch is
problematic. In addition, this study examined whether the reasons for the switch provided in the
extraordinary reports affect investment behavior. Using CAR, this study demonstrated that there
are no significant market reactions associated with the disclosure of the reasons for auditor
switching. Therefore, it is possible to conclude that the disclosure system related to auditor
switching may not be useful for investors.

This study contributes to the literature on auditor switching in several ways. First, although
auditor switching has been frequently discussed in recent years, there is not enough empirical
research on auditor switching in the specific context of Japan. This study addresses this gap.
Second, most of the prior studies do not deal with auditor switching from the perspective of the
specific reasons provided in the extraordinary reports. This study considered extraordinary
reports, which represent one of the most important characteristics of auditor switching in Japan.
Third, as an institutional implication, it is possible to say that the disclosure of reasons in the
extraordinary report may not prove useful for investors.

This study has a number of limitations. Although the model proposed in this study used some
control variables, it is extremely hard to control everything that influences the disclosure of the
reasons for switching auditors and CAR. Further, the results of Model (2) (which implied no
significance) could be interpreted in various ways other than what was discussed in this study.
Finally, this study does not analyze every auditor switch individually in great detail. The case
study method may prove helpful in this context. Future research should examine these issues in
further detail.
REFERENCE


Exchange Commission, Washington, D.C.


Table 1: Summary of Prior Research

<table>
<thead>
<tr>
<th>Literature</th>
<th>Period</th>
<th>Sample</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fried and Schiff (1981)</td>
<td>1972-1975</td>
<td>48 switchers</td>
<td>There is some evidence of negative market reaction around the time of announcement of the switch. It is not clear what motivates this reaction. The dimension of size and conflict examined in the study did not yield a conclusive explanation.</td>
</tr>
<tr>
<td>Smith and Nichols (1982)</td>
<td>1973-1979</td>
<td>27 companies</td>
<td>The study investigates the information content of the disclosures of the auditor-company disagreements. The analysis indicates a significant negative market reaction in the week when the Form 8-K is filed with the SEC. This finding is consistent with the reported finding that disclosure provides information useful to investors.</td>
</tr>
<tr>
<td>McConnell (1984)</td>
<td>1974-1978</td>
<td>748 observations</td>
<td>The results of this study indicate that Big 8 firms were more frequently both predecessors and successors in the case of auditor switches involving disagreements. Further, significant differences were found to exist among Big 8 firms in terms of disagreement involvement rates as both predecessor and successor auditors.</td>
</tr>
<tr>
<td>Hackenbrack and Hogan (2002)</td>
<td>1991-1997</td>
<td>802 auditor switching</td>
<td>The study investigates the relative informativeness of earnings announcements of the Form 8-K disclosures of the reason for auditor switching. The average price response per unit of earnings surprise is found to be lower following an auditor switch for disagreement-related or fee-related reasons and higher for a switch made for service-related reasons.</td>
</tr>
<tr>
<td>Sankaragurus and Whisenant (2004)</td>
<td>1992-1996</td>
<td>2,076 observations</td>
<td>They found evidence that the clients’ non-verifiable voluntary disclosures of reasons are interpreted as “good news” by investors, and that voluntary disclosures of reasons credibly describe the common underlying factors affecting change and choice decisions, with fee-related reasons being associated with choice decisions and service-related reasons being</td>
</tr>
</tbody>
</table>
Aldhizer III et al. (2009) investigated whether required and voluntary Form 8-K auditor switching disclosures in 2004 and 2005 convey information content to investors in a post-SOX era. The results indicate that disclosures related to internal control material weakness and non-reliance on management representation convey negative information content, while disclosures related to audit scope limitation, earnings restatement, and client-auditor disagreement do not convey any information content.

Table 2: Sample Selection Process

| Initial sample of switchers listed on Japanese stock market | 623 |
| Banks, securities companies and insurance companies | 38 |
| Accounting term alterations | 19 |
| Delisted firms | 77 |
| Cases that did not involve substantial switching | 22 |
| Switching during the term | 64 |
| Lack of data (including failure to file the extraordinary report) | 39 259 |
| **Final Sample** | **364** |

Table 3: Disclosed Reasons for Auditor Switching and Size of Audit Firm

<table>
<thead>
<tr>
<th>Total</th>
<th>Switch Direction</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BigN</td>
</tr>
<tr>
<td></td>
<td>to BigN</td>
</tr>
<tr>
<td>“Expiration of auditors’ term of office”</td>
<td>299</td>
</tr>
<tr>
<td>Engagement with the same auditor in company group</td>
<td>25</td>
</tr>
<tr>
<td>Audit fee</td>
<td>16</td>
</tr>
<tr>
<td>Service-related</td>
<td>15</td>
</tr>
<tr>
<td>Periodic rotation (voluntarily)</td>
<td>8</td>
</tr>
<tr>
<td>Having an interest</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>364</strong></td>
</tr>
</tbody>
</table>
Table 4: Variables Description of Switchers

Panel A: Total

<table>
<thead>
<tr>
<th>Variables</th>
<th>DOWN</th>
<th>GCO</th>
<th>CAR</th>
<th>SIZE</th>
<th>NI</th>
<th>LEV</th>
<th>LIQ</th>
<th>GROWTH</th>
<th>FORECAST</th>
<th>SURPRISE</th>
<th>AFEE</th>
<th>TEAM</th>
<th>NONAUDIT</th>
<th>EMP</th>
<th>MULTI</th>
<th>MG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.467</td>
<td>0.129</td>
<td>0.009</td>
<td>9.486</td>
<td>-0.053</td>
<td>0.549</td>
<td>0.581</td>
<td>-0.043</td>
<td>-0.015</td>
<td>0.000</td>
<td>-0.046</td>
<td>-0.110</td>
<td>0.354</td>
<td>0.261</td>
<td>0.074</td>
<td>0.569</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.500</td>
<td>0.336</td>
<td>0.080</td>
<td>1.517</td>
<td>0.249</td>
<td>0.243</td>
<td>0.202</td>
<td>0.244</td>
<td>0.169</td>
<td>0.006</td>
<td>0.425</td>
<td>0.515</td>
<td>0.479</td>
<td>0.440</td>
<td>0.262</td>
<td>0.496</td>
</tr>
<tr>
<td>10%</td>
<td>0</td>
<td>0</td>
<td>-0.064</td>
<td>7.646</td>
<td>-0.188</td>
<td>0.223</td>
<td>0.316</td>
<td>-0.263</td>
<td>-0.102</td>
<td>0.000</td>
<td>-0.543</td>
<td>-0.742</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>25%</td>
<td>0</td>
<td>0</td>
<td>-0.027</td>
<td>8.583</td>
<td>-0.060</td>
<td>0.350</td>
<td>0.453</td>
<td>-0.119</td>
<td>-0.021</td>
<td>0.000</td>
<td>-0.298</td>
<td>-0.415</td>
<td>0</td>
<td>0</td>
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<td>0</td>
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<tr>
<td>50%(Median)</td>
<td>0</td>
<td>0</td>
<td>0.004</td>
<td>9.330</td>
<td>0.008</td>
<td>0.550</td>
<td>0.574</td>
<td>-0.038</td>
<td>0.009</td>
<td>0.000</td>
<td>-0.092</td>
<td>-0.105</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>75%</td>
<td>1</td>
<td>0</td>
<td>0.038</td>
<td>10.399</td>
<td>0.032</td>
<td>0.726</td>
<td>0.730</td>
<td>0.029</td>
<td>0.031</td>
<td>0.000</td>
<td>0.196</td>
<td>0.202</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>90%</td>
<td>1</td>
<td>1</td>
<td>0.074</td>
<td>11.325</td>
<td>0.058</td>
<td>0.855</td>
<td>0.847</td>
<td>0.109</td>
<td>0.061</td>
<td>0.000</td>
<td>0.492</td>
<td>0.584</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
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</table>

Panel B: Switchers that claimed “expiration of auditors’ term of office”

<table>
<thead>
<tr>
<th>Variables</th>
<th>DOWN</th>
<th>GCO</th>
<th>CAR</th>
<th>SIZE</th>
<th>NI</th>
<th>LEV</th>
<th>LIQ</th>
<th>GROWTH</th>
<th>FORECAST</th>
<th>SURPRISE</th>
<th>AFEE</th>
<th>TEAM</th>
<th>NONAUDIT</th>
<th>EMP</th>
<th>MULTI</th>
<th>MG</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>299</td>
<td>299</td>
<td>299</td>
<td>299</td>
<td>299</td>
<td>299</td>
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<td>299</td>
<td>299</td>
<td>299</td>
<td>299</td>
<td>299</td>
</tr>
<tr>
<td>Mean</td>
<td>0.495</td>
<td>0.147</td>
<td>0.012</td>
<td>9.425</td>
<td>-0.059</td>
<td>0.560</td>
<td>0.577</td>
<td>-0.058</td>
<td>-0.019</td>
<td>-0.000</td>
<td>-0.056</td>
<td>-0.108</td>
<td>0.348</td>
<td>0.268</td>
<td>0.080</td>
<td>0.605</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.501</td>
<td>0.355</td>
<td>0.084</td>
<td>1.472</td>
<td>0.265</td>
<td>0.245</td>
<td>0.203</td>
<td>0.190</td>
<td>0.166</td>
<td>0.003</td>
<td>0.446</td>
<td>0.527</td>
<td>0.477</td>
<td>0.443</td>
<td>0.272</td>
<td>0.490</td>
</tr>
<tr>
<td>10%</td>
<td>0</td>
<td>0</td>
<td>-0.063</td>
<td>7.594</td>
<td>-0.208</td>
<td>0.228</td>
<td>0.310</td>
<td>-0.276</td>
<td>-0.114</td>
<td>0.000</td>
<td>-0.589</td>
<td>-0.776</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>25%</td>
<td>0</td>
<td>0</td>
<td>-0.026</td>
<td>8.582</td>
<td>-0.065</td>
<td>0.357</td>
<td>0.449</td>
<td>-0.132</td>
<td>-0.021</td>
<td>0.000</td>
<td>-0.334</td>
<td>-0.424</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>50%(Median)</td>
<td>0</td>
<td>0</td>
<td>0.007</td>
<td>9.328</td>
<td>0.008</td>
<td>0.565</td>
<td>0.576</td>
<td>-0.040</td>
<td>0.009</td>
<td>0.000</td>
<td>-0.118</td>
<td>-0.105</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</tr>
<tr>
<td>75%</td>
<td>1</td>
<td>0</td>
<td>0.041</td>
<td>10.275</td>
<td>0.029</td>
<td>0.748</td>
<td>0.719</td>
<td>0.029</td>
<td>0.030</td>
<td>0.000</td>
<td>0.220</td>
<td>0.215</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>90%</td>
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<td>1</td>
<td>0.079</td>
<td>11.179</td>
<td>0.058</td>
<td>0.873</td>
<td>0.849</td>
<td>0.109</td>
<td>0.060</td>
<td>0.000</td>
<td>0.504</td>
<td>0.589</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
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</table>

Panel C: Switchers that provided specific reason(s)

<table>
<thead>
<tr>
<th>Variables</th>
<th>DOWN</th>
<th>GCO</th>
<th>CAR</th>
<th>SIZE</th>
<th>NI</th>
<th>LEV</th>
<th>LIQ</th>
<th>GROWTH</th>
<th>FORECAST</th>
<th>SURPRISE</th>
<th>AFEE</th>
<th>TEAM</th>
<th>NONAUDIT</th>
<th>EMP</th>
<th>MULTI</th>
<th>MG</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>65</td>
<td>65</td>
<td>65</td>
<td>65</td>
<td>65</td>
<td>65</td>
<td>65</td>
<td>65</td>
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<td>65</td>
<td>65</td>
<td>65</td>
<td>65</td>
<td>65</td>
<td>65</td>
<td>65</td>
</tr>
<tr>
<td>Mean</td>
<td>0.338</td>
<td>0.046</td>
<td>-0.004</td>
<td>9.768</td>
<td>-0.026</td>
<td>0.486</td>
<td>0.599</td>
<td>0.026</td>
<td>0.000</td>
<td>0.001</td>
<td>0.001</td>
<td>-0.117</td>
<td>0.385</td>
<td>0.231</td>
<td>0.046</td>
<td></td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.477</td>
<td>0.211</td>
<td>0.057</td>
<td>1.692</td>
<td>0.150</td>
<td>0.221</td>
<td>0.198</td>
<td>0.406</td>
<td>0.181</td>
<td>0.012</td>
<td>0.308</td>
<td>0.457</td>
<td>0.490</td>
<td>0.425</td>
<td>0.211</td>
<td></td>
</tr>
</tbody>
</table>

Panel D: “Expiration of auditors’ term of office” vs. the specific reason

<table>
<thead>
<tr>
<th></th>
<th>t-statistics</th>
<th>z-statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-2.376**</td>
<td>2.288**</td>
</tr>
<tr>
<td>10%</td>
<td>-3.033***</td>
<td>2.196**</td>
</tr>
<tr>
<td>25%</td>
<td>-1.793*</td>
<td>1.917*</td>
</tr>
<tr>
<td>50%(Median)</td>
<td>-2.389**</td>
<td>2.083**</td>
</tr>
<tr>
<td>75%</td>
<td>0.811</td>
<td>0.593</td>
</tr>
<tr>
<td>90%</td>
<td>1.665</td>
<td>0.728</td>
</tr>
</tbody>
</table>

Note:

1. t-statistics for t-test (two-tailed) and z-statistics for the Wilcoxon Rank Sum test (two-tailed). ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.
2. The results of INDUSTRY and YEAR are omitted.
Table 5: Logistic Regression Results for Model (1)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Expected Sign</th>
<th>Coefficient</th>
<th>z-statistics (p-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>-</td>
<td>-1.557</td>
<td>-0.853 (0.393)</td>
</tr>
<tr>
<td>DOWN</td>
<td>+</td>
<td>0.857</td>
<td>2.239** (0.025)</td>
</tr>
<tr>
<td>GCO</td>
<td>+</td>
<td>2.087</td>
<td>2.391** (0.016)</td>
</tr>
<tr>
<td>SIZE</td>
<td>+</td>
<td>0.183</td>
<td>1.231 (0.218)</td>
</tr>
<tr>
<td>NI</td>
<td>-</td>
<td>1.319</td>
<td>1.028 (0.304)</td>
</tr>
<tr>
<td>AFEE</td>
<td>+</td>
<td>0.185</td>
<td>0.399 (0.690)</td>
</tr>
<tr>
<td>TEAM</td>
<td>±</td>
<td>0.363</td>
<td>0.983 (0.325)</td>
</tr>
<tr>
<td>NONAUDIT</td>
<td>±</td>
<td>-0.341</td>
<td>-0.980 (0.326)</td>
</tr>
<tr>
<td>EMP</td>
<td>+</td>
<td>0.562</td>
<td>1.489 (0.136)</td>
</tr>
<tr>
<td>MULTI</td>
<td>+</td>
<td>-0.053</td>
<td>-0.067 (0.946)</td>
</tr>
<tr>
<td>MG</td>
<td>+</td>
<td>1.244</td>
<td>2.949*** (0.003)</td>
</tr>
<tr>
<td>YEAR</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INDUSTRY</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Highest VIF</td>
<td>2.331</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean VIF</td>
<td>1.674</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIC</td>
<td>350.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: As the highest VIF is below 5, the problem of multicollinearity does not seem to occur in this model (the table of the correlation coefficient is omitted because of space constraints).
Table 6: Multiple Regression Results for Model (2)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Expected Sign</th>
<th>Coefficient</th>
<th>( t )-statistics</th>
<th>( p )-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>-</td>
<td>-0.055</td>
<td>-1.560</td>
<td>(0.119)</td>
</tr>
<tr>
<td>( REASON )</td>
<td>-</td>
<td>0.010</td>
<td>1.326</td>
<td>(0.185)</td>
</tr>
<tr>
<td>( REASON \ast , DOWN )</td>
<td>-</td>
<td>0.005</td>
<td>0.691</td>
<td>(0.489)</td>
</tr>
<tr>
<td>( REASON \ast , GCO_{t-1} )</td>
<td>-</td>
<td>0.005</td>
<td>0.384</td>
<td>(0.701)</td>
</tr>
<tr>
<td>( SIZE )</td>
<td>+</td>
<td>0.003</td>
<td>1.208</td>
<td>(0.227)</td>
</tr>
<tr>
<td>( NI )</td>
<td>+</td>
<td>-0.040</td>
<td>-1.599</td>
<td>(0.110)</td>
</tr>
<tr>
<td>( LEV )</td>
<td>-</td>
<td>-0.003</td>
<td>-0.250</td>
<td>(0.802)</td>
</tr>
<tr>
<td>( LIQ )</td>
<td>+</td>
<td>0.008</td>
<td>0.487</td>
<td>(0.626)</td>
</tr>
<tr>
<td>( GROWTH )</td>
<td>+</td>
<td>-0.009</td>
<td>-0.663</td>
<td>(0.495)</td>
</tr>
<tr>
<td>( EMP )</td>
<td>-</td>
<td>0.006</td>
<td>0.841</td>
<td>(0.400)</td>
</tr>
<tr>
<td>( FORECAST )</td>
<td>+</td>
<td>0.080</td>
<td>2.623***</td>
<td>(0.009)</td>
</tr>
<tr>
<td>( SURPRISE )</td>
<td>±</td>
<td>-1.188</td>
<td>-3.385***</td>
<td>(0.000)</td>
</tr>
<tr>
<td>( MULTI )</td>
<td>-</td>
<td>0.005</td>
<td>0.435</td>
<td>(0.663)</td>
</tr>
<tr>
<td>( MG )</td>
<td>-</td>
<td>-0.004</td>
<td>-0.557</td>
<td>(0.577)</td>
</tr>
<tr>
<td>( YEAR )</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( INDUSTRY )</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Highest VIF: 1.864
Mean VIF: 1.403
Multiple \( R^2 \): 0.183
Adjusted \( R^2 \): 0.082

Note: As the highest VIF is below 5, the problem of multicollinearity does not seem to occur.
in this model (the table of the correlation coefficient is omitted because of space constraints).

Table 7: Treatment Effect Model for Model (2)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Expected Sign</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>p-value</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Intercept)</td>
<td>-</td>
<td>0.059</td>
<td>0.044</td>
<td>0.184</td>
<td>-0.028 - 0.147</td>
</tr>
<tr>
<td>LEV</td>
<td>-</td>
<td>0.010</td>
<td>0.018</td>
<td>0.584</td>
<td>-0.026 - 0.047</td>
</tr>
<tr>
<td>LIQ</td>
<td>+</td>
<td>-0.024</td>
<td>0.023</td>
<td>0.306</td>
<td>-0.070 - 0.022</td>
</tr>
<tr>
<td>GROWTH</td>
<td>+</td>
<td>-0.008</td>
<td>0.019</td>
<td>0.678</td>
<td>-0.029 - 0.045</td>
</tr>
<tr>
<td>FORECAST</td>
<td>+</td>
<td>0.046</td>
<td>0.026</td>
<td>0.074*</td>
<td>-0.004 - 0.097</td>
</tr>
<tr>
<td>SURPRISE</td>
<td>±</td>
<td>-1.293</td>
<td>0.696</td>
<td>0.063*</td>
<td>-2.658 - 0.071</td>
</tr>
<tr>
<td>REASON</td>
<td>-</td>
<td>-0.034</td>
<td>0.044</td>
<td>0.437</td>
<td>-0.121 - 0.052</td>
</tr>
<tr>
<td>(treatment)</td>
<td></td>
<td>-0.154</td>
<td>0.727</td>
<td>0.832</td>
<td>-1.580 - 1.271</td>
</tr>
<tr>
<td>DOWN</td>
<td>+</td>
<td>0.379</td>
<td>0.185</td>
<td>0.041**</td>
<td>0.015 - 0.744</td>
</tr>
<tr>
<td>GCO</td>
<td>+</td>
<td>0.673</td>
<td>0.330</td>
<td>0.041**</td>
<td>0.025 - 1.320</td>
</tr>
<tr>
<td>SIZE</td>
<td>+</td>
<td>0.061</td>
<td>0.068</td>
<td>0.373</td>
<td>-0.073 - 0.195</td>
</tr>
<tr>
<td>NI</td>
<td>-</td>
<td>-0.117</td>
<td>0.477</td>
<td>0.806</td>
<td>-1.053 - 0.818</td>
</tr>
<tr>
<td>AFEE</td>
<td>+</td>
<td>-0.206</td>
<td>0.204</td>
<td>0.311</td>
<td>-0.607 - 0.193</td>
</tr>
<tr>
<td>TEAM</td>
<td>±</td>
<td>0.306</td>
<td>0.179</td>
<td>0.088*</td>
<td>-0.045 - 0.658</td>
</tr>
<tr>
<td>NONAUDIT</td>
<td>±</td>
<td>-0.102</td>
<td>0.172</td>
<td>0.552</td>
<td>-0.441 - 0.236</td>
</tr>
<tr>
<td>EMP</td>
<td>+</td>
<td>0.235</td>
<td>0.185</td>
<td>0.205</td>
<td>-0.128 - 0.599</td>
</tr>
<tr>
<td>MULTI</td>
<td>+</td>
<td>0.227</td>
<td>0.345</td>
<td>0.511</td>
<td>-0.449 - 0.903</td>
</tr>
<tr>
<td>MG</td>
<td>+</td>
<td>0.488</td>
<td>0.200</td>
<td>0.015**</td>
<td>0.094 - 0.882</td>
</tr>
<tr>
<td>YEAR</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INDUSTRY</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: The results of INDUSTRY and YEAR are omitted.
THE MARKET-WIDE COST OF CAPITAL IMPACTS ON THE AGGREGATE EARNINGS-RETURNS RELATION -EVIDENCE FROM JAPAN-

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August 2015

Abstract

Prior studies have observed a significantly positive relation between earnings changes and the contemporaneous stock returns at the firm level. However, when they are cross-sectionally aggregated, even a negative relation can be observed. To clarify this puzzling aggregate earnings-returns relation, Kothari et al. (2006) propose that changes in the market-wide cost of capital cause an omitted variable bias. Consistent with this hypothesis, U.S. studies have shown that the risk-free rate and expected inflation bias the aggregate earnings-returns relation as important components of the market-wide cost of capital. On the other hand, the economic impacts of these components are trivial in Japan due to the “zero-interest-rate policy” and stable prices, such that the market-wide cost of capital can be weak. Therefore, we test whether changes in the market-wide cost of capital still have a strong bias against the aggregate earnings-returns relation in the Japanese stock market. Our tests indicate two evidences for the existence of this bias in Japan. First, aggregate earnings changes are positively correlated to the contemporaneous changes in the market-wide cost of capital. Second, although this significant earnings-returns relation is not observed by a simple regression, a significantly positive aggregate earnings-returns relation appears after controlling for changes in the market-wide cost of capital. These results suggest that even if the economic significance of the risk-free rate and expected inflation are small, the market-wide cost of capital affects the aggregate earnings-returns relation.

Keywords: aggregate earnings, earnings-returns relation, implied cost of capital

JEL Classification: E44, G12, G14, M41

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1. Introduction

The purpose of this paper is to contribute to clarifying the mechanism of the surprising earnings-returns relation observed at the aggregate level. In accounting and finance research, many researchers have studied the relation between accounting earnings and stock returns, beginning with Ball and Brown (1968). In this stream of studies, a robust positive relation between earnings changes and the contemporaneous stock returns is observed at the firm level\(^1\) (cf. Ball and Sadka 2015). Earnings changes are often regarded as earnings surprises\(^2\). Positive (negative) earnings surprises indicate that reported earnings are higher (lower) than expected and these earnings are financial resources for payout. Thus, investors will increase (decrease) the expected cash flows from stocks of the firm and trade them based on their modified expectations. This results in a positive earnings-returns relation at the firm level\(^3\).

If this explanation holds true and when earnings changes and stock returns of individual firms are cross-sectionally aggregated, what relation should be observed between “aggregate” earnings changes and “aggregate” stock returns? These aggregate variables represent the general trends of the listed firms. When positive (negative) aggregate earnings changes are observed, listed firms will generally experience a rise (drop) in performance. Subsequently, the economic impacts of positive (negative) firm-level earnings surprises should be dominant in the market, hence resulting in higher (lower) stock prices. According to this logic, positive earnings-returns relation should also be observed at the aggregate level. However, recent U.S. studies, such as Kothari et al. (2006) (referred as KLW henceforth), present evidence contrary to this prediction. By running a simple regression, they report that significantly positive earnings-returns relation cannot be detected at the aggregate level\(^4\). Furthermore, some studies indicate that even a significantly negative relation can be observed\(^5\).

In order to clarify this puzzling earnings-returns relation, KLW develop a hypothesis based on the omitted variable bias. KLW suppose that investors increase (decrease) the market-wide discount rate when aggregate earnings changes are positive (negative). If this is correct, the positive effect of aggregate earnings changes on the contemporaneous aggregate stock returns can be concealed by the negative effect of changes in the market-wide discount rate. This hypothesis can explain the puzzling aggregate earnings-returns relation observed when running a simple regression.

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\(^1\) We describe “contemporaneous” variables as variables at the earnings announcement period in this paper.

\(^2\) Assuming that expected earnings at the current period are equal to the realized earnings at the previous period \((E_{t-1}[X_t] = X_{t-1})\), earnings surprises at the current period become equal to the earnings changes at the current period \((UE_{t-1}[\Delta X_t] = \Delta X_t \because UE_{t-1}[\Delta X_t] = X_t - E_{t-1}[X_t], \Delta X_t = X_t - X_{t-1})\).

\(^3\) We use the description, “earnings-returns relation” as the relation between earnings changes and the contemporaneous corresponding stock returns.

\(^4\) Many existing U.S. research reports that a significantly positive aggregate earnings-returns relation cannot be detected in a simple regression or in a pairwise correlation (Kothari et al. 2006; Anilowski et al. 2007; Bali et al. 2008; Hirshleifer et al. 2009; Sadka and Sadka 2009; Patatoukas and Yan 2010; Uysal 2010; Patatoukas 2014). We also observe an insignificant and negative (-0.638) aggregate earnings-returns relation in the Japanese stock market by running a simple regression, as shown in Table 3.

\(^5\) Despite a robust positive earnings-returns relation at the firm level (the micro level), a positive earnings-returns relation cannot be detected at the aggregate level (the macro level) when running a simple regression. Such a puzzling earnings-returns relation is introduced as “Micro-Macro-Puzzle” in Japan (cf. Nakano 2012, 2014; Nakano and Yoshinaga 2015).
The cost of capital is regarded as the discount rate (Brealey et al. 2014). Recently, Patatoukas (2014) reports that when controlling for changes in the market-wide cost of capital, a significantly positive earnings-returns relation is observed at the aggregate level in the U.S. market. Nevertheless, it is not clear whether the market-wide cost of capital has such a strong bias in the Japanese stock market. Other U.S. studies (Patatoukas and Yan 2010; Uysal 2010) show that when controlling for the risk-free rate and expected inflation, which are the components of the market-wide cost of capital, a positive aggregate earnings-returns relation appears. Therefore, these two components should cause a strong bias against aggregate earnings-returns relation in the U.S. market. On the other hand, the economic impacts of these components should be trivial in Japan due to the “zero-interest-rate policy” and stable prices. These differences can reduce the economic significance of the market-wide cost of capital. Thus, whether and how the market-wide cost of capital affects the aggregate earnings-returns relation in the Japanese stock market has not yet been clarified. In this paper, we test whether changes in the market-wide cost of capital bias the aggregate earnings-returns relation even in the Japanese stock market.

This study proceeds as follows. Section 2 introduces two hypotheses to explain the aggregate earnings-returns relation. One is proposed by KLW and the other is proposed by Sadka and Sadka (2009) (referenced as SS henceforth). We state our research design in Section 3, and our sample selection and variable definition are described in Section 4. Section 5 details our empirical results and interpretations. Finally, Section 6 concludes this study and describes the implications and future research questions.

2. Prior research and our research questions

There are two primary hypotheses on the aggregate earnings-returns relation. One is proposed by KLW and the other is by SS. In this section, we introduce these two hypotheses and propose our research questions.

Hecht and Vuolteenaho (2006) present a formula that three components explain realized returns, which is based on Campbell (1991) who decomposes unexpected returns into two components.

\[ R_t \approx E_{t-1}[R_t] + (E_t - E_{t-1}) \left[ \sum_{j=0}^{\infty} \rho^j \Delta d_{t+j} \right] - (E_t - E_{t-1}) \left[ \sum_{j=0}^{\infty} \rho^{j-1} R_{t+j} \right] \]

6 The average absolute value of the quarterly yield changes in 10-year government bond over our sample period (from Q2:2003 to Q1:2015) is 0.153% in Japan, while it is 0.397% in the U.S. The average absolute value of the year-over-year changes in the quarterly Consumer Price Index for all items less food and energy from Q2:2003 to Q1:2014 is 0.590% in Japan, while it is 1.92% in the U.S. The yield of 10-year government bond in the U.S. is collected from the website of the U.S. Department of the Treasury and the Consumer Price Index in the U.S. is from website of the U.S. Bureau of Labor Statistics. The Japanese data is collected from “Nikkei NEEDS Financial Quest 2.0.”

7 He and Hu (2014) report that the interest rate and inflation do not produce omitted variable biases against the aggregate earnings-returns relation in the non-U.S. markets, including the Japanese stock market. However, He and Hu (2014) use “pooled regression” to check whether these have any effect on the aggregate earnings-returns relation. Therefore, their evidence is for the average non-U.S. market, not for a specific stock market.
\[ R_t \text{ is realized return at period } t. \quad E_{t-1}[R_t] \text{ denotes stock return at period } t \text{ expected at the end of period } t-1. \quad (E_t - E_{t-1})[X] \text{ represents the modified expectation for } X \text{ based on the news released at period } t. \quad \Delta d_t \text{ is log dividend growth at period } t. \quad \rho \text{ is the inverse of } 1 \text{ plus the dividend yield } (\rho < 1). \quad \] 

\[ (E_t - E_{t-1})[\sum_{j=0}^{\infty} \rho^j \Delta d_{t+j}] (= N_{CF,t}) \text{ means the modified expectation for the subsequent dividend growth, which is caused by “cash-flow news.” Further, } \]

\[ (E_t - E_{t-1})[\sum_{j=0}^{\infty} \rho^{j-1} R_{t+j}] (= N_{DR,t}) \text{ is the modified expectation for the subsequent cost of capital, which is caused by “discount-rate news.”} \]

Next, we split earnings changes into expected earnings changes \((E_{t-1}[\Delta X_t])\) and unexpected earnings changes (earnings surprises: \(UE_{t-1}[\Delta X_t])\).

\[ \Delta X_t = E_{t-1}[\Delta X_t] + UE_{t-1}[\Delta X_t] \]

Substituting \(\Delta X_t\) into \(E_{t-1}[\Delta X_t] + UE_{t-1}[\Delta X_t]\) in Equation 1 and deleting the uncorrelated terms in definition \(^9\), we can rewrite the earnings-returns relation \((cov(R_t, \Delta X_t))\) in the following way.

\[ \text{cov}(R_t, \Delta X_t) \approx \text{cov}(E_{t-1}[R_t], E_{t-1}[\Delta X_t]) + \text{cov}(N_{CF,t}, UE_{t-1}[\Delta X_t]) 
- \text{cov}(N_{DR,t}, UE_{t-1}[\Delta X_t]) \] (3)

In Equation 3, earnings-returns relation is decomposed into three components: (1) the relation between expected earnings changes and expected returns \((\text{cov}(E_{t-1}[R_t], E_{t-1}[\Delta X_t])\); (2) the relation between earnings surprises and the contemporaneous modified expectation for the subsequent dividend growth \((\text{cov}(N_{CF,t}, UE_{t-1}[\Delta X_t]))\); and, (3) the relation between earnings surprises and the contemporaneous modified expectation for the subsequent cost of capital \((\text{cov}(N_{DR,t}, UE_{t-1}[\Delta X_t]))\). In the following subsections, we introduce two hypotheses on the aggregate earning-returns relation based on these three components.

2.1. KLW’s hypothesis

Figure 1 illustrates KLW’s hypothesis. In an economic boom (economic recession) when aggregate earnings changes are positive (negative), positive (negative) firm-level earnings surprises should be dominant in the market, hence yielding higher (lower) stock prices. Thus, earnings changes should have a positive effect on the contemporaneous stock returns

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\(^8\) Though Hecht and Vuolteenaho (2006) denote \((E_t - E_{t-1})[\sum_{j=0}^{\infty} \rho^j \Delta d_{t+j}]\) as the “expected-return news,” we describe it as the news modifying investors’ expectations about the subsequent “cost of capital,” because the expected return is normally equal to the cost of capital in the efficient market. If the expected return of a security is higher (lower) than the cost of capital, investors will be eager to buy (sell) the security. Then, the security price will move upward (downward) until the expected return becomes equal to the cost of capital.

\(^9\) We delete the uncorrelated terms in the following way. Earnings changes expected at period t-1 are not related to the news released at period t \((\text{cov}(N_{CF,t}, E_{t-1}[\Delta X_t]) = 0, \text{cov}(N_{DR,t}, E_{t-1}[\Delta X_t]) = 0)\). Since earnings surprises occur at period t, they are not correlated to stock returns expected at period t-1 \((\text{cov}(E_{t-1}[R_t], UE_{t-1}[\Delta X_t]) = 0)\).
at the aggregate level, comparable to the firm level ($\text{cov}(N_{CF,t}, U_{E_{t-1}}[\Delta X_t]) > 0$). However, what if aggregate earnings changes are positively related to changes in the market-wide cost of capital ($\text{cov}(N_{DR,t}, U_{E_{t-1}}[\Delta X_t]) > 0$)? Changes in the market-wide cost of capital are generally negatively related to the movement of the stock prices\(^{10}\). Additionally, according to KLW, “discount rates should be strongly correlated across stocks, largely driven by business conditions, while cash flows are likely to have a larger idiosyncratic component.” Based on the diversification argument that firm-specific components will be diversified away through aggregation, the negative effect of changes in the cost of capital on the contemporaneous stock returns will be stronger than the positive effect of earnings surprises at the aggregate level ($\text{cov}(N_{CF,t}, U_{E_{t-1}}[\Delta X_t]) \leq \text{cov}(N_{DR,t}, U_{E_{t-1}}[\Delta X_t])$). Therefore, in a simple regression model that does not control for changes in the market-wide cost of capital, an omitted variable bias will make earnings-returns relation insignificant or negative ($\text{cov}(R_t, \Delta X_t) \leq 0$)\(^{11}\).

Patatoukas (2014) observes that aggregate earnings changes are positively related to changes in the market-wide cost of capital. He shows that significantly positive aggregate earnings-returns relation appears after controlling for the changes in the market-wide cost of capital, though this significant relation does not come out in a simple regression. Patatoukas (2014) also decomposes the market-wide cost of capital into three components: real risk-free rate, expected inflation, and market risk premium. Other existing U.S. studies mainly focus on the effects of the risk-free rate and expected inflation. KLW show that aggregate earnings changes are positively related to changes in the one-year T-bill rate. They also indicate that a significantly positive aggregate earnings-returns relation can come up after controlling for changes in the T-bill rate, although this relation does not appear by running a simple regression. Patatoukas and Yan (2010) and Uysal (2010) report that although the aggregate earnings-returns relation is insignificant in a simple regression, a significantly positive aggregate earnings-returns relation occurs after controlling for these two variables. Based on these studies, the risk-free rate and expected inflation will have a strong bias against the aggregate earnings-returns relation in the U.S. market\(^{12}\).

2.2. SS’s hypothesis

Figure 2 illustrates the other hypothesis proposed by SS to explain the aggregate earnings-returns relation. In this hypothesis, it is assumed that aggregate earnings changes are almost completely predicted and priced before the earnings announcement period\(^{13}\) ($U_{E_{t-1}}[\Delta X_t] \approx 0, \Delta X_t \approx E_{t-1}[\Delta X_t]$). Thus, this hypothesis assumes that aggregate earnings changes do not modify investors’ expectations at the earnings announcement.

\(^{10}\) Based on valuation models such as the Dividend Discount Model, the increase (decrease) of the discount rate (the cost of capital) drives the stock prices downward (upward). Therefore, changes in the market-wide cost of capital have a negative effect on the aggregate stock returns.

\(^{11}\) Additionally, as SS describe, since this hypothesis assumes that aggregate earnings changes are largely unpredictable, the relation between expected earnings changes and expected returns should not affect the aggregate earnings-returns relation ($E_{t-1}[\Delta X_t] \approx 0, \Delta X_t \approx U_{E_{t-1}}[\Delta X_t]$). To understand KLW’s hypothesis more deeply, we propose the possible economic story behind the positive relation between aggregate earnings changes and changes in the risk-free rate or expected inflation. In an economic boom (economic recession) when positive (negative) aggregate earnings changes are observed, the demands for money, goods, and services will increase (decrease), hence causing higher (lower) interest rates and inflation.

\(^{12}\) Strictly speaking, SS’s hypothesis assumes that aggregate earnings changes announced at period t are priced in before the beginning of period t.
period\(^{14}\) \(\text{cov}(N_{CF,t}, U_{E,t-1}[\Delta X_t]) \approx 0, \ \text{cov}(N_{DR,t}, U_{E,t-1}[\Delta X_t]) \approx 0\). SS also suppose that when investors predict an economic boom (economic recession), they will take more (less) risks\(^{15}\), resulting in a lower (higher) market risk premium. Since the market risk premium is one of the components of the market-wide cost of capital, a lower (higher) market risk premium will lead to a lower (higher) market-wide cost of capital. Then, stock prices will move upward (downward) until the “expected returns from buying stocks on current prices” get equal to the correspondent cost of capital\(^{16}\). Assuming that they correspond before the earnings announcement period, “expected returns from buying stocks on current prices” at the beginning of the earnings announcement period will be lower (higher) and will have a negative relation with the predicted aggregate earnings changes \(\text{cov}(E_{t-1}[R_t], E_{t-1}[\Delta X_t]) \leq 0\). In conclusion, if positive (negative) aggregate earnings changes are sufficiently predicted, expected returns will decrease (increase), causing realized returns to decrease (increase) \(\text{cov}(R_t, \Delta X_t) \leq 0\).

Existing literature supporting SS’s hypothesis argues that aggregate earnings changes are more predictable than firm-level earnings changes, and that the earnings-returns relation will get weaker (from positive to negative) as the number of firms aggregated increases\(^{17}\). SS report that aggregate earnings changes have more components that can be explained by the correspondent stock returns before the earnings announcement period than the firm-level earnings changes. They also show that the more number of firm-level earnings changes are aggregated, the more information about aggregate earnings changes are priced in before the earnings announcement period. This causes a weaker (from positive to negative) aggregate earnings-returns relation. Ball et al. (2009) report a positive correlation between aggregate earnings and the previous aggregate stock returns. This positive correlation suggests that the information in aggregate earnings is priced in before the earnings announcement period. He and Hu (2014) run a pooling regression of the country/year observations made from the financial data of listed firms in 28 non-U.S. stock markets. They show that the aggregate earnings-returns relation is weaker (from positive to

\(^{14}\) Existing research supporting SS’s hypothesis interprets aggregate earnings changes as cash-flow news priced in before the earnings announcement period, not aggregate earnings surprises at the earnings announcement period.

\(^{15}\) We tentatively present the economic background behind the negative relation between the predicted aggregate earnings changes and risk appetite of investors to understand SS’s hypothesis more deeply. When expected cash flows are modified upward (downward), the possibility of capital loss of buying stocks will decrease (increase) as long as the volatilities of stock prices are stable.

\(^{16}\) Although expected returns are ordinarily equal to the cost of capital, “expected returns from buying stocks on current prices” can be different from the cost of capital temporarily due to cash-flow news or discount-rate news. When “expected returns from buying stocks on current prices” become higher than the cost of capital, it means that the expected cash flows are higher (lower) than required. Since investors are eager to buy (sell) such stocks, stock prices will move upward (downward). As stock prices move upward (downward), “expected returns from buying stocks on current prices” get lower (higher) and finally, “expected returns from buying stocks on current prices” become equal to the cost of capital.

\(^{17}\) SS name Chen (1991) as a supporter of their hypothesis. However, we suspect that he may not be a proper supporter for their hypothesis. Chen (1991) shows that the recent growth of Gross National Product is negatively correlated to the future market return. If the effects of cash-flow news and discount-rate news stay constant, realized return is equal to the expected return on average. Thus, his results may suggest a negative relation between the economic growth and the market-wide cost of capital (which is equal to the expected return). Since aggregate earnings changes have a positive relation with the contemporaneous economic growth (e.g., Konchitchki and Patatoukas 2014; Nakano and Yoshinaga 2015), aggregate earnings changes can be regarded as reflecting the contemporaneous economic growth. Therefore, the result by Chen (1991) may indicate the negative relation between aggregate earnings changes and changes in the market-wide cost of capital. Assuming that the economic growth and changes in the market-wide cost of capital are positively correlated, KLW's hypothesis can explain the results by Chen (1991).
negative) in countries with more transparent financial disclosure because such disclosure helps investors forecast future earnings more precisely.

2.3. Research questions

As described, prior U.S. studies suggest that the risk-free rate and expected inflation are important components of the market-wide cost of capital that bias the aggregate earnings-returns relation. On the other hand, the economic significance of these components will be trivial in Japan due to the “zero-interest-rate policy” and stable prices. Thus, changes in the market-wide cost of capital may not function as an omitted variable. Therefore, our research question is whether the market-wide cost of capital still biases the aggregate earnings-returns relation in the Japanese stock market. To answer this question, we focus on three points. The first is whether and how aggregate earnings changes are related to changes in the market-wide cost of capital. If changes in the market-wide cost of capital cause the omitted variable bias, they must have a positive relation.

Second, we focus on whether changes in the market-wide cost of capital have a significantly negative relation with aggregate stock returns and whether a significantly positive aggregate earnings-returns relation appears after controlling for changes in the market-wide cost of capital in the Japanese stock market. If changes in the market-wide cost of capital are an omitted variable, they should have a significantly negative effect on the aggregate stock returns. Additionally, a significantly positive earnings-returns relation should appear at the aggregate level after controlling for them.

Finally, we decompose changes in the market-wide cost of capital into three components following Patatoukas (2014), and investigate which components bias the aggregate earnings-returns relation in the Japanese stock market. Due to the slight changes of the risk-free rate and expected inflation during our sample periods, their economic impacts will be trivial in the Japanese stock market. Therefore, we predict that these two components do not cause an omitted variable bias against the aggregate earnings-returns relation in Japan.

3. Research design

3.1. Model description

We adopt two main tests to investigate whether the market-wide cost of capital biases aggregate earnings-returns relation in the Japanese stock market. In the first test, we check the relation between aggregate earnings variables ($\Delta AggE_q$) and the contemporaneous changes in the market-wide cost of capital ($\Delta ICC_{q+1}$). We use two aggregate earnings variables: aggregate earnings changes ($\Delta EARN_q$) and aggregate earnings surprises

SS construct the hypothesis that aggregate earnings changes are predicted before the earnings announcement period. Consistent with their hypothesis, Yoshinaga (2015) show that aggregate earnings changes have a significantly positive relation with aggregate stock returns before earnings announcements in the Japanese stock market. Additionally, KLW report that aggregate earnings changes have a positive autocorrelation (earnings persistence). According to these studies, aggregate earnings changes may be correctly predictable and may mainly be composed of expected earnings changes ($E_{t-1}[\Delta X_t]$), not of unexpected earnings changes ($UE_{t-1}[\Delta X_t]$). Thus, we extract surprising information in aggregate earnings changes (aggregate earnings surprises) to use in our empirical analysis. If the results are not largely different
(SUR_q). Following Patatoukas (2014), we use the regression model as shown in Equations 4 through 6.

\[
\Delta AggE_q = \alpha + \beta_1 \Delta ICC_{q+1} + \epsilon \\
\Delta AggE_q = \alpha + \beta_1 \Delta IRP_{q+1} + \beta_2 \Delta RF_{q+1} + \epsilon \\
\Delta AggE_q = \alpha + \beta_1 \Delta IRP_{q+1} + \beta_2 \Delta RRF_{q+1} + \beta_3 \Delta INF_{q+1} + \epsilon
\]

In Equation 4, we investigate the relation between aggregate earnings variables and changes in the market-wide cost of capital. If KLW’s hypothesis grasps the reality of the Japanese stock market, \( \beta_1 \) in Equation 4 should be significantly positive. In Equations 5 and 6, we investigate which components of changes in the market-wide cost of capital cause an omitted variable bias. In Equation 5, we split changes in the market-wide cost of capital into changes in the market risk premium (\( \Delta IRP_{q+1} \)) and changes in the nominal risk-free rate (\( \Delta RF_{q+1} \)). In Equation 6, we divide changes in the nominal risk-free rate into the real risk-free rate (\( \Delta RRF_{q+1} \)) and those of expected inflation (\( \Delta INF_{q+1} \)). If these components are omitted variables, their coefficients should be significantly positive.

In the second test, we focus on the bias of changes in the market-wide cost of capital and those in its components against the aggregate earnings-returns relation. We use the regression model described in Equations 7 through 10.

\[
R_{q+1} = \alpha + \gamma_1 \Delta AggE_q + \epsilon \\
R_{q+1} = \alpha + \gamma_1 \Delta AggE_q + \gamma_2 \Delta ICC_{q+1} + \epsilon \\
R_{q+1} = \alpha + \gamma_1 \Delta AggE_q + \gamma_2 \Delta IRP_{q+1} + \gamma_3 \Delta RF_{q+1} + \epsilon \\
R_{q+1} = \alpha + \gamma_1 \Delta AggE_q + \gamma_2 \Delta IRP_{q+1} + \gamma_3 \Delta RRF_{q+1} + \gamma_4 \Delta INF_{q+1} + \epsilon
\]

According to prior studies, observed aggregate earnings-returns relation is insignificant or negative with a simple regression model both in the U.S. (e.g., KLW; SS; Patatoukas 2014) and in Japan (Yoshinaga 2015). Therefore, we expect that \( \gamma_1 \) in Equation 7 will not be significantly positive. However, KLW’s hypothesis argues that this earnings-returns relation is biased by the negative effect of the contemporaneous changes in the market-wide cost of capital (\( \Delta ICC_{q+1} \)). Then, in Equations 8 through 10, we control for the contemporaneous changes in the market-wide cost of capital or their components, and test whether and how \( \gamma_1 \) changes. If KLW’s hypothesis reflects reality, \( \gamma_1 \) should be significantly positive and \( \gamma_2 \) should be significantly negative in Equation 8. In Equations 9 and 10, we decompose changes in the market-wide cost of capital and investigate which components have significantly negative coefficients. If the coefficient of a component is significantly positive in the first test and significantly negative in the second test, the

for whichever aggregate earnings variables we use, we can judge that aggregate earnings changes mainly reflect aggregate earnings surprises.
component is suggested to bias the aggregate earnings-returns relation. Based on the unique Japanese economic situation, we predict that at least the risk-free rate and expected inflation will not meet both requirements.

3.2. Variable definition

We use quarterly data. As a proxy for aggregate stock returns, we use the equally-weighted averages of the quarterly buy-and-hold returns ($R_q$). Before calculating the firm-level stock returns, we adjust stock prices for the price movements due to the ex-rights and ex-dividends. Aggregate earnings changes ($\Delta EARN_q$) are the averages of the seasonally differenced quarterly earnings deflated by the book value of equity one year before ($\frac{EARN_{q}-EARN_{q-4}}{BV_{q-4}}$). We define aggregate earnings surprises ($SUR_q$) as the residuals of the following Equation 11:

$$\Delta EARN_q = \alpha + \beta_1 \Delta EARN_{q-1} + \beta_2 R_q + \epsilon$$

Easton and Sommers (2007) run a cross-sectional regression to determine the implied cost of capital for a portfolio. We estimate that the implied cost of capital for a market portfolio which is composed of the stocks of all sample firms based on their method, and use this as the market-wide cost of capital in our analysis ($ICC_q$). Their method is derived from the following residual income model (Equation 12).

$$v_{i,t} = bps_{i,t} + \sum_{\tau}^\infty \frac{eps_{i,t+\tau} - r_{i,t} \times bps_{i,t+\tau-1}}{(1 + r_{i,t})^\tau}$$

$v_{i,t}$ is the intrinsic value per share of firm $i$ at period $t$. $bps_{i,t}$ is the book value per share of firm $i$ at period $t$. $eps_{i,t}$ is the earnings per share of firm $i$ at period $t$. $r_{i,t}$ is the cost of capital of firm $i$ at period $t$. We transform Equation 12 into Equation 13 by setting the following two assumptions: (1) the perpetual growth rate of the residual earnings starting from period $t+1$ ($g_t$) is constant, and (2) the intrinsic value is equal to the contemporaneous stock price ($v_{i,t} = p_{i,t}$).

$$p_{i,t} = bps_{i,t} + \frac{E_t[eps_{i,t+1}] - r_{i,t} \times bps_{i,t}}{(r_{i,t} - g_t)}$$

In Equation 13, $p_{i,t}$ is stock price of the firm $i$ at period $t$, and $E_t[eps_{i,t+1}]$ is the earnings per share of firm $i$ at period $t+1$ that are expected at period $t$. Then Equation 13 can be reduced to Equation 14.

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19 According to KLW, aggregate earnings changes have the first to the third order significantly positive autocorrelation and this autocorrelation is mainly caused by the first order partial autocorrelation. In our untabulated test, we confirm that $\Delta EARN_q$ also has the first order to the second order significantly positive autocorrelation and this is mainly caused by the first order partial autocorrelation. (The relation between $\Delta EARN_q$ and $\Delta EARN_{q-2}$ turns into insignificant after controlling for $\Delta EARN_{q-1}$, although the relation is significantly positive when running a simple regression.) Thus, we adjust aggregate earnings changes for only the first order autocorrelation in calculating $SUR_q$. 
\[ E_t[\text{eps}_{i,t+1}] \] 
\[ \frac{\text{bps}_{i,t}}{\text{bps}_{i,t}} = r_{i,t} + (r_{i,t} - g_i) \times \frac{p_{i,t}}{\text{bps}_{i,t}} \]

If we assume that the analyst forecast of earnings per share is the proxy for the expected earnings per share \( E_t[\text{eps}_{i,t+1}] \), we can substitute all items for the specific values in Equation 14 except \( r_{i,t} \) and \( (r_{i,t} - g_i) \). Furthermore, if we replace these two variables by the intercept parameter and the slope parameter respectively \( (\alpha = r_{i,t}, \beta = (r_{i,t} - g_i)) \), and run a cross-sectional regression, we can simultaneously estimate the averages of the cost of capital for the stocks in the portfolio and those of the perpetual growth rate for the listed firms whose stocks are in the portfolio each period.

Nonetheless, it is known that the estimated cost of capital by using the analysts’ forecast of future earnings is biased upward since analysts tend to forecast future earnings optimistically (Easton and Sommers 2007). To handle this upward bias, Easton and Sommers (2007) propose a method that estimates the implied cost of capital using realized current earnings instead of forecasted future earnings. Assuming that the perpetual growth rate of residual earnings starting from period \( t \) \( (g'_i) \) is stable and that the intrinsic value is equal to the contemporaneous stock price \( (v_{i,t} = p_{i,t}) \), we transform Equation 12 into Equation 15. Further, Equation 15 can be reduced to Equation 16.

By replacing \( r_{i,t} \) and \( \frac{r_{i,t} - g'_i}{1 + g'_i} \) with the intercept parameter and the slope parameter respectively \( (\alpha = r_{i,t}, \beta = \frac{r_{i,t} - g'_i}{1 + g'_i}) \), we can simultaneously estimate the average cost of capital for the stocks in the portfolio and the average perpetual growth rates of the listed firms whose stocks are in the portfolio each period. Although Easton and Sommers (2007) estimate the implied cost of capital each year using annual earnings, we have to estimate it each quarter because our analysis is quarterly based. So we sum up the recent four quarterly earnings of each firm and regard such total earnings as the quasi annual earnings of the firm. Using these quasi annual earnings, we estimate the implied market-wide cost of capital each quarter. Considering the timing of the quarterly earnings announcement and multiplying per share items by the number of outstanding shares, we transform Equations 15 and 16 into Equations 17 and 18, respectively.

\[ MV_{i,q} = BV_{i,q-1} + \frac{(\text{SUMEARN}_{i,q-1} - ICC_{i,q} \times BV_{i,q-5})(1 + G'_{i,q})}{(ICC_{i,q} - G'_{i,q})} \]

\[ 20 \text{ In Japan, quarterly earnings are normally released at the next quarter.} \]
\[
\frac{\text{SUMEARN}_{i,q-1}}{\text{BV}_{i,q-5}} = \frac{\text{ICC}_{i,q} - G'_{i,q}}{1 + G'_{i,q}} \times \frac{\text{MV}_{i,q} - \text{BV}_{i,q-1}}{\text{BV}_{i,q-5}} + \varepsilon
\]

\(\text{MV}_{i,q}\) is the market value of firm \(i\) at the end of quarter \(q\). \(\text{BV}_{i,q-1}\) is the book value of firm \(i\) stated in the earnings briefing at quarter \(q-1\) (released at quarter \(q\)). \(\text{SUMEARN}_{i,q-1}\) is the quasi annual earnings of firm \(i\) at quarter \(q-1\). \(\text{ICC}_{i,q}\) is implied cost of capital of firm \(i\) estimated at the end of quarter \(q\). \(G'_{i,q}\) is the perpetual growth rate of residual quasi annual earnings starting from quarter \(q\). Using Equation 19 as derived from Equation 18, we run the cross-sectional regression and estimate the implied cost of capital for the market portfolio each quarter.

\[
\frac{\text{SUMEARN}_{i,q-1}}{\text{BV}_{i,q-5}} = \alpha_q + \beta_q \times \frac{\text{MV}_{i,q} - \text{BV}_{i,q-1}}{\text{BV}_{i,q-5}} + \varepsilon
\]

Changes in the nominal risk-free rate are the differenced yield of the 10-year government bond \((\Delta RF_q = RF_q - RF_{q-1})\). We define the difference between changes in the market-wide cost of capital and changes in the nominal risk-free rate as the market risk premium \((\Delta IRP_q = \Delta ICC_q - \Delta RF_q)\), following Patatoukas (2014). Changes in expected inflation are the expected year-on-year growth of the core Consumer Price Index (CPI) \((\Delta INF_q = INF_q - INF_{q-1})\). Following Patatoukas (2014), we use the real risk-free rate as the difference between the nominal risk-free rate and expected inflation \((\Delta RRF_q = \Delta RF_q - \Delta INF_q)\). Figure 3 is the timeline of our main variables.

3.3. Statistical issues: heteroskedasticity, serial correlation, and multicollinearity

Many empirical studies in accounting and finance adjust for heteroskedasticity. For example, researchers often calculate standard errors by the method of White (1980) to reduce the statistical problems due to heteroskedasticity. Additionally, considering the Durbin-Watson statistics, some of our main results may be biased by the serial correlation\(^{21}\). Therefore, we use the heteroskedasticity- and autocorrelation-consistent standard errors proposed by Newey and West (1987). We set the maximum lag length for calculating the Newey-West adjusted standard errors as two, which is the integer part of the 0.25 power of the sample size, based on related studies (Konchitchki and Patatoukas 2014; Nakano and Yoshinaga 2015) and practical convention (Ota 2012). We judge if our empirical results are biased by multicollinearity based on the Variance Inflation Factor (VIF). Since the VIF of each variable is lower than 10 in all models, we suppose that the statistical problems due to multicollinearity are trivial.

\(^{21}\) Stanford University releases "Critical Values for the Durbin-Watson Test" based on the method by Savin and White (1977) (http://web.stanford.edu/~clint/bench/dwcrit.htm). We use the critical values presented on this homepage to judge whether and how strong the serial correlation affects our results.
4. Sample selection and Data source

4.1. Sample selection

Our data source is primarily “Nikkei NEEDS Financial Quest 2.0,” which contains the financial data of listed firms and macroeconomic data in Japan. We define Q1 as the quarter from January to March, Q2 as that from April to June, Q3 as that from July to September, and Q4 as that from October to December. Using this description, our sample covers 48 quarters from Q2:2003 to Q1:2015. Although the first quarter which Nikkei NEEDS includes financial data from the quarterly Summary of Financial Statements (Kessan-Tanshin in Japanese) is Q2:2002, we exclude the periods before Q2:2003, because all firm/quarter observations before Q2:2003 do not meet the following six data requirements.

I. Firm/quarter observations that have non-missing data to construct the variables
II. Firm/quarter observations of industrial firms (not financial firms: banks; insurance; brokerage; asset management firms)
III. Firm/quarter observations that have positive market values and positive book values used to construct the variables
IV. Firm/quarter observations whose stock price at the beginning of the quarter is ¥100 and over
V. Firm/quarter observations whose fiscal year-ends are March, June, September, or December
VI. Firm/quarter observations that release a quarterly Summary of Financial Statements by 60 days after the beginning of the earnings announcement period

Data requirement I is required to remove observations that have missing values. Data requirement II is established because the accounting items of financial firms are different from industrial firms. Data requirement III is set to avoid negative deflators and financially abnormal observations. Data requirement IV is imposed to exclude the outliers of stock returns. If stock prices are near the minimum monetary unit (¥1), the stock returns tend to be highly volatile. Thus, it is supposed that K LW and SS exclude observations with stock prices below $1 to reduce the effects of the outliers of stock returns. We cover the listed firms adopting March as the fiscal year-end because March is the most popular fiscal year-end in Japan. Additionally, data requirement V is required to increase the number of sample firms by covering firms that have fiscal year-ends of June, September, or December. Data requirement VI is set so reported earnings are priced in at the earnings announcement period.

After imposing these data requirements, we regard the top and bottom 1% of the firm/quarter observations as ranked by the $\Delta EARN_{i,q}$, $\frac{SUMEARN_{i,q-1}}{BV_{i,q-5}}$ and $\frac{MV_{i,q}-BV_{i,q-1}}{BV_{i,q-5}}$ each quarter as the outliers, and exclude them from our sample. Our final sample contains 43 quarter observations aggregated by 102,877 firm/quarter observations.

We collect macroeconomic data during our sample periods. The nominal risk-free rate is the yield of the 10-year government bond at the end of each quarter obtained from Nikkei NEEDS. We manually collect the averages of the expected year-on-year growth of the core
CPI from the ESP forecast\textsuperscript{22} issued at the end of each quarter as expected inflation\textsuperscript{23}.

4.2. Correlation matrix and descriptive statistics

Table 1 shows the correlation matrix and descriptive statistics. The correlation between $SURE_q$ and $R_q$ is almost zero because $SURE_q$ is the residuals estimated using the regression model that contains $R_q$ as an independent variable (Equation 11). The correlation between $\Delta ICC_q$ and $\Delta IRP_q$ is almost one probably because of the trivial movements of the risk-free rate and expected inflation in Japan. Consistent with this supposition, the standard deviations of $\Delta RF_q$ and $\Delta INF_q$ are less than one third of those of $\Delta IRP_q$.

We conduct the unit root tests proposed by Phillips and Perron (1988) for all variables described in Table 1. According to Okimoto (2010), when we regress a dependent variable that has a unit root on an independent variable that also has a unit root, significant relation between them can be observed, even though they have no rational relation (cf. “spurious regression” as Granger and Newbold 1974 state). All results of the Phillips-Perron type unit root tests reject the null hypothesis that variables contain a unit root at the 1\% level (untabulated). Therefore, our regressions in Section 5 should not be “spurious regressions.”

5. Empirical results

5.1. Main results

Table 2 details the results from the first main test. At first, aggregate earnings changes have a significantly positive relation with the contemporaneous changes in the market-wide cost of capital, as do aggregate earnings surprises. In this table, we can also observe the significantly positive relation between aggregate earnings variables and changes in the market risk premium. On the other hand, coefficients of changes in the risk-free rates and those of expected inflation are not consistent.

Table 3 illustrates the results of the second main test. When running a simple regression, a significantly positive aggregate earnings-returns relation cannot be observed consistent

\textsuperscript{22} The ESP forecast is the survey issued by the Economic Planning Association originally and was taken over by the Japan Center for Economic Research after April 2002. These authorities send approximately 40 private economists a questionnaire about their expectations of important economic indicators, such as stock prices and yen exchange rates, each month. They submit their answers each month to clarify the consensus on the future economic trends and the persistence of the business condition (cf. http://www.jcer.or.jp/esp/index.html).

\textsuperscript{23} In April 2014, the consumption tax rate was increased from 5\% to 8\% in Japan. To exclude the effect of this, we use the average core CPI after adjusting for the rise in the consumption tax rate (the adjusted average core CPI) starting at Q2:2013. However, at Q2:2013 and at Q3:2013, the ESP forecast has not announced the adjusted average core CPI. “The effects of the two scheduled consumption tax hikes on prices can be mechanically estimated by assuming that the rise in the consumption taxes will be fully passed on for all currently taxable items. On this basis, the CPI will be pushed up by 2.0 percentage points in fiscal 2014” (Bank of Japan 2013). Based on these statements, we subtract 2\% from the non-adjusted average year-over-year growth of the core CPI at these quarters to rule out the effect of the consumption tax rate increase.
with prior studies. On the other hand, when controlling for the contemporaneous changes in the market-wide cost of capital, coefficients of aggregate earnings variables dramatically change. They turn into significantly positive. Additionally, it is indicated that changes in the market-wide cost of capital have significantly negative relation with the aggregate stock returns. These results suggest that the contemporaneous changes in the market-wide cost of capital cause an omitted variable bias against the aggregate earnings-returns relation in the Japanese stock market.

Next, we decompose changes in the market-wide cost of capital and investigate which components bias the aggregate earnings-returns relation in Japan. Consistent with our prediction, the coefficients of changes in the risk-free rates and expected inflation are all insignificant. On the other hand, the coefficient of the market risk premium is significantly negative. Therefore, it is suggested that the market-wide cost of capital causes a strong bias against the aggregate earnings-returns relation due to the bias from the market risk premium in the Japanese stock market.

Additionally, there are minimal differences between the results with aggregate earnings changes and those with aggregate earnings surprises. Thus, although aggregate earnings changes may be predicted before the earnings announcement period, they reflect surprising information at the earnings announcement period.

5.2. Robustness checks

In this section, we run robustness checks by using different standard errors, regression method, aggregating method, and sample periods. We do not tabulate the results of these robustness checks due to space considerations.

5.2.1. Robustness checks on serial correlation and heteroskedasticity

We calculate the heteroskedasticity- and autocorrelation-consistent standard errors proposed by Newey and West (1987) in our main tests. In calculating these standard errors, we set the maximum lag length as two. Despite this treatment, we may not be able to reduce statistical problems due to serial correlation, since this lag length is based only on academic and practical conventions. Therefore, we check the robustness of the main results in the following two ways. First, we vary the maximum lag length from zero to four and check the sensitivity of our results. Second, we adopt the generalized least-squares method presented by Prais and Winsten (1954) and use the heteroskedasticity-consistent standard errors presented by White (1980). All results of these robustness checks are similar to our main results.

5.2.2. Robustness checks on the other aggregating method: value-weighted averages

Existing studies on aggregate earnings-returns relation use not only equally-weighted cross-sectional averages but also value-weighted cross-sectional averages as aggregate

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24 We confirm that the observed aggregate earnings-returns relation is still insignificant, even when we control for only the contemporaneous changes in the real risk-free rate and those in expected inflation (untabulated).
variables. Therefore, we employ value-weighted averages based on market values as the aggregation method and run the same regressions as conducted in the main analysis. In this robustness check, we estimate the cost of capital separately for each industry and calculate the value-weighted averages of the cost of capital based on the total market value of each industry as the market-wide cost of capital. Almost all signs and statistical significances of the coefficients are similar to those of the main results, with one differing result. When we check the relation between aggregate earnings surprises and the contemporaneous aggregate stock returns after controlling for the contemporaneous changes in the market-wide cost of capital (Equation 8) or those of its components (Equation 9 and 10) with the standard errors by Newey and West (1987), an insignificant relation is observed. To the contrary, when we adopt the generalized least-squares method by Prais and Winsten (1954) and the heteroskedasticity-consistent standard errors proposed by White (1980), a significantly positive aggregate earnings-returns relation occurs consistent with the main analysis. Therefore, we comprehensively judge that the positive effect of the value-weighted aggregate earnings surprises on the contemporaneous aggregate stock returns exists, but is somewhat weaker.

5.2.3. Robustness checks on the sample period

Due to the data restrictions, our sample is limited to roughly 1,000 firm/quarter observations before Q2:2005, although we can collect over 2,000 firm/quarter observations starting from Q2:2005. Before Q2:2005, the aggregated variables may become outliers because aggregating fewer firms can cause an inadequate diversification of firm-specific information. Thus, we limit the sample periods starting from Q2:2005 and run our main regression models. The results are not largely different from the main results in the signs and significances of the coefficients.

The bankruptcy of Lehman Brothers and the subsequent financial crisis occurred during our sample period. Since this financial crisis seriously damaged the Japanese economy, some observations can be outliers due to the crisis. Therefore, we exclude quarter observations from Q3:2008 (the period Lehman Brothers declared bankruptcy) to Q1:2010 (the first trough of the business cycle following the bankruptcy of Lehman Brothers according to the Cabinet Office of Japan) to reduce the effect of the financial crisis on our results. In this skipped sample period, we run the same regressions as in our main tests using the generalized least-squares method by Prais and Winsten (1954) and the heteroskedasticity-consistent standard errors by White (1980). In the results of this robustness check, aggregate earnings changes are not significantly related to changes in the risk-free rates and expected inflation, unlike the main results. However, this does not impede the interpretation of our main results, and the other results are similar to our main results.

25 The positive effect of value-weighted aggregate earnings surprises is weaker, probably because the impacts of large firms will be strong if we use value-weighted averages. Collins et al. (1987) suggest that earnings changes in larger firms are more predictable. Therefore, value-weighted averages of earnings changes will be predicted more easily than equally-weighted averages. By running Equation 11 to calculate $SUR_q$ using equally-weighted averages, the adjusted R-Square is 46.54% (untabulated). On the other hand, when we use value-weighted averages, the adjusted R-Square is 56.01% (untabulated). This difference suggests that the value-weighted aggregate earnings changes are more predictable than the equally-weighted aggregate earnings changes.
5.2.4. Conclusion of the robustness checks

Three main evidences are confirmed again by these robustness checks. First, aggregate earnings changes are positively related to the contemporaneous changes in the market-wide cost of capital. Second, a significantly positive aggregate earnings-returns relation appears after controlling for the contemporaneous changes in the market-wide cost of capital. Third, the economic impacts of the market-wide cost of capital are mainly based on the market risk premium in the Japanese stock market. These results support the robustness of our main results.

6. Conclusion

Contrary to the “common sense” of the research area on accounting and finance, recent studies report that significantly positive earnings-returns relation cannot be observed at the aggregate level. To explain this puzzling relation, KLW propose that changes in the market-wide cost of capital cause an omitted variable bias against this relation. Although U.S. studies suggest that the risk-free rate and expected inflation are the important components of the market-wide cost of capital, the economic impacts of these components are minimal in Japan due to its economic situation. Nevertheless, our three results suggest that KLW’s hypothesis still explains the Japanese stock market. First, aggregate earnings changes are positively correlated to changes in the market-wide cost of capital. Second, after controlling for the contemporaneous changes in the market-wide cost of capital, a significantly positive aggregate earnings-returns relation appears. Third, these two results are mainly caused by changes in the market risk premium.

To the best of our knowledge, this paper is the first study to show supportive evidence for KLW’s hypothesis not only in the Japanese stock market but also in another non-U.S. market. Our results suggest that changes in the market risk premium cause an omitted variable bias against the aggregate earnings-returns relation in the Japanese stock market, where the risk-free rate and expected inflation do not have significant economic impacts. This may have implications for foreign stock markets. Although prior studies suggest that the risk-free rate is one of the important components in the U.S. market, the U.S. government adopted the “zero-interest-rate policy” in 2008. Therefore, the economic impacts of the risk-free rate may decrease in the recent U.S. market. However, related prior U.S. studies do not cover the sample period after 2008 sufficiently. Additionally, He and Hu (2014) propose evidence that interest rates and inflation do not affect the aggregate earnings-returns relation in the non-U.S. markets. Based on our results, the market risk premium may strongly bias the aggregate earnings-returns relation even in markets where the risk-free rate and/or expected inflation do not affect this relation. This bias may cause changes in the market-wide cost of capital to impact the aggregate earnings-returns relation in those markets. Of course it has not clarified yet that what the specific economic story exists behind the positive relation between aggregate earnings changes and changes in the market risk premium. This limitation provides opportunities for our future research.

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Appendix

(A) The validity of $SUR_q$ as a proxy for aggregate earnings surprises

We use the residuals of Equation 11 as a proxy for aggregate earnings surprises ($SUR_q$). We test whether this variable is appropriate as aggregate earnings surprises using Equation 20. If the slope parameters of Equation 20 are significant, $SUR_q$ can have the information priced in before the earnings announcement period and this variable may not be appropriate as aggregate earnings surprises.

$$SUR_q = \alpha + \sum_{k=0}^{3} \beta_k R_{q-k} + \varepsilon$$

Table 4 indicates the results of the regression using Equation 20. In this table, aggregate earnings surprises are not significantly related to the past aggregate stock returns. From this result, we can interpret that $SUR_q$ is not priced in before the earnings announcement period.
REFERENCE


Table 1 Correlation matrix and descriptive statistics

Panel A Correlation matrix

$R_q$ is aggregate stock returns. $ΔEARN_q$ is aggregate earnings changes. $SUR_q$ is aggregate earnings surprises. $ΔICC_q$ is changes in the market-wide cost of capital. $ΔIRP_q$ is changes in the market risk premium. $ΔRF_q$ is changes in the nominal risk-free rate. $ΔRRF_q$ is changes in the real risk-free rate. $ΔINF_q$ is changes in expected inflation. Pearson (Spearman) correlations are above (below) diagonal. Significant correlation at 5% level is bold.

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<td>-0.058</td>
<td>-0.380</td>
<td>-0.415</td>
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<tr>
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Panel B Descriptive statistics

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<th>Mean</th>
<th>S. D.</th>
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<th>Median</th>
<th>75%</th>
<th>Max</th>
<th>N</th>
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<td>$R_q$</td>
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<td>0.100</td>
<td>-0.168</td>
<td>-0.049</td>
<td>0.013</td>
<td>0.086</td>
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</tr>
<tr>
<td>$ΔEARN_q$</td>
<td>0.002</td>
<td>0.009</td>
<td>-0.026</td>
<td>-0.002</td>
<td>0.002</td>
<td>0.007</td>
<td>0.033</td>
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<td>$SUR_q$</td>
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<td>-0.019</td>
<td>-0.003</td>
<td>0.000</td>
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<td>$ΔICC_q$</td>
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<td>-0.006</td>
<td>0.000</td>
<td>0.005</td>
<td>0.028</td>
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</tr>
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<td>-0.008</td>
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<td>0.001</td>
<td>0.001</td>
<td>0.005</td>
<td>43</td>
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</table>
Table 2: The relation between aggregate earnings variables and the changes in the market-wide cost of capital

The table shows the results obtained by $\Delta AggE_q = \alpha + \beta_1 \Delta ICC_{q+1} + \epsilon$ (Equation 4), $\Delta AggE_q = \alpha + \beta_1 \Delta IRP_{q+1} + \beta_2 \Delta RRF_{q+1} + \epsilon$ (Equation 5), $\Delta AggE_q = \alpha + \beta_1 \Delta IRP_{q+1} + \beta_2 \Delta RRF_{q+1} + \beta_3 \Delta INF_{q+1} + \epsilon$ (Equation 6). $\Delta AggE_q$ is aggregate earnings variable, which is replaced by $\Delta EARN_q$ or $SUR_q$. $\Delta EARN_q$ is aggregate earnings changes. $SUR_q$ is aggregate earnings surprises. $\Delta ICC_q$ is changes in the market-wide cost of capital. $\Delta IRP_q$ is changes in the market risk premium. $\Delta RF_q$ is changes in the nominal risk-free rate. $\Delta RRF_q$ is changes in the real risk-free rate. $\Delta INF_q$ is changes in expected inflation. The left three rows indicate the results by the regression whose independent variable is $\Delta EARN_q$. The right three rows indicate the results by the regression whose independent variable is $SUR_q$. We report $t$-statistics using heteroskedasticity- and autocorrelation-consistent standard errors proposed by Newey and West (1987) in the brackets. ***, ** and * denote statistical significance at the 1%, 5% and 10% level respectively, using two-tailed tests.

<table>
<thead>
<tr>
<th></th>
<th>$\Delta EARN_q$</th>
<th>$SUR_q$</th>
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<tbody>
<tr>
<td>Intercept</td>
<td>0.002**</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>[2.156]</td>
<td>[0.077]</td>
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<tr>
<td>$\Delta ICC_{q+1}$</td>
<td>0.857***</td>
<td>0.462***</td>
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<tr>
<td></td>
<td>[8.364]</td>
<td>[4.774]</td>
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<tr>
<td>$\Delta IRP_{q+1}$</td>
<td>0.882***</td>
<td>0.435***</td>
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<td></td>
<td>[8.389]</td>
<td>[3.784]</td>
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<tr>
<td>$\Delta RF_{q+1}$</td>
<td>1.292***</td>
<td>-0.005</td>
</tr>
<tr>
<td></td>
<td>[2.931]</td>
<td>[-0.008]</td>
</tr>
<tr>
<td>$\Delta RRF_{q+1}$</td>
<td>0.848**</td>
<td>-0.038</td>
</tr>
<tr>
<td></td>
<td>[2.358]</td>
<td>[-0.055]</td>
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<tr>
<td>$\Delta INF_{q+1}$</td>
<td>1.574***</td>
<td>0.016</td>
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<tr>
<td></td>
<td>[4.928]</td>
<td>[0.027]</td>
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<tr>
<td>$Adj. R^2$</td>
<td>0.776</td>
<td>0.434</td>
</tr>
<tr>
<td>$F$ stats</td>
<td>69.953***</td>
<td>22.787***</td>
</tr>
<tr>
<td>$D. W. stats$</td>
<td>1.648</td>
<td>2.173</td>
</tr>
<tr>
<td>$N$</td>
<td>42</td>
<td>41</td>
</tr>
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</table>

**Note:** The table shows the results obtained by $\Delta AggE_q = \alpha + \beta_1 \Delta ICC_{q+1} + \epsilon$ (Equation 4), $\Delta AggE_q = \alpha + \beta_1 \Delta IRP_{q+1} + \beta_2 \Delta RRF_{q+1} + \epsilon$ (Equation 5), $\Delta AggE_q = \alpha + \beta_1 \Delta IRP_{q+1} + \beta_2 \Delta RRF_{q+1} + \beta_3 \Delta INF_{q+1} + \epsilon$ (Equation 6). $\Delta AggE_q$ is aggregate earnings variable, which is replaced by $\Delta EARN_q$ or $SUR_q$. $\Delta EARN_q$ is aggregate earnings changes. $SUR_q$ is aggregate earnings surprises. $\Delta ICC_q$ is changes in the market-wide cost of capital. $\Delta IRP_q$ is changes in the market risk premium. $\Delta RF_q$ is changes in the nominal risk-free rate. $\Delta RRF_q$ is changes in the real risk-free rate. $\Delta INF_q$ is changes in expected inflation. The left three rows indicate the results by the regression whose independent variable is $\Delta EARN_q$. The right three rows indicate the results by the regression whose independent variable is $SUR_q$. We report $t$-statistics using heteroskedasticity- and autocorrelation-consistent standard errors proposed by Newey and West (1987) in the brackets. ***, ** and * denote statistical significance at the 1%, 5% and 10% level respectively, using two-tailed tests.
Table 3: The bias of the changes in the market-wide cost of capital against the aggregate earnings-returns relation

The table shows the results obtained by $R_{q+1} = \alpha + \gamma_1 \Delta AggE_q + \gamma_2 \Delta ICC_{q+1} + \epsilon$ (Equation 7), $R_{q+1} = \alpha + \gamma_1 \Delta AggE_q + \gamma_2 \Delta IRP_{q+1} + \gamma_3 \Delta RF_{q+1} + \epsilon$ (Equation 8), $R_{q+1} = \alpha + \gamma_1 \Delta AggE_q + \gamma_2 \Delta IRP_{q+1} + \gamma_3 \Delta RF_{q+1} + \gamma_4 \Delta INF_{q+1} + \epsilon$ (Equation 9), $R_{q+1} = \alpha + \gamma_1 \Delta AggE_q + \gamma_2 \Delta IRP_{q+1} + \gamma_3 \Delta RF_{q+1} + \gamma_4 \Delta INF_{q+1} + \epsilon$ (Equation 10). $\Delta AggE_q$ is aggregate earnings variable, which is replaced by $\Delta EARN_q$ or $SUR_q$. $R_q$ is aggregate stock returns. $\Delta EARN_q$ is aggregate earnings changes. $SUR_q$ is aggregate earnings surprises. $\Delta ICC_q$ is changes in the market-wide cost of capital. $\Delta IRP_q$ is changes in the market risk premium. $\Delta RF_q$ is changes in the nominal risk-free rate. $\Delta RRF_q$ is changes in the real risk-free rate. $\Delta INF_q$ is changes in expected inflation. We report t-statistics using heteroskedasticity-and autocorrelation-consistent standard errors proposed by Newey and West (1987) in the brackets. ***, ** and * denote statistical significance at the 1%, 5% and 10% level respectively, using two-tailed tests.

<table>
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<th>0.006</th>
<th>0.007</th>
<th>0.025</th>
<th>0.025</th>
<th>0.028</th>
<th>0.024</th>
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<td>[0.489]</td>
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<td>[1.440]</td>
<td>[1.350]</td>
<td>[1.639]</td>
<td>[1.488]</td>
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<tr>
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<td>11.355***</td>
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<td></td>
<td>[0.417]</td>
<td>[3.947]</td>
<td>[3.684]</td>
<td>[2.779]</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>$SUR_q$</td>
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<td>5.415**</td>
<td>5.987**</td>
<td>5.812***</td>
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<td>[2.623]</td>
<td>[2.557]</td>
<td>[3.043]</td>
<td></td>
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<td>$\Delta ICC_{q+1}$</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
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<tr>
<td>$\Delta IRP_{q+1}$</td>
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<td>-12.213**</td>
<td>-5.506**</td>
<td>-6.451**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$\Delta RF_{q+1}$</td>
<td>7.534</td>
<td>7.157</td>
<td>5.506**</td>
<td>6.451**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[0.779]</td>
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<td>$\Delta RRF_{q+1}$</td>
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<tr>
<td>$\Delta INF_{q+1}$</td>
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<td></td>
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<td>0.339</td>
<td>0.338</td>
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<td>11.494***</td>
<td>12.802***</td>
<td>0.066</td>
<td>5.691***</td>
<td>5.451***</td>
<td>6.895***</td>
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<tr>
<td>D.W. stats</td>
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<td>2.262</td>
<td>2.280</td>
<td>2.274</td>
<td>1.618</td>
<td>1.213</td>
<td>1.265</td>
<td>1.371</td>
</tr>
<tr>
<td>$N$</td>
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<td>42</td>
<td>41</td>
<td>41</td>
<td>41</td>
<td>41</td>
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Table 4 The relation between aggregate earnings surprises and the past aggregate stock returns

The table shows the results obtained by \( \text{SUR}_q = \alpha + \sum_{k=0}^3 \beta_k R_{q-k} + \varepsilon \) (Equation 20). \( R_q \) is aggregate stock returns. \( \text{SUR}_q \) is aggregate earnings surprises. We report t-statistics using heteroskedasticity-consistent standard errors proposed by White (1980) in the brackets. ***, ** and * denote statistical significance at the 1%, 5% and 10% level respectively, using two-tailed tests.

<table>
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<th>( \text{Intercept} )</th>
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<th>0.000</th>
<th>0.000</th>
<th>0.000</th>
<th>-0.001</th>
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</thead>
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<td>( R_q )</td>
<td>0.000</td>
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<td>[-0.529]</td>
<td>[-0.223]</td>
<td>[-0.584]</td>
</tr>
<tr>
<td>( R_{q-1} )</td>
<td>0.004</td>
<td>[0.362]</td>
<td>0.002</td>
<td>[0.184]</td>
<td></td>
</tr>
<tr>
<td>( R_{q-2} )</td>
<td>0.023*</td>
<td>[1.769]</td>
<td>0.019</td>
<td>[1.113]</td>
<td></td>
</tr>
<tr>
<td>( R_{q-3} )</td>
<td>0.018</td>
<td>[1.557]</td>
<td>0.015</td>
<td>[1.084]</td>
<td></td>
</tr>
</tbody>
</table>

| \( Adj. R^2 \)         | -0.025 | -0.022 | 0.090 | 0.050 | 0.058 |
| \( F \) stats          | 0.000 | 0.131 | 3.129* | 2.423 | 1.625 |
| \( D.W. \) stats       | 1.873 | 1.909 | 2.046 | 1.873 | 1.901 |
| \( N \)                | 42    | 42    | 41    | 40    | 40    |
Figure 1 Conceptual diagram of KLW’s hypothesis

Positive (negative) aggregate earnings changes

A rise (drop) of the market-wide cost of capital

Higher (lower) stock prices do not appear.

Cancel out

Earnings announcement period
Figure 2 Conceptual diagram of SS’s hypothesis

Positive (negative) aggregate earnings changes are predicted

Stock prices move upward (downward)

Market-wide cost of capital get lower (higher)

Expected returns are lower (higher)

Lower (higher) realized returns

Before earnings announcement

Earnings announcement period
Figure 3 The timeline of our main variables

\( R_q \) is aggregate stock returns. \( \Delta EARN_q \) is aggregate earnings changes. \( \Delta ICC_q \) is changes in the market-wide cost of capital. \( \Delta IRP_q \) is changes in the market risk premium. \( \Delta RRF_q \) is changes in the real risk-free rate. \( \Delta INF_q \) is changes in expected inflation.
THE DETERMINANTS OF PERFORMANCE IN CHINA: A STUDY FOCUSED ON CULTURAL AND INSTITUTIONAL DRIVERS IN THE AREA OF SHANGHAI

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ABSTRACT

We base our work on an historical study and on interviews of Chinese managers living in the area of Shanghai. We use the institutional theoretical stream in combination with the impact of national culture, considering that organizations and managers are influenced by cultural and institutional determinants. In a first part, we describe the theoretical background to the research and our method. Then, in a second part, we present the significant cultural and institutional features of China that enable us to justify several hypotheses about our topic. In a third part, we analyze twelve in-depth interviews, trying to answer our research question. Our basic research question focuses on what “Performance” means for Chinese managers. Behind the word and its different meanings (economic, global, social), we analyze the cultural and institutional backgrounds of the managers interviewed. We end by drawing several conclusions, some of them quite non-intuitive. We show the disappearance of Confucian values behind a combination of pragmatism, and interpersonal relations. In this context, the perception of Performance would be subjective and the expression of institutional and cultural components of Chinese society. We believe that it is relevant for managers coming from Western cultures to have an understanding of this context when doing business in China.

Keywords: Chinese managers; institutions; performance; Confucianism
THE DETERMINANTS OF PERFORMANCE IN CHINA: A STUDY FOCUSED ON CULTURAL AND INSTITUTIONAL DRIVERS IN THE AREA OF SHANGHAI

International accounting standardization aims at promoting a common language and a common representation of economic activities around the world to facilitate the globalization of economic and financial transactions.

Through an institutional and cultural approach to organizations, we propose to study the performance concept of an entity. This performance concept will integrate the diversity of the stakeholders’ expectations and the diversity of the institutions. We define the concept of performance of an entity with respect to its stakeholders according to given institutions. We base our work on historical and cultural studies and thoughts, and illustrate our analyses through several interviews of Chinese managers living in and around Shanghai, trying to cross-check our analysis with their discourses. Our aim is to give us greater insight than the usual banalities and to develop points of real interest relating to specific problems of a given organization. We use the institutional theoretical stream which considers that organizations are influenced by cultural and institutional determinants. For China, Confucianism may be a strong cultural variable, but several political and social variables are also to be considered. We also draw a parallel with the Stakeholder theory (Freeman, 1984) when using these interviews.

In a first part, we describe the theoretical background to the research and our method. In a second part, we present the significant cultural, social, and institutional features of China that enable us to justify several hypotheses. Then, in the last part, we analyze twelve in-depth interviews as illustrative cases to confirm or question our previous analysis. Our basic research question is: what does “Performance” mean for Chinese managers? Behind the word performance, we analyze the cultural and institutional backgrounds, examining their behaviors and business relations. More precisely, we wonder if Chinese managers define performance based on the word Chinese traditional meaning (control, maintenance of the economic, political, and legal apparatus) or on a more modern Western meaning (economic and financial efficiency). From this general question, we list several hypotheses, based on an historical analysis:

- Performance in China is more subjective than in Western countries because of the role played by interpersonal relations.
- The boundary between private and public life is more permeable in China and conducts to a “clannish” vision of performance.
- Family, interpersonal, and business relations and links with the authorities are mixed in China.

We end by drawing several conclusions bases on these hypotheses with the belief that it is relevant for Western managers to have an understanding of this context when doing business in China.

1. Theoretical method and background

Institutional theory focuses on the influences of the systems surrounding organizations (Scott, 2001). We understand institutions as social constructs directing actions while being sensitive to their influences (Granovetter, 1985). These institutions include both formal rules such as government policies, regulations and laws ( economical orientation of institutional theory:
North, 1990; Coase, 1998) and informal constraints such as norm of behavior, conventions and codes of conduct coming from cultural and social influences (sociological orientation of institutional theory: DiMaggio and Powell, 1983; Schein, 1985; Scott, 2001) and provide us with multiple insights (economic, social, and cultural) into economic phenomena (Polanyi, 1968). According to North (1981, 1990), allowance for institutions appears to be inescapable when evaluating corporate behavior. So firms are embedded (Granovetter, 1985) in a social, political, institutional, and cultural context. Their behaviors have to be compatible with certain socially accepted values, norms, and rules. In accordance with the neoinstitutional approach, firms are mainly looking for legitimacy (DiMaggio and Powell, 1983; Scott, 2001). DiMaggio and Powell (1983) distinguish three kinds of isomorphism: coercive (regulations coming from the authorities), normative (from an economic domain, certain professional associations, etc.), and mimetism (trying to be like other firms).

This theoretical background seems relevant for our study because we want to examine different types of influences — traditions, politics, administration, culture, etc. — on Chinese managers. We ground our study on historical elements of Chinese traditions and cultural habits that enable us to consider a tangle of cultural, institutional, and economic factors affecting the perceptions of the Chinese managers interviewed as expressed in the figure below.

Figure 1: Relationship between cultural habits (including Chinese traditions), institutions and Management of Performance

Performance is always context-specific (Golob and Bartlett, 2007) and cannot readily be compared abstractly. Therefore, cultural factors should impact the content of the stories told by Chinese managers. Nevertheless, this cultural dimension is compounded by contingent factors such as fields of activity, historical background of managers, etc. This is why Chinese business realities are embedded in a complex mesh of economic, social, and cultural determinants. According to Wang, Tee, and Ahmed (2012), Chinese managers are embedded specifically in philosophical traditions and cultural values that are mixed in a kind of “new-Confucianism” (a mix of Confucianism, Legalism, and Taoism). Concerning our topic, findings based on neo-institutional theory suggest that organizations respond to institutional pressures toward corporate social responsibility for instance (Oliver, 1991). Our interviews give us an opportunity to validate or invalidate the reality of this kind of “new Confucianism”. However, it is important to keep in mind that those selected interviews are a part of a larger ongoing research project and are used for as additional references for the present study.

Through the interviews of Chinese managers, we propose to de-structuralize the storytelling to make apparent the various elements that contribute to the story. Our research is exploratory in nature, as it aims to gain insights into the concept of performance in the Chinese context, to
identify the factors and understand how these factors influence entrepreneurs’ points of view, or, at least, how they perceive or express the idea of performance. This is why the interviews are deliberately non-directive to be as close as possible to the real thinking of the managers interviewed. In organizations, storytelling could be helpful in examining subtle and fundamentally qualitative topics. In that sense it can be a way to represent the firm’s performance (Boje, 1991: 106).

We use a questionnaire frame (see appendix A) as a guide to conduct the interviews. Through each topic, we subtly try to lead the interviewee to express his deep feelings. We freely discuss different topics with the managers depending on how the interview evolves. We have recorded the interview so that we could precisely analyze the conversations. Interview data are coded using content analysis procedures (Lincoln & Guba, 1985; Strauss, 1987). We also use primary data (websites, reports and newspapers articles) to check the validity of the interview data by triangulation. Transcripts of interviews are also verified by the original interviewees (Lincoln and Guba, 1985).

In this way, beyond simplistic assertions relating, for instance, to the influence of traditions such as Confucianism, we try to explore the reality of the determinants of Chinese managers’ conception of performance. Storytelling is also useful when trying to analyze situations with various stakeholders, with social and environmental dimensions (Van der Laan, Smith, Adhikari, and Tondkar, 2005). As an exploratory approach, we take over evolutions in the content and in the way we handle the interviews. Step by step, we sharpen our starting intuitions and as a consequence, we gradually change the way we broach certain types of subject. Each interview is a new experience. This approach is an important aspect of our methodology, which is deliberately exploratory and focuses on the impressions of our interviewees.

In our inquiry, we focus on Chinese managers that have created and/or manage private medium sized companies. Here is the list of the twelve managers we have interviewed1.

- 1st company: In his small firm (around 20 people), Mr. Li Kevin deals with private equity funds, asset management, and investment banking. He helps Chinese firms to invest overseas.
- 2nd company: The firm created by Mr. Weng in 2010 is about Facilities Management in Shanghai.
- 3rd company: Mrs. Xia is General Manager of a firm which activities are dedicated to cable devices for communication systems.
- 4th company: Mr. Wu Jun helps small and medium-sized logistic firms to grow thanks to IT support.
- 5th company: Mr. WU Wenguang is deputy general manager of a Sino-French join-venture that was created in 2007. The company produces plastics for the car industry.
- 6th company: Mr. Zhang is General Manager of a medium-sized private firm founded in 2001. The main activities are the design and manufacture of molds, fixtures, and plastic parts for automotive industry.
- 7th company: Mr. Li Xiankun created a second-hand car business 10 years ago.

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1 See Appendix B for more precisions about the managers and their firms.
- 8th company: Mr. Xun created five years ago a firm that produces software for the second-hand car business.
- 9th company: Mrs. Zhu holds a small firm dedicated to Chinese students that want to study abroad.
- 10th company: Mr. Leon Xun is General Manager of Shanghai CIIC HR Consulting Co, a small company specialized in recruitment.
- 11th company: Mrs. Qiong Du is Chief executive officer of a medium-sized industrial company specialized in manufacturing equipment for the aviation sector.
- 12th company: Mrs. Xu is director of a private elementary school located in Shanghai.

The purpose of the interviews is to discuss managers’ visions of what Performance means and the consequences for Chinese management style. For that purpose, we decided to subdivide the interviews into different topics trying to perceive:
- The behaviors of Chinese managers, their distinctive cultural traits, and any evidence of Chinese traditions remaining in the way they perceive the management of performance;
- The role of interpersonal relations in the construction of firms’ performances.

2. The notion of performance in China: An institutional and historical perspective

2.1. The Word “Performance” In Chinese: Origin and Meaning

The word usually used to translate performance in Chinese is xingneng 性能, which is composed by the characters xing (nature) and neng (capacity), so the word means literally “natural skill or capacity”. However, in most cases this general term is generally applied to machines and apparatus, and also to the intrinsic properties of individuals, but it is not used for economics. In the field of economics or management, several synonymous expressions can render or translate the word performance, often accompanied (but not necessarily) by the adjective “economic”: jinjji jixiao 经济绩效; jinjji yeji 经济业绩; jinjji shiji 经济实绩; jinjji chengjiu 经济成就; jinjji biaoxian 经济表现, etc. which are all equivalent to “(economic) performance” and/or “economic achievement”. In the same way, “managerial performance” can be translated (with guanli 管理 for management) by: yeji guanli 业绩管理 or jixiao guanli 绩效管理. The multiplicity of expressions can be principally explained by the fact that the notion of “economic performance” is rather new in China; it has been introduced over recent decades through business literature in English and the development of modern economics and management. This modern notion, based on the efficient relation between objectives, means, and results, was initially unfamiliar to China. Can we infer from this statement that no Chinese word nor Chinese notion formerly corresponded in full or in part to the idea of performance? Among the Chinese equivalents for performance introduced above, the first one, jixiao 绩效 (traditional Chinese: 組效; variant characters: jixiao 組效), is both the most current and the oldest. The first characters is composed of the radical “silk” sì 素 (the left part of the character) and the character ze 責 (the right part), meaning “duty”, “responsibility” (Xu Xuan, 1963). The

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association of silk and duty, according to the most ancient Chinese etymology dictionary\(^3\), express the idea of debt repayment, since, in ancient China, it was a common practice to do silk needlework to repay a debt. Thus, \(ji\) took the meaning “to spin” (silk, hemp), and later, by semantic extension, the meaning of “praiseworthy achievement” or “exploit, feat”, honoring a debt being considered as a praiseworthy, a moral action, beneficial for the public interest (Fang, 2009). These archaic meanings have somehow evolved through history but today the character \(ji\) still has the meaning of praiseworthy action, achievement or (positive) result.

The word \(jixiao\) 竣效, which is the most common translation for “performance”, actually covers two closely related but separate ideas: the idea of result or accomplishment, and the idea of success, exploit, or praiseworthy act. This word is often used in the nomenclature of the imperial administration where it is attached to the term “evaluation”, in expressions related to the assessment system of mandarins and public finances (or merits) (Fang and Wang, 2014). Thus, the notion of performance in Chinese (or the words closest to it) refers directly to the praiseworthy assessment system, distributing rewards or punishments, of the imperial administration and finances, which could be thought of as the precursor of modern audits. In an Empire as big as China’s, it is not surprising that the government felt the need to establish an increasingly sophisticated assessment system (Fang and Wang, 2014; Feuerwerker, 1984). According to the results of the evaluations, the local civil servants were either rewarded (financially or by promotions), or fined or even given more serious sentences.

The original notion of “performance” in China is by consequence intimately connected to two essential parameters: the capacity to control (of taking a census) of a centralized power, and the application of a praiseworthy system (rewards and penalties) established to preserve the integrity of civil servants and maintain a healthy management of the economic, political, and legal apparatus. Therefore, the question we may ask would be whether today, in Chinese companies, the introduction of the modern notion of performance, which now largely dominates the world of business, still bears traces of this vast centered system of rewards for merit used for centuries by the imperial administration, or whether the idea of performance has finally conformed with western standards, giving precedence, for example, to profitability and to costs minimization. If so, then it would tend to prove that the term \(jixiao\) 竣效 has been completely renewed to keep only the meaning related to the modern notion of “efficiency” (Deng, Wu, and Zheng, 2006).

2.2 Confucian tradition: Performance through ethics?\(^4\)

Ancient China, which we know had Confucianism for its dominant model of thinking, continuously promoted moral qualities and values to guide people’s behavior, rules, and relationships in society. According to the Confucian corpus, moral values may vary from 5 to 8 or 10, the most essential being: Ren 仁 (benevolence, humanity), Yi 義 (justice, righteousness), Li 礼 (rite, decorum), Zhi 智 (wisdom, knowledge), Xin 信 (confidence, trust),

\(^3\) The *Shuowen jiezi* 説文解字 (literally: “Explaining Graphs and Analyzing Characters”), which was compiled during the early 2\(^{nd}\) century.

\(^4\) The analyses in this paragraph are based on works of Shin (2011) and Tai (1989).
Zhong 忠 (loyalty, devotion), and Xiao 孝 (filial piety or obedience). The evaluation and the control of senior civil servant was not only an assessment of their working capacity, but above all of their moral integrity (uprightness). According to the *Rites of Zhou* (*Zhou Li*) 周禮, written during the first century BC, one of the oldest known methods for evaluating civil servants of the Kingdom was the “Six measures”, having the following criteria, in order (Deng, 1967; Fang, 2009): (1) competence, expertise, (2) authority, (3) respect, (4) moral rectitude, (5) respect for and understanding of laws, (6) discernment. It is interesting to notice that moral qualities are as important as working capacities. While the assessment methods of performance for civil servants have evolved through history, these two aspects of assessment have always continuously co-existed.

Confucian morality is a morality of anticipation: it aims to provide between people and society fair and balanced reporting in order to prevent conflict and behaviors that endanger the moral and social order. It focuses on prevention and precaution, striving to preserve high moral standards and requiring of everyone a constant moral effort to control themselves. Rather than relying on deterrence or suppression by law, Confucianism deeply permeates the entire Chinese culture by laying down principles that manage society by means of a pervasive moral concern and moral responsibility (Tu, 1996; Schwartz, 1985). Confucianism is often presented as a system of thought favoring collective interests at the expense of individual freedoms (MacFarquhar, 1980; Ni, Ni, 1996). While this observation is largely true, it should be qualified by recalling the essential role of the individual in the scale of moral values: individuals are at the center and at the base of everything, and they should be perfected in order to maintain harmony within the family, to ensure the stability of society, of the state, and of collective interest (Chang, Kalmanson, 2010; Tu, 1996). That is why the so called “subordination of the individual” to the interest of the group must be used with caution and regarded as a rough simplification.

The *Doctrine of the Mean* advocates an ideal world where harmony and unity reign (*Zhonghe 中和* “harmony, peace center”): harmony between people, between humankind and society, between people and Nature. However, to achieve a common harmony in an environment dominated by the complexity of differences and multiple identities, it is necessary for individuals to maintain, to a certain extent, a distance with others, and sometimes even to withdraw from the world, to disappear or isolate themselves. We still find that focus on harmony in *The Analects of Confucius* (551–479 BC.), that summarizes an ideal of government by harmony, peace, and understanding, and that in human relations favors negotiation and conciliation over confrontation and opposition (Cheng, 1987; Liu, 2010; Schwartz, 1985).

So, in the Confucian philosophy, the meaning of performance is closely associated to the ability to maintain the harmony and the social order. And the control of the performance of civil servants depended both on moral qualities and competencies.

2.3. Evolution of tradition and major social changes

In this paragraph we show that religions and beliefs are distantly remembered in a China molded by Marxism and Capitalism.

Despite the conflicts that have taken place in history between the main Chinese religions, the religious factor in Chinese culture is distinguished by its syncretism. Confucianism, Taoism,
and Buddhism intermingle easily, especially in the most popular classes where religious folklore adapts and mixes these different beliefs. For the cultivated aristocracy, the boundary between these three schools of thought is sharper, although it is not uncommon to see Chinese scholars following one of these traditions, and at the same time not hesitating to learn or seek inspiration from other religions (Granet, 1922). As a school of thought rooted in the heart of Chinese civilization, Confucianism exerted a prevailing influence over the whole society that other schools of thought have failed to achieve, and that still shapes much Chinese cultural behavior. But, unlike Buddhism and Taoism, Confucianism is primarily concerned with the moral aspect of human relations and society, it has very little room for metaphysics, death, and beliefs (gods, ghosts, etc.), which it sees as playing a secondary role in human affairs, in social harmony, and the need for self-improvement (Granet, 1922; Etiemble, 1986).

Although the Taoist philosophy had a strong influence on the Chinese intelligentsia, it is very marginal compared to Confucianism and Buddhism (master-disciple limited transmission, esoteric and hermetic teachings, etc.). Buddhism has a huge corpus of texts covering a broad range of human and metaphysical questions. It is not limited to moral and social issues, such as Confucianism, or the metaphysical and ascetic, magical or physiological practices of Taoism. Very few areas of Chinese culture have not been influenced by Buddhism. For example, Buddhism also played a role in the development of the Chinese economy during the Tang Dynasty, and because of their wealth and prosperity, Buddhist monasteries acted as loan offices for farmers and as custodian banks for wealthy merchants. They contributed to the development of China’s credit and banking system (Cheng, 2003).

Despite the wealth and the history of these three schools of thought, only Confucianism seems to have preserved its influence on China in the 21st century. It is much more difficult to seek for traces of Taoism or Buddhism, apart from a few vestiges embedded in popular belief. Confucianism, which is often presented by the Chinese themselves as their main reference system, has also suffered greatly from the Cultural Revolution and social changes in modern China. One only has to compare China to South Korea and Japan to see that China has probably become the least Confucian country in eastern Asia (Bi, 2003; Zhang, 2010). The adoption of Marxism as a state ideology and the effects of the Cultural Revolution wrought profound changes in traditional Chinese society, destroying many cultural markers and weakening educational standards. The Marxist ideology is also at the origin of the concept of productivity and efficiency bringing new values that were previously unknown. After the revolutionary years, the rush of China to a market economy in a confused society having lost traditional values, has certainly enabled the country to become the economic powerhouse it is today, but not without many sacrifices, since these violent transformations did not come without their lot of inequalities and social injustice (Cheng C.-Y., 2014). The lure of money, trade and profit, have become an ultimate goal for many Chinese.

This sudden rush toward capitalism in a chaotic market that appeared overnight had even more uncontrolled consequences because the Cultural Revolution has deprived the society of its moral and cultural landmarks for nearly a decade (Tsou, 1986). After being rocked by diametrically opposed dogmas and promoting Confucian ideals, Chinese society generated new social relationships, behavior that was individualistic and more self-interested, the sudden appearance of the first personal wealth, then the spread of business practices on a scale that China had never known, which allowed small businesses to expand. For some people, China is still paying the price of forced conversion and endeavoring, somehow, to correct its prolonged
effects (Chen, 2008). Confucianism is sometimes considered to be a component of the working capacity of Chinese people and of China’s “economic miracle”, while only a little historical perspective shows that this miracle, the cult of profitability, growth, and productivity are very unfamiliar to the Chinese tradition. Moreover, this “miracle” generally goes against Confucian values, since it involves all kinds of inequality and disharmony. By contrast, the “economic miracle” has accelerated the destruction of traditional values and (partly) family values (Ji, 2012).

In this way, we consider that the evolutions described, bring a new conception of performance in China, based on the maximizing of profitability and the increase of individual wealth. It is quite different from the idea of performance in the Chinese tradition. It was linked to the assessment system for officials and local economies, with two characteristics: moral demands addressed to officials and a strong desire to control the state apparatus (Chang, 2006; Chen, 2008). Moreover, it was a subtle mix between subjective, objective and interpersonal components with the aim of preserving social harmony. Differently, the concepts of competition, productivity, and efficiency, which have appeared more recently, are absent from this tradition or even opposed to it. In the next part, we confront these historical analyses with in-depth interviews with managers based in and around Shanghai on issues related to the determinants of performance.

3. Managerial and behavioral determinants covering the field of performance today

3.1. Performance and daily challenges for Chinese managers: The disappearance of tradition from modern management

Intercultural research frequently uses the Hofstede typology examining several cultural traits in a specific business context. Through our interviews, we combine these cultural traits with the institutional features that we have just described in the historical part.

Hofstede (1980, 1994) investigates IBM employees’ work values in 40 countries in terms of power distance, individualism, uncertainty avoidance, masculinity, and long term orientation. It is generally agreed that the Chinese culture is characterized by both a high level of collectivism and a high power distance. In such a situation, great emphasis is placed on the maintenance of mutual face. Kwon (2012) explores regional differences of the work values in China, reporting higher scores for individualism and uncertainty avoidance and lower scores for long-term orientation in Shenzhen than Taiyuan. It can be thought that Shanghai, being a business-friendly place, would have similar scores to Shenzhen.

The interview conducted with Mr. Li Kevin is a good starting point for our inquiry, this manager being closer to the US style of management than the others. He highlights his determination to reduce the hierarchical distance with his employees, he seems open to risk-taking, and ambitious to succeed. He explains that he lived in the USA for several years and that returning home was difficult. He says, “I have a US style (…), nobody calls me boss (…) Every Monday, we have a meeting (…) I ask the employees: last week, what has excited you (…), how do you see the world (…), what are your key values”. His behavior might also be related to a paternalistic approach more in tune with Chinese culture. Indeed, several scholars in China have identified a remnant of paternalism, possibly a survival of Chinese traditions.
With a quantitative study looking into the mediating mechanism of trust-in-supervisor, Wu, Huang and, Chan (2012) try to show that paternalistic leadership has its roots in a kind of Confucian wisdom and still influences contemporary leaders in China.

In general, all the managers interviewed seem highly conscious of the new competitive environment stakes and are quite pragmatic. They all express for instance their concern for environmental aspects as new levers of performance in terms of brand image. According to Mr. Wu Jun, marketing, customers’ and employees’ relations are fundamental in this context because they are key success factors; in this way, he promotes a kind of instrumental Stakeholder approach. But following the conversation, a specific behavior toward the “partners” seems to prevail, according great importance to interpersonal relations, frequent meetings, superimposition of private and public life with an affective dimension, as key drivers of performance. The same feeling emerges with Mr. Zhang Rong Fu. We examine this trend more deeply in the next part.

Differently, Mr. Li Kevin uses bonuses in accordance with his environment (financial markets). As he explains, “the fixed part of the salary is just under the average in my sector (...) and the variable part is based on two factors: employees and company targets”. Ultimately, Mr. Li Kevin appreciates the US contract-based style of doing business. He says that “it is a security in business relations. But it is not possible in the Chinese system. China is lacking a strong legal system …” Others interviews confirm that the contract-based style is not conventional in the Chinese business institutions’ traditions. So during the interviews, we frequently observed a favored use of informal rather than contract-based processes to doing business. As we know that China has a strong administrative system, we also need to explore relations with the Chinese authorities.

During the interviews, we collected numerous details about the influence of administrative constraints. Most of the time, the managers express frustration about time-consuming administrative processes. For instance, Li Kevin says, “every month, I need to use my own signature to sign checks (...) There is too much administration in China, it is a burden on business …” Some administrative rules are also criticized such as the early retirement age together with trade unions. Mr. Wu Jun says, for instance, that in his field, logistics, he cannot trust trade unions because they do not fulfill their missions. Another point expressed is the insecurity that goes with the Chinese administrative authorities’ behaviors. The rules are unclear and managers are sometimes not entirely sure about what the right decision would be. This feeling was most particularly expressed by Mr. Li Kevin and Mr. Li Xiankun, the latter calling for more security for transactions in China. But we have to temper the critics collected in two different ways. Several managers highlight advantages with the Chinese system. Mr. Weng Gou Qiang and Mrs. Xia Xiaoyan describe the social dimension behind the administrative process, inside the firm — for instance support for families if any issues should arise — and outside the firm — integration into the local business environment.

Concerning the influence of Chinese bureaucratic administration, we conclude that we observe a subtle mix between a high degree of deregulation that gives freedom to managers, and complex and unclear administrative processes that require managers to build good relations with the administrative authorities. At the end of this part, we tentatively conclude that there is in China a tangle between informal relations and administrative processes with global insecurity and lack of trust in daily business activities. But we also detect some contradictions...
observing the behaviors. As Leung explains (2008: 186), “The interplay between traditional values and contemporary social forces may account for some seemingly paradoxical behavioral patterns of the Chinese people”. This suggests that there are cultural and institutional determinants in China that we need to look into more closely to understand managerial behaviors. Accordingly, in the next part we analyze the role played by interpersonal relations in business activities.

3.2. A predominance of interpersonal relations on business activities? Toward a clan approach as an institutional driver

Our hypothesis on this topic is that the managers interviewed express a predominance of interpersonal and subjective behaviors in their daily business activities. These behaviors would determine the way managers build their firms’ performances. Several situations illustrate this claim.

Generally, traditions in China should favor high moral rectitude in business dealings. Traditions (Buddhism, Taoism, and Confucianism) had an influence on Business during the 16th, 17th, and 18th centuries under the Ming and Wing Dynasties. Confucianism in Asia has been recognized and confirmed as one of ten cultural clusters in global studies (Gupta, Hanges, and Dorfman, 2002). McDonald (2012) examines the degree to which Confucian ideology is apparent in the practices of modern Chinese business leaders. Based on a comprehensive biographical database of the top 200 business leaders identified, McDonald shows the strong influence of Confucian ideology in China. More practically in daily life, these values could be associated to face saving, humility, a sense of group orientation, respect for social hierarchy, and reciprocity in exchange (Cheung, Leung, Zhang, Sun, and Gan, 2001; Lee and Green 1991). Wah (2001) adds in this context the importance of family and moral obligations which he suggests will be manifested in a paternalistic style of leadership. Tsang (2007) points out that Confucianism has fostered collectivism in China, which manifests itself as guanxi relationships.

But from our developments in the first part, we believe that it is difficult to detect a strong influence of the Confucian values in the daily life of Chinese managers. Instead, we think that the behaviors observed could be related to more archaic Chinese traditions. Moreover, we have to take into account the weight of Communist history on contemporary Chinese behaviors. Today, about 90% of Chinese citizens are reportedly atheists. The impacts of religions and philosophy on society and morality are difficult to study. Since recently, the Chinese authorities seem to believe that religions have some virtues, some positive influences, but that they must be kept under control: religious associations in China are under the authority of the Communist Party which appoints their main leaders.

So, during the interviews, we tried to detect traces, residuals, as impaired expressions of some traditions that we need to clarify. More specifically, we focused on the firm seen as a family (clan vision). Chinese traditions have become unusual in business activities except for certain customs such as Fengshui. So we prefer in this part to focus on more relevant behaviors that could be analyzed within a cultural and institutional background. In traditional Chinese society, business activities have a clan-based social structure, meaning that they are the responsibility of a family. People in charge of these activities have duties toward and within the community that we might call the clan (a village, the local authorities, several families with strong bonds, etc.)
So, in this section, our questions include whether the managers interviewed have a clan perspective of the firm and what this clan vision means in terms of the history of China. As a dual-cultural business background, Mr. Li Kevin makes some interesting comments about the differences in doing business in China and the US. He says that Chinese business behaviors are strongly relationship-driven. So it is time and cost consuming to do business in China, whereas business relations in the US are mainly legal-driven. He adds that in China, poor connections with civil servants and officials could be a barrier to winning a contract. He explains, for instance, his close relations with some officials from the regulatory Commission in Beijing, thanks to his years working at HSBC.

The other managers interviewed express much the same feelings about this conception of the firm as a “family”. Mr. Zhang Rong Fu for instance asserts that “the firm is a kind of family and my main responsibilities are toward my employees and customers”. For his employees, Mr. Weng Gouqiang acts as the head of a family: he offers them a global package that comprises home, food, cleaning, and possibly a second job. He sometimes deals with family problems, gives money for weddings, birthdays, etc. He says “I deal with the everyday life of my employees; I guarantee their security because they are not used to living in such a city as Shanghai”. The same management style appears in Mrs. Du Qiong attitude when she says “employees see me as their sister (...) we sometimes play ping pong during the break (...)

The family is also referred to in the creation of the firms and the role of the main leaders. It is more especially relevant when analyzing small and medium enterprises. Mr. Li Xiankun for instance explains that his firm has close ties with his family: his cousin is one of his partners and that he has close business relations with the third partner. Mrs. Du Qiong runs the company with her father and several members of her family participate in the company’s management. Moreover, the managers interviewed express a close link between these elements and the performance of their firms.

But sometimes, several managers interviewed seem to believe that “Western virtues” could enhance their performance. Mr. Wu Jun tries to favor internal promotions on a rational basis. He set up an election process for a top marketing position between three candidates believing that it is a Western approach. But this kind of example is an exception. Many of the interviews revealed that family relations in China are one of the main drivers of business activities and one of the main determinants of performance. This observation leads to another one: a low level of trust in business relations and a strong sense of insecurity in dealings outside the family.

3.3. A predominance of interpersonal relations on business activities? Guanxi as a way to regulate business relations and performance achievement

In the same way, we analyze guanxi as an impaired expression of some traditions. In relation to the predominance of family, we show in this paragraph that guanxi plays an important role in business activities in China and that the managers interviewed associate guanxi with the performance achievement.

The Chinese expression guanxi (关系) could be translated into English as “interpersonal relations”. It is one of the main features of Chinese cultural identity (Davies, Leung, Luk, and Wong, 1995) and one of the most studied indigenous Chinese concepts. The term consists of two parts: Guan and Xi. Guan means “the door” or “to close” and Xi means “to tie” and by extension “relations” (Luo 1997: 44). The expression guanxi could then be interpreted as “get
through the door and remain connected” (Lee and Dawes 2005: 29). As Davies et al. (1995: 22) explain, someone “inside” is one of us and can be trusted, whereas someone “outside” is a foreigner and not to be trusted. On several occasions, the interviews show this link between trust and interpersonal relations. For instance, Mr. Li Xiankun expresses a low level of trust toward his employees except for his closest partners and employees. In the same way, Mr. Sun Leon, who holds a recruitment firm, explains the difficulties he experienced to develop his activity in Shanghai. The principle of a recruitment firm is to deal with unknown companies and to convince them to recruit employees that the headhunters have selected. Mr. Sun confirms that his business is not institutionalized in China and under-developed compared to Western countries.

Several features come with the notion of guanxi: tact in the interpersonal contacts, a manner of preventing conflicts, humanization of labor relations with feelings and building bonds of friendships. This is the why the ren qing (人情) notion is associated to guanxi. It means literally “human emotions” and by extension in a labor context “feeling of accountability”. This notion contains rather positive characteristics that the majority of the managers interviewed stress. Mao, Peng, and Wong (2012) conducted conceptual research into the indigenous concept of guanxi in management, trying to investigate its emic components. They insist on the fact that the interpersonal relations are quite different in China from other countries because they are strongly associated with obligations rooted in social and ethical norms. One major consequence is strong pressure to protect the interests of people with close guanxi.

But some negative aspects are sometimes highlighted. From sympathy and friendliness, we can easily move to complacency and favoritism. Mr. Li Kang explains that this type of relations come mostly at the expense of performance and professionalism. Moreover, the guanxi approach could lead to connivance, collusion, and even corruption. This risk of corruption is even greater because mostly, these links of sympathy lead to the creation of a network of relations that could become a network of complicity. Luo (2008) reveals such an intertwinement between guanxi and corruption explaining that (p. 189) “…When relational norms and Confucian values are considerably eroded, guanxi could bring out further egoism, opportunism, and instrumentality”. Su and Littlefield (2001) and Su, Sirgy, and Littlefield (2003: 10) differentiate positive and negative guanxi. In contradiction, Su et al. (2003: 310) describe a negative guanxi as a system of collusions. This guanxi would become a synonym for corruption (Fan 2002; Su and Littlefield 2001). The effects of guanxi inside firms could also be described as positive or negative depending on the situation. Xinhui, Chen, and Shi (2013: 532) for instance show the negative effect of personal favor attribution on trust in the supervisor.

Unsurprisingly, the managers’ discourses show us that guanxi is present in everyday life in the Chinese business world. Mr. Li Kevin explains that guanxi is mandatory in China when doing business. In the same way, Mr. Weng Guo Qiang stresses the role of relations and for example the role of trade unions, associations, and local authorities. Mr. Zhang Rong Fu stresses the importance of the business networks for success and adds that it takes time for them to become profitable. To succeed, he needs to build close relations with the administration, too (frequent visits, gifts, etc.) In the same way, Mrs. Zhu explains that she needs close relations with the Chinese education authorities to be performant in her business. Mrs. Xu explains that without the support of the local authorities, she could not develop her school, despite its private status.
Moreover, the support and trust of families are essential to attract new families (word of mouth effect).

We even detect some criticisms of *guanxi*, which is sometimes considered to be a serious brake on innovation, entrepreneurship and performance.

From the topic of *guanxi*, we could draw the parallel with the stakeholder theory. So, when we asked the managers who their main partners were, some of them answer the customers, as the main driver for performance, rather than employees and relations outside the firm (partners, authorities, etc.) Mr. Weng Guo Qiang argues for close links between customers and employee satisfaction, which enhances reputation and service quality. We heard much the same claim from Mr. Wu Jun, who describes “a new platform delivering computing services for small and medium-sized companies that strengthens relations between customers and employees”. Other managers insist on relationships with employees. Mrs. Du Qiong for instance feels that the security and the motivation of her employees are the main determinant of the performance of her firm. So we observe some formal similarities between the Stakeholder approach and *guanxi*. But we have to underscore major differences relating to the behaviors observed that can be explained by cultural and institutional contexts. Chinese managers favor non-formal relations, with an affective dimension, trying to build a kind of family business. The stakeholder stream is mainly associated with a contractual approach to relations among firms, with a low emotional dimension. During our interviews, we also note that the clan vision and the *guanxi* approach are linked. A clan perception of the firm favors the creation of strong interpersonal relations, and vice-versa. We also observe that these cultural behaviors concern all the dimensions of Chinese society, including the Chinese authorities.

At the end of this part, we think that the Chinese managers behaviors observed are deeply rooted in a cultural and institutional context and enable us to understand some key drivers of performance in China. As we explained in the first part, this context could be linked to more ancient Chinese traditions rather than Confucianism that seems to have a low impact, even if businessmen frequently refer to it.

3. CONCLUSION

The interviews conducted in Shanghai give rise to a nuanced statement of our perception of Chinese managers’ behaviors and the determinants of performance. We show that cultural and institutional determinants are fundamental to the analysis our observations. A common point shared by most of the people interviewed is a strong belief in innovation and entrepreneurship. We could say that this point characterizes the economic determinants and a way of envisioning performance.

But, more fundamentally in this research, we observe the disappearance of traditional values from Chinese companies, despite repeated claims about the legacy of Confucianism. Confucian values should provide a counterweight to amoral practices and individual interests corrupting the good/healthy process of communities (society, firm, etc.) in a cultural and institutional context characterized by:
- the predominance of private interest (limited sphere: interest of clan, family, close friends), which undermine the common interest, rules and principles;
And the predominance of interpersonal relations.

The Chinese managers we have interviewed express a combination of pragmatism, interpersonal relations, and a family approach to the management of their firms. So we confirm our hypotheses about the subjectivity of performance and the predominance of interpersonal relations and a clan vision to business life. These features are the expression of archaic values that are combined with social and historical components of Chinese society. Our approach, combining cultural and institutional approaches, thanks to a precise historical analysis, was relevant. In the context described, and without the balancing values of Confucianism, lack of trust is a serious weakness of management in China and may be the core of the performance challenge in the future. We believe that it is pertinent for managers coming from Western cultures to have an understanding of this context when doing business in China.

For future research, more interviews are being analyzed and scheduled. We also plan to study the impact of the “corporate social responsibility” concept in China, using the same method. We seek to test whether the corporate social responsibility stream in China could be a determinant of performance in the sense that it could be used as a tool to counteract the imbalances that have been caused by the erosion of Chinese traditions such as Confucianism.
REFERENCE


### APPENDIX A – QUESTIONNAIRE FRAME

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<th><strong>IDENTITY OF FIRM</strong></th>
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<td><strong>Degree course</strong></td>
<td><strong>Field:</strong></td>
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**Previous companies and experience abroad**

**Comments**

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<thead>
<tr>
<th><strong>Business characteristics</strong></th>
<th><strong>Private</strong></th>
<th><strong>Family</strong></th>
<th><strong>Subcontractor of multinational company</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Sector</strong></th>
<th><strong>Distribution</strong></th>
<th><strong>Services</strong></th>
<th><strong>Bank &amp; Insurance</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Industry</strong></td>
<td><strong>Other (description)</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Creation date</strong></th>
<th><strong>Government Support?</strong> (if any)</th>
</tr>
</thead>
</table>

**Description of the main business activities**

**Comments**

<table>
<thead>
<tr>
<th><strong>Employees</strong></th>
<th><strong>Male:</strong></th>
<th><strong>Female:</strong></th>
<th><strong>Mean age:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Family members</strong></td>
<td><strong>(how many)</strong></td>
<td><strong>Function:</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Staff recommended</strong></td>
<td><strong>(how many)</strong></td>
<td><strong>Function:</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Salary</strong></th>
<th><strong>Average:</strong></th>
<th><strong>Overtime:</strong></th>
</tr>
</thead>
</table>

**Stock-options or bonuses for employees (circumstances)**

**Comments**

<table>
<thead>
<tr>
<th><strong>Shareholders</strong></th>
<th><strong>How many:</strong></th>
<th><strong>Main owner:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Relation with sh. 1</strong></td>
<td><strong>Family / ex-Colleague or partner / Friend</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Relation with sh. 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Relation with sh. 3</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Advantages & Inconveniences**

**Potential conflicts (&Trust issue)**

**Comments**
**STRUCTURE OF THE FIRM:** description of the organizational structure

<table>
<thead>
<tr>
<th>Comments</th>
</tr>
</thead>
</table>

**RELATIONS WITH EMPLOYEES & STAFF MANAGEMENT**

Could you describe your process of recruitment? Try to discuss about recommendations, family members, friends, networks or professional relations that could influence the process.

Could you describe your relations with your employees? Do you organize social or friendly activities?

Do you organize training programs? Which kinds, how often, for what purposes?

About employees, what is most important? (try to discuss about wage level, discontents, skills, competencies, well-being, …)

Do your employees often work overtime? What is the hardest part of their work?

Do you delegate a part of your responsibilities? Which ones? To whom?

Could you describe your management control system?

| Comments |

**INTERPERSONAL RELATIONS, ASSISTANCE** during the creation process

How did you manage to create you firm? Could you describe the process?

Did you get help from friends, networks, family or any governmental institution?

Did you train in any way to develop management skills? (training programs, advices, books, consulting?)

What are the main difficulties and obstacles you experienced?
**RELATIONS WITH CUSTOMERS & PARTNERS**

Concerning the relations with the customers and other stakeholders, could you describe the way you do business, the way you contract with suppliers, etc.? What are your main concerns?

<table>
<thead>
<tr>
<th>What are the main components of a contract? (try to discuss about legal aspects and trust)</th>
</tr>
</thead>
</table>

What is your suppliers’ rate of turn over?

What are the main problems you experience with your customers? How do you manage them?

**RELATIONS WITH ADMINISTRATION & SOCIETY**

<table>
<thead>
<tr>
<th>What are your main concerns with the administration? Try to discuss about the rules compliance, the formal and informal relationships, ….</th>
</tr>
</thead>
</table>

What are your main expectations towards the administration?

What is your concern about environmental problems? Try to discuss about a pressure coming from the institutions, the civil society, competition, …

| Comments |

**GLOBAL MANAGEMENT & STRATEGY**

What is your ambition?

What is your generic strategy? Are you inspired by any strategic model?

What are the Key Value Drivers of your business?

What are the upcoming challenge?

| Comments |
APPENDIX B - Interview summaries

1st INTERVIEW – Sunday 14 April 2013. 2.00 – 4.00 pm.
Firm: Global Vantage.
Place: 7D, Mirae asset Tower, no. 166 Lujiazui Ring Road, Pudong, Shanghai, 200120, China.
Manager: Mr. LI Kevin, Founding & Executive Partner.
Mr. LI has created a Chinese–US joint venture to help investors in Shanghai. Mr. Li is influenced by US business culture as he previously worked for JP Morgan, City Group, and HSBC. In his firm, he deals with private equity funds, asset management, and investment banking. He helps Chinese firms to invest overseas. His organization is quite small, with 11 people and 4 partners and a branch in the United States. Three analysts deal with marketing research. Two project managers work on the investor companies. Two employees deal with the finance side. His partners have studied abroad and the project managers and analysts at reputed Chinese universities. There are more women than men.

2nd INTERVIEW – Saturday 20 April 2013. 1.30 – 4.00 pm.
Firm: TLP, Shanghai TL Property Management Co., Ltd.
Place: M. floor, Building 1, Minghua ramps, Lane 525, Fangxie Rd, Huangpu District, Shanghai 200011, China.
Manager: Mr. WENG Gou Qiang, Founding & Chief Executive Officer.
TLP is a private firm (100% Chinese) created three years ago (June 2010) by Mr. WENG Guo Qiang. After gaining experience at several other companies, Mr. WENG decided to create Facilities Management activities in Shanghai that could compete with foreign companies. He is the Vice-president of the Association for Facilities Management Activities.
The firm has 543 employees for different types of activities: Management (44), Service supply (35), equipment/maintenance (60), security (233), cleaning (61), and garden maintenance (3). Because of the type of activities (security), there are 2.5 more men than women. The firm’s turnover is 40 million RMB and the margin is about 5%. Three managers are responsible for geographical areas: Shanghai downtown, Shanghai suburbs, and Jiangsu/Zhejiang provinces.

3rd INTERVIEW – Monday 22 April 2013. 2:30 – 4.15 pm.
Firm: OCM, Oriental Cable Network Co., LTD.
Place: N°31 Wujiang Rd., Oriental Cable Building 26 F, Shanghai, 200041, China
Manager: Mrs. XIA Xiaoya, General Manager.
OCM is a state-owned company; their employees are government employees. Its activities are related to cable devices for communication systems. The same kind of firm exists in every province of China (Shanghai has the status of a Province). Even if the firm is state-owned, it operates in a highly competitive market, especially in the field of new technologies (internet and wireless systems). In Shanghai, OCM has three main competitors. OCM has two shareholders: the Shanghai government (51%) and the Oriental Pearl Company, a very famous private firm in Shanghai (49%). The firm employs around 1800 people and is divided into nine branches. Mrs. XIA has three deputies.

4th INTERVIEW – November 5 2013, 2.00 – 4.00 PM
WU Jun – General Manager
Shanghai Newstep Logistics IT Co., Ltd. (http://www.56hui.com)
Place: N°29, Lipu Road, Jinshan district, Shanghai.
The interview took place in an office of the firm’s headquarters in a district dedicated to logistic activities. The firm also has a branch in downtown Shanghai. Shanghai Newstep is a private firm with three shareholders that was created ten years ago. The firm helps small and medium-sized logistic firms to grow thanks to IT support. WU Jun has developed an IT platform that offers a wide range of services. The firm has grown substantially in recent years. About 200 employees work for Shanghai Newstep: 30 in the R&D department, 60 in marketing, 30 in administration and the rest as support teams and in low level activities. The firm also has a call center platform.

5th INTERVIEW – November 5 2013. 6.00 – 8.00 PM
WU Wenguang: Deputy General Manager (www.atyfp.com)
Yanfeng Plastic Omnium Automotive Exterior Systems Co., Ltd
Place: Marriot Shanghai
Yanfeng is a Sino-French joint venture in which Plastic Omnium holds 50% of the shares. The company was created in 2007. The return was around 600 million RMB in 2007, it is today around 3.5 billion RMB. The joint-venture employs 2450 people. The company produces plastics for the car industry using two processes: injection and painting.

6th INTERVIEW – 25 APRIL 2014. 2.00 – 4.00 PM
ZHANG Rong Fu – General Manager
Shanghai Hanshi Mould Shape Co., Ltd. (http://www.hanmold.com)
Headquarters: No. 355, Youdong Road, 201100, Shanghai.
Place of Interview: Grand Mercure Shanghai Zhongya, 330 Meiyuan Road.
Shanghai Hanshi Mold Shape Company is a medium-sized private firm founded by Mr. Zhang in 2001. The main activities are the design and manufacture of molds, fixtures, and plastic parts. The products mainly include automotive interior and exterior plastic parts, garden machine fittings, and household appliance fittings. Mr. Shang’s firm has around 1000 employees and a turnover of around RMB 700 million. The market is experiencing substantial growth.

7th INTERVIEW - November 1 2014. 10.00 – 11.30 am
Mr. LI Xiankun - General Manager of Jie He Auto Trade Chain Co., Ltd.
(http://www.jh100.com)
Headquarters: Shenzhen
Place of interview: Sofitel 505 East Nanjing Road, Shanghai
Mr. Li created a second-hand car business 10 years ago with two partners, first in Shenzhen, then in several cities around China. He focuses more on second range cities where the return on investment is better. The firm has around 220 employees in China, with a large proportion of salesmen, and with great variations depending on the market.

8th INTERVIEW - 1 November 2014. 11.30 am – 1.00 PM
Mr. XUN Wang
Headquarters: Hangzhou
Place of interview: Sofitel 505 East Nanjing Road, Shanghai
Mr. Xun is a friend of Mr. Li. They used to work for the same firm. Then, Mr. Xun decided to create his own firm in the Web economy. He set up in Hangzhou, explaining that more skills can be found in Hangzhou than in Shanghai in the computing field. His firm produces software for the second-hand car business. At the moment, his firm is not profitable enough so he has a second job as consultant. He employs 20 people and mostly programmers.
9th INTERVIEW - 1 November 2014. 11.30 am – 1.00 PM
Mrs. Zhu Zhunhui
Place of interview: Shanghai, headquarter of the firm
Mrs. Zhu created in 2002 a firm that offers services to Chinese students that want to study abroad, and more especially in France. She sets up her firm in Shanghai with a strong partnership with a French business school and have a few employees. This market is highly competitive and profitable.

10th interview
Mr. Leon Sun, General Manager of Shanghai CIIC HR Consulting Co, Ltd.
Place of interview: Shanghai, headquarter of the firm
Mr. Sun has opened in 2000 the Shanghai branch of a Beijing firm specialized in recruitment. His firm is now independent. He employees 16 employees for three kinds of missions: the research of new talents, analyze of candidates profiles and contacts with customers.

11th interview
Mrs. Qiong Du is Chief executive officer of a medium-sized industrial company located in Shanghai and specialized in manufacturing equipment for the aviation sector. Her father has created the firm in 1986. So it is a family company that employs today 186 employees. Other members of the family take part to the management of the firm.

12th Interview
Mrs. Xu is director of a private elementary school located in Shanghai. Five shareholders are the school owners but don’t manage it. This school is now profitable and Mrs. Xu runs it with a good friend. 500 students attend the school. The school is located in the suburb of Shanghai (Baoshan).
INVESTMENT FORECAST DISCLOSURE AND THE COST OF EQUITY CAPITAL:
EVIDENCE FROM THE TREATMENT EFFECT ESTIMATIONS

Yoshinori Shimada
Associate Professor
Faculty of Humanities and Social Sciences
Iwate University
Japan
yshimada@iwate-u.ac.jp

ABSTRACT

In this study, I examined the economic effectiveness of investment forecast disclosures. In particular, the relationship between such disclosures and a decrease in the cost of capital is addressed. Disclosures of future investments are of significance because these business activities relate directly to future cash flows and operating incomes, both of which are foundational for firm valuations. Japan seems especially suited for an analysis of this kind, given that Japanese firms voluntarily disclose their capital and R&D investment forecasts.

Using Japanese manufacturing firm data for the period 2004 to 2011, I show that firms with investment forecast disclosures enjoy a greater reduction in the cost of capital than do firms without disclosures. Research on voluntary disclosures inevitably faces problems of selection bias and endogeneity. To deal with these problems, I applied the treatment effect estimates model. The estimation results show a negative association between investment forecast disclosures and the cost of capital, even when potential determinants and other variables pertaining to the cost of capital are controlled for. The change in the cost of capital is 0.71% and 0.40% significantly lower, respectively, if firms disclose capital investment and R&D investment forecasts. Furthermore, sensitivity analyses results do not vary even when the change in the cost of capital is compared with matching firms based on propensity scores and the change in the cost of capital is measured in a different time period.
1. Introduction

To date, the large body of research on management forecast disclosure has focused on forecast information, and most studies have covered earnings forecasts (e.g., Ajinkya et al., 2005; Baginski and Hassell, 1990; Bamber and Cho, 1998; Baginski et al., 2002; Hutton and Skinner, 2003; McNichols, 1989; Pownall and Waymire, 1989; Pownall et al., 1993). However, firms not only disclose earnings forecasts to financial statement users but also voluntarily release investment forecasts. This paper therefore attempts to focus specifically on investment forecast information rather than the many other varieties of forecast information.

Notably, in Japan, the Tokyo Stock Exchange (TSE) proactively and strongly encourages listing firms to disclose information on future investment forecasts, as investors’ decision-making is based on predictions of firms’ intrinsic values, and forward-looking information is positioned as beneficial information for investment decisions.¹ For this reason, most firms listed on the TSE are willing to voluntarily disclose the specific amounts of their capital investments, research and development (R&D) investments, and deprecations during subsequent periods, along with the Kessan Tanshin (summaries of their financial statements). Such quantitative information on future investments is published in the Toyo Keizai Kaisha Shiki Ho and the Nikkei Kaisha Joho, both of which are widely used by investors in their decision-making.² These unique disclosure circumstances in Japan make it possible to explore the factors of investment forecasts and their effects on the capital markets empirically.

One important issue that investors are faced with is that of the high importance of the association between future cash flows and firm values for investors. For instance, the Conceptual Framework of International Financial Reporting Standards states that ‘The economic decisions that are taken by users of financial statements require an evaluation of the ability of an enterprise to generate cash and cash equivalents and of the timing and certainty

¹ The TSE states that the forward-looking information to be disclosed is not limited to earnings forecasts; a wide range of contents are included in forward-looking information, including a descriptive explanation of the future vision, principle management index forecasts such as ROE, and the financial indicators that influence future business performance (e.g., outlay of capital investment and R&D investment and depreciation).
² Shimada (2015) shows the percentages of TSE listing firms that disclosed actual and forecast values for capital investment and R&D investment by industry between 2002 and 2011. For actual figures, the average disclosure ratio for manufacturing industries is 96.86%, while that for non-manufacturing industries is 88.21%. For forecast figures, the average disclosure ratio for manufacturing industries is 80.27%, while that for non-manufacturing industries is 59.93%.
of their generation’ (par. 15). Similarly, the Statement of Financial Accounting Concepts No.1 par. 25 (Financial Accounting Standards Board) states that ‘Potential users of financial information most directly concerned with a particular business enterprise are generally interested in its ability to generate favorable cash flows because their decisions relate to amounts, timing, and uncertainty of expected cash flows’. Both imply that a factor that is of much account in investors’ decision-making processes is the expected future cash flows generated by enterprises through operating activities.

Capital investments and R&D investments are directly related to operating activities and the process of generating future cash flows, and it can thereby be inferred that investors pay a lot of attention to information relating to future capital investments and R&D investments. Considering the fact that firms disclose certain information on future investments and statements in their conceptual frameworks, the exploration of the economic impact of capital investment forecasts and R&D investment forecasts is of great concern for financial statement users.

In particular, this study focuses on a reduction in firms’ cost of capital although voluntary disclosures influence on various factors. This is because the cost of capital plays a critical role in a firm’s financing and general operating decisions (Dhaliwal et al., 2011), and managers seem to assume that more communication with shareholders through disclosures can reduce the firm’s cost of capital (Graham et al., 2005). This paper provides evidence concerning whether the investment forecast disclosure is useful in decreasing the cost of capital based on managers’ view that firms spontaneously release forward-looking information since they expect more disclosure to mitigate the extent of information asymmetry between managers and investors and reduce agency costs. In particular, I investigate how voluntary quantitative forecast information about firms’ investment prospects (e.g., capital investment, R&D investment) is related to a reduction in the cost of capital, in light of the fact that investors have a great deal to be concerned about in terms of non-financial information from a quantitative viewpoint (Perrini, 2006).

As mentioned above, investment disclosure is voluntary in the Japanese setting. Some firms choose to release their future investment prospects publicly, but other firms do not disclose, which implies that not all firms are motivated to inform investors of their investment plans.³

³ One possible explanation is that voluntary disclosure of investment forecasts causes the potential loss of competitive advantage or core business competencies (Diamond and Verrecchia, 1991). In
The economic consequence of voluntary disclosure is affected by firms’ decisions about whether managers will spontaneously disclose investment forecasts, so the problems of sample selection bias and endogeneity occur in demonstrating the effects of voluntary disclosures. This paper investigate the linkage between voluntary investment forecast disclosure and cost of capital using the treatment effect estimates model, controlling for the potential determinants of contemporary voluntary disclosure of quantitative investment forecasts. Thus, the results of this article are more comprehensive and robust than those in the previous literature.

This article provides empirical evidence of the negative relation between voluntary investment forecast disclosure and the cost of capital, using a large sample of Japanese manufacturing firms. Univariate and multivariate tests present the results that capital and R&D investment forecast disclosures have negative effects on the cost of capital. The results of univariate tests show that the difference in the change in the cost of capital from year \( t-1 \) to year \( t \) between firms disclosing capital investment forecasts and firms not disclosing is \(-0.93\%\) on average, which is statistically different from zero at the 1\% level. Likewise, the change in cost of capital for firms that disclose R&D investment forecasts is 0.54\% lower than that for firms that do not disclose. Moreover, investment forecast disclosure is still negatively associated with changes in the cost of capital when selection bias and endogeneity issues are dealt with using the treatment effect estimates model (multivariate test) to address the fact that, in the Japanese setting, the disclosure of investment forecasts is not mandatory and the propensities of firms that are more likely to disclose (i.e., large firms, highly profitable firms, growth firms, less entrenched firms, firms with financing plans) may be related to a decrease in idiosyncratic risks. Furthermore, the results of sensitivity analyses (propensity matching model and another interval to measure the change in the cost of capital) are consistent with the main results.

The contributions of this paper are as follows. First, I contribute to the disclosure research by extensively examining the effects of voluntary investment forecast disclosures, suggesting that managers fully utilise the merits of disclosures of future investment in quantitative fashion for more effective shareholder engagement. Second, this paper provides empirical evidence about usefulness and effectiveness of forward-looking information from the addition, Depoers (2000) argues that some disclosures give competitors too much information and cause financial harm.
medium- and long-term perspective, implying that investors consider disclosed information to convey prospects relating to the generation of cash flows in future periods, and they regard such information as value-relevant. That is, voluntary disclosure about future investment in operating activities is informative for investors. Finally, this paper implies that the TSE’s efforts to encourage firms to disclose future information constructively contribute to the formation of healthy and sound capital markets. Hence, policymakers’ involvements in disclosure regulation and investor relations might have profound significance for the development of fair and efficient equity markets, not only in Japan but also in other countries.

The remainder of this paper is organized as follows. Section 2 reviews the existing literature and develops relevant hypotheses. Section 3 describes the research design and variables. Section 4 provides descriptive statistics regarding the sample in this article. Section 5 provides evidence of the determinants of investment forecast disclosures, as well as the results of the relationships between the investment forecast disclosures and the change in the cost of capital. Section 6 shows the results of additional analyses. Finally, a summary and conclusion are provided in Section 7.

2. Related research and hypothesis development

Voluntary disclosure of firms’ investment prospects incrementally conveys information concerning the possibility of future growth and generation of future cash flows to a broad group of stakeholders. Such increased disclosure gives additional perspectives beyond those shown in historical information, like the information in financial statements (Dhaliwal et al., 2011). Recently, many firms have released and explained their future investment visions in a variety of venues worldwide.4 One reason for the above trend is that, since the beginning of this century, investors and financial analysts have yearned for more non-financial information, including forward-looking information, in order to understand managers’ medium- and long-term corporate management ability (Robb et al., 2001).

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4 For example, Microsoft Inc. provides detailed information on R&D investment forecasts in its Form 10-K (Microsoft Inc., 2014, p. 10), while Suncor Energy Inc., a Canadian firm, descriptively discloses its future prospects for capital expenditures in its Management Discussion and Analysis (MD&A) (Suncor Energy Inc., 2013, pp. 54-55). Although firms around the world consider investment forecast information to be of concern for investors and spontaneously disclose such information, the venues through which particular firms offer disclosures and disclosed content are diverse.
Some have reviewed the relationship between voluntary disclosures and the levels of the cost of capital as economic consequence (e.g., Core, 2001; Healy and Papepu, 2001; Leuz and Wysocki, 2008). Based on the outcomes of past achievements, the consensus that there is a negative association between increased voluntary disclosure and the cost of capital is universal. Furthermore, in previous studies, the subject of study is not limited to information about historical information in the financial statements (e.g., Chen et al., 2009; Dhaliwal et al., 2011; Reverte, 2009). The relation between information out of financial statements (i.e., environmental, social, and governance (ESG information) and the cost of capital also has been examined. For example, Dhaliwal et al. (2011) find that voluntarily disclosing non-operating activities has a negative impact on the cost of equity capital because the greater disclosure reduces the covariance of a firm’s cash flow and relaxes information asymmetry between informed and uninformed investors. This result suggests that voluntary disclosures other than financial information can also economically benefit both management and shareholders.

In theory, Verrecchia (1983) asserts that firms would be willing to inform investors of internal information voluntarily to mitigate agency costs and decrease the cost of capital if it were not for costs relating to disclosures. According to Jensen and Meckling (1976), the agency theory postulates that outside investors incur monitoring costs in the world of information imperfection, and such cost burdens are alleviated to some degree when agency costs abate the amount of manager compensation. This encourages managers to publish more information voluntarily because increased disclosure and more communication with outsiders lead to their benefit in terms of preservation of manager compensation. Furthermore, based on the concept of information asymmetry, managers prefer to release internal information to mitigate the information gap between managers and investors as private information disclosures directly satisfy investors’ information demands (Myers and Majluf, 1984). Voluntary disclosures in turn resolve issues of moral hazard and adverse selection.

These ideas can be applied to various kinds of information, so long as the information is value-relevant (Dhaliwal et al., 2011). Indeed, Shimada (2015) suggests that investment forecast information is value-relevant. More importantly, information concerning future investment is directly related to positive cash flows and earnings in the future. These insights

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5 Meanwhile, some managers assume that they incur proprietary costs when they disclose information beyond the required level; market participants then become anxious that the firm has chosen not to disclose in order to conceal bad news. In such a case, the markets are likely to react more negatively than in the case of voluntary disclosure.
emphasize the significance of future investment information in reducing agency costs and the information asymmetry, and uncertainty related to factors affecting firm valuation, which leads to a reduction in the cost of capital. To summarise, this article examines the impact of investment forecast disclosure on a change in cost of capital as the economic consequence using Japanese manufacturing firms, considering the rising importance of investment forecast disclosures in recent years. The following two hypotheses are tested (both are stated in alternate forms).

**Ha:** The presence of capital investment forecast disclosures is negatively associated with a subsequently lower cost of equity capital.

**Hb:** The presence of R&D investment forecast disclosures is negatively associated with a subsequently lower cost of equity capital.

3. Research design

3.1. Measurement of cost of equity capital

Several methods have been proposed to estimate the cost of equity capital. The representative and most widely used methods are the traditional capital asset pricing model (CAPM) and the three-factor model. However, Fama and French (1997) indicate that estimates of the cost of capital based on historical market data using the CAPM and the three-factor model are awfully imprecise. Therefore, more recently, some studies have developed alternative methods to measure the cost of capital (e.g., Claus and Thomas, 2001; Gebhardt et al., 2001; Gode and Mohanram, 2003; Ohlson and Juettner-Nauroth, 2005). Furthermore, Easton (2007) shows that assumptions about firms’ growth rate are closely related to estimates of the expected rate of return on equity capital, suggesting that the growth rate estimates should largely focus on estimating the expected rate of return. In such estimations, both the implied cost of capital (expected rate of return) and the implied growth rate might be as well simultaneously estimated using stock prices, shareholders’ equity, and earnings forecasts. In addition, Easton (2004) finds that the implied cost of capital has more desirable properties when estimated alongside implied growth rates.

In this paper, the firm-specific implied cost of capital is estimated using earnings forecasts. Following Huang et al. (2005), the estimation model is as shown in equation (1):
\[ FEPS_m/P_m - rf_m = \alpha_0 + \alpha_1(BPS_m/P_m - 1) + \varepsilon_m, \]  
\[ \text{(1)} \]

where \( FEPS_m \) is the forecast earnings per share of the coming fiscal periods at month \( m \), \( P_m \) is the stock closing price at the end of month \( m \), \( rf_m \) is the risk-free rate (monthly return rate of 10-year bills) at month \( m \), and \( BPS_m \) is the shareholder equity per share at month \( m \). Equation (1) is estimated using rolling data for the past 60 months, and the estimated values \( \hat{\alpha}_0 \) and \( \hat{\alpha}_1 \) are obtained. The intercept (\( \hat{\alpha}_0 \)) captures the firm-specific risk premium, and the slope (\( \hat{\alpha}_1 \)) captures the firm-specific long-term growth in abnormal earnings (Huang et al., 2005). Consequently, the estimated cost of equity capital at month \( m \) (\( \text{COC}_m \)) becomes the sum (\( \hat{\alpha}_0 + rf_m \)) of the estimated intercept and the risk-free rate at month \( m \).\(^6\) Finally, the difference in implied cost of equity capital between the month \( t \) when financial summaries are disclosed and one year ago this month \( t-1 \) is measured as an objective variable (\( \Delta \text{COC}_t \)) because the purpose of this study is to examine whether voluntary investment forecast disclosures are related to a decline in the cost of equity capital.\(^7\)

3.2 Empirical methodology

The main aim of this study is to investigate the effect of investment forecast disclosures on changes in the cost of equity capital. The relation is represented by:

\[ \Delta \text{COC}_t = \gamma_0 + \gamma_1 DISC_t + \varepsilon_t, \]  
\[ \text{(2)} \]

where \( \Delta \text{COC}_t \) is the change in the cost of capital from year \( t-1 \) to year \( t \), \( DISC_t \) is a dummy variable that equals one if firms disclose investment forecasts during year \( t \), and zero otherwise.

As discussed above, a simple ordinary least squares (OLS) regression is problematic for two reasons. One reason is that a firm’s decision on investment forecast disclosures can be associated with firm characteristics that are also likely to influence the cost of capital, like firm size, growth opportunities, mispricing in the capital market, and profitability. That is, firms that choose to disclose investment forecasts may not form a random sample of firms. The other is the possibility that there may be omitted variables (endogeneity problem). For

\(^6\) When \( \hat{\alpha}_0 + rf_m \) becomes less than zero or more than one, the value in the preceding month (\( \text{COC}_{m-1} \)) is substituted.

\(^7\) In this paper, \( t \) is defined as the month when firms disclose investment forecast for the first time.
example, a firm’s decision to disclose investment forecasts may also be influenced by some unobservable firm characteristics, like corporate and industry features, that make investment forecast disclosure easier or more difficult. In both cases, $DISC_t$ will be correlated with the error term ($\varepsilon_t$) and the estimated parameters from OLS regression will be biased and inconsistent.

The treatment effect estimates model is employed to address the selection bias and endogeneity. This model is designed to control for the firm’s selection regarding investment forecast disclosure based on the determinants of disclosure. In the first stage, a probit model with maximum likelihood estimation is used to estimate the likelihood of investment forecast disclosure as a function of disclosure determinants. The first-stage model is:

$$DISC_t = \beta_0 + \sum \beta_j DET_{t-1} + \delta YEAR_t + \delta INDUSTRY_t + \mu_t,$$  \hfill (3)

where $DET_{t-1}$ denotes a vector of determinants for investment forecast disclosure. The detailed explanation of determinants of voluntary disclosure is discussed below. Moreover, year fixed effects ($YEAR_t$) and industry fixed effects ($INDUSTRY_t$) are controlled. The inverse Mill’s ratio is obtained from estimation of the probit disclosure model in the first-stage model to account for potential problems of self-selection bias related to managers’ disclosure choices.

In the second stage, a change in the cost of capital is regressed on a dummy variable for investment forecast disclosures adjusted by the inverse Mill’s ratio and other control variables. Specifically, the estimated value of the inverse Mill’s ratio from the first-stage regression estimation (equation (3)) is denoted by $\phi(\alpha_1 DET)/\Phi(\alpha_1 DET)$, where $\phi$ represents a probability density function and $\Phi$ represents a cumulative distribution function of the error term. In the second stage, the following OLS regression model is estimated with firm clusters:

$$\Delta COC_t = \gamma_0 + \gamma_1 DISC_t + \sum \gamma_k CTRL_t + \delta YEAR_t + \delta INDUSTRY_t + \varepsilon_t,$$  \hfill (4)

The inclusion of $DISC_t$ adjusted by the inverse Mill’s ratio in the second-stage regression suggests that issues of selection bias and endogeneity are treated as a special case of the omitted variable problem where the inverse Mill’s ratio is the omitted variable (Guo and Fraser, 2014).

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8 The treatment effects model is applied to deal with the problems of selection bias since the outcome variable (a change in the cost of capital) of the regression equation is observed for both disclosing firms and non-disclosing firms (Guo and Fraser, 2014).
Fraser, 2014). If the inverse Mill’s ratio is positive and significantly different from zero, this implies that the errors in the selection and outcome stages are correlated, confirming a selection bias.

In this equation model, the coefficients ($\gamma_1$) of $DISC_t$ are expected to be significantly negative. In estimating equations (3) and (4), both $DISC_FCAP_t$ and $DISC_FRD_t$ are individually tested as alternative independent variables, where $DISC_FCAP_t$ represents a dummy variable that equals one if firms disclose capital investment forecasts in a quantitative fashion during year $t$, and $DISC_FRD_t$ represents a dummy variable that equals one if firms disclose R&D investment forecasts in a quantitative fashion during year $t$.

Because previous research shows that firms with higher risk have a higher cost of capital, firm-specific variables are also added into the regression model as control variables ($CTRL_t$), which have been shown to be related to firm risks. Specifically, a vector of $CTRL_t$ comprises the following proxy variables for risk: operating cash flow ($CFO$), variability of operating cash flow ($SDCFO$), market capitalisation ($MKCAP$), market-to-book ratio ($PBR$), financial leverage ($LEV$), and past stock return ($RET$).

The level and variability of cash flows ($CFO$ and $SDCFO$) are expected to be negatively and positively correlated with firm-specific risk because Francis et al. (2005) suggest that the variability in profitability can be perceived as a source of risk for the firm. I also include market capitalisation ($MKCAP$) and market-to-book ratio ($PBR$) as additional control variables because Fama and French (1992) show that these influence the expected rate of return. The higher the financial leverage, the higher the probability that the firm could default; therefore, financial leverage ($LEV$) is expected to be positively related to the cost of capital (Francis et al., 2005). Finally, past stock return ($RET$) is also included because Rajgopal and Venkatachalam (2005) find a negative association between systematic risk and past stock return, while Duffee (1995) indicates that the relationship between systematic risk and past stock return is sensitive to sample selection and that the association can change according to researchers’ handling of bankruptcy, mergers and acquisitions, and delisting. As for $RET$, any sign is expected because the results of previous research show that past stock return is either positively or negatively associated with systematic risk.

Equation (4) also includes year and industry dummy variables because the cost of capital can vary over time across industries. In estimating equation (4), the White (1980) standard error
correction has been used to estimate test statistics ($t$-values) and the firm-level cluster is adjusted.

3.3 Determinants of voluntary disclosure

In the first-stage regression, a vector of determinants of investment forecast disclosure ($DE_{t-1}$) should be specified. As for why managers voluntarily provide more information than required, some studies have found several determinants. For example, Healy and Palepu (2001) illustrate several motives for voluntary disclosure. In this paper, seven potential determinants of investment forecast disclosures are considered: firm size, profitability, misvaluation, leverage, board ownerships, barriers to entry, and new financing. The expected relations of these determinants and voluntary disclosure are as follows.

3.3.1 Size

The relationship between firm size and the extent of disclosure is well documented; in general, firm size has statistically significant influence on disclosures (Depoers, 2000; Hossain et al., 2005; Walker and Louvari, 2003). Broadly speaking, large firms incur fewer costs in disclosing information because highly skilled employees and experienced managers can provide information with relative ease (Raffournier, 1995). In addition, large firms may experience less information asymmetry than small firms because large firms are likely to be mature and to have built relations with outside investors over time, as well as to receive much attention from the markets and regulators (Diamond and Verrecchia, 1991). Therefore, compared with smaller firms, large firms will be able to provide outsiders with more information concerning their future investment programs without putting themselves at a competitive disadvantage. The proxy for firm size in this article is the logarithm of market capitalisation ($MK_{\text{CAP}_{t-1}}$) at year $t-1$.

3.3.2 Profitability

9 They show six hypotheses relating to voluntary disclosure: (1) capital markets transactions hypothesis, (2) corporate control contest hypothesis, (3) stock compensation hypothesis, (4) litigation cost hypothesis, (5) management talent signalling hypothesis, and (6) proprietary cost hypothesis.

10 Other hypotheses can also be considered. For example, Depoers (2000) indicates that internationality (foreign activities), auditor firms, and labour pressure are possible determinants of voluntary disclosure, and Lang and Lundholm (1993) and Botosan (1997) suggest that analyst following is also a determinant of disclosure levels. However, in this paper, these factors are not taken into account because of the problem of data availability.
Singhvi and Desai (1971) state that profitability is positively related to voluntary disclosures. They allege that highly profitable firms are willing to engage in full disclosure because high profitability ensures their positions and compensation. On the other hand, managers do not aggressively release detailed information when their operating results are unfavorable. These arguments suggest that we should expect a positive association between profitability and voluntary disclosures. Profitability is measured as return on shareholder equities ($ROE_{t-1}$), where ROE is net incomes in year $t-1$, divided by total assets at year $t-1$.

3.3.3 Misvaluation

Kreps (1990) suggests that contracts between managers and investors provide managers an incentive to publish more private information, which mitigates the extent of misvaluation through the reduction of information asymmetry. This implies that a firm mispriced in the equity markets has a stronger motive to disclose private information for the purpose of a correction of the degree of misvaluation. Such an incentive is assumed to be more powerful for a firm whose stock price is undervalued in the market rather than overvalued. Thus, it is supposed that undervalued firms are more likely to disclose investment forecast information. In this article, market-to-book ratio at year $t-1$ ($PBR_{t-1}$) is utilised as a variable to measure the degree of misvaluation. The market-to-book ratio is expected to be negatively related to the likelihood of investment forecast disclosures, as a firm with a lower market-to-book ratio is undervalued in the markets.\footnote{However, there is also the possibility that $PBR_{t-1}$ will become a proxy for a growth opportunity perceived by capital market participants. Investment opportunities are positively related to forward-looking information disclosures because future information helps to reduce agency conflicts (Skinner, 1993; Smith and Watts, 1992). A growing firm is motivated to reveal forward-looking information about its prospects, and such an incentive tends to increase along with growth opportunities. The market-to-book ratio is expected to be positively related to investment forecast disclosures if it captures growth opportunities.}

3.3.4 Financial leverage

Voluntary disclosures are useful because they can play a role in adjusting the conflict between shareholders and creditors. A problem exists between them when a firm has a large amount of debt. Creditors demand the firm to supply more information than required when a firm uses proactive external debt financing (Raffournier, 1995). Furthermore, agency costs are incurred based on investors’ claims (Jensen and Meckling, 1976) and investment strategies (Depoers, 2000). Creditors can indirectly monitor and control the level of future investment because firms’ investment and financing activities are connected by the
intermediary cash flows (Smith and Warner, 1979), implying that financial leverage plays the key role of monitoring. However, a firm with an extremely high level of leverage is assumed to suffer financial distress. Most of these firms would have few appealing investment opportunities and poor business performance; therefore, they would be reluctant to release investment forecasts voluntarily. To summarise, financial leverage can have either positive or negative effects on voluntary disclosures. Financial leverage ($LEV_{t-1}$) is defined as the ratio of interest-bearing liabilities to total assets at year $t-1$.

3.3.5 Barriers to entry

Verrecchia (1983) develops his model based on the concept of adverse selection. He assumes that managers disclose all proprietary information to the markets and that investors regard a lack of disclosure to indicate that firms are concealing bad news, with stock price decreases reflecting investors’ negative assessments. This implies that a firm has an incentive to publish all private information and to try to inform investors that it has more business opportunities than other less profitable firms. However, rival firms can use the disclosed information to improve their products or commodities, implying that too much voluntary disclosure impose proprietary costs on the disclosing firm. Verrecchia (1983) argues that, owing to proprietary costs, a manager is likely to refrain from publishing confidential information. Some studies find that the potential entry of new competitors is related to the level of future prospect disclosures (Darrough, 1995; Darrough and Stoughton, 1990). It is therefore assumed that a firm protected by a large entry barrier can release more information than firms without protection. The barriers to entry level is measured by total fixed assets divided by total assets at year $t-1$ ($PPE_{t-1}$), because this indicator expresses the degree of investment necessitated to enter a sector.

3.3.6 Board ownership

The agency problem is closely related to a firm’s disclosure policy because full disclosure creates a decline in monitoring costs. The diffusion of ownership is likely to cause agency costs and conflicts between managers and shareholders. According to Jensen and Meckling (1976), managers may abuse their positions as board officers and behave in a manner contrary to the maximization of shareholders’ wealth. However, the extent to which this

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12 In addition, a manager does not have to publicly disclose information if the relationship between a firm and a bank is quite close and a large amount of money is financed from a specific lender. This is because such a lender has a quite close relationship between the manager and can directly gather information.
occurs is dependent on internal control systems (corporate governance mechanisms) and external monitoring. When corporate governance and external monitoring work effectively, managers are required to disclose extensive information. However, managers try to divert a firm’s wealth to themselves when the ownership is concentrated among board managers and managers are under little pressure from outsiders. That is, a firm has little incentive to disclose voluntarily if its board members have a large amount of ownership and engage in empire building, implying that the level of board ownership is negatively associated with voluntary disclosures. I employ ownership concentration ($BOARD_{t-1}$), which is measured as the ratio of shares held by board members to total outstanding shares at year $t-1$.

3.3.7 Fund-raising from direct financing markets

A firm that engages in fund-raising is more likely to disclose information for the sake of providing potential shareholders and bondholders with supplemental information and realising better financing conditions, bolstering investor confidence (Raffournier, 1995). This implies that a firm hoping to increase its fund-raising capacity from direct markets is apt to supply information to outside investors voluntarily. The proxy for financing from direct markets ($NEWFIN_{t}$) is measured as the ratio of cash inflows from direct financing (share or bond issue) in year $t$ to total assets at year $t-1$.

In addition, in order to deal with outliers, all continuous variables in both equations (3) and (4) are winsorised at the 1st-percentile and 99th-percentile levels in the below-mentioned sample universe. The variables are defined in Table 1.

[Insert TABLE 1 about here]

4 Sample and descriptive statistics

4.1 Sample selection

The sample universe in this study is made up of 14,669 firm-years of all manufacturing firms listed on Japanese markets, covering the period from 2004 to 2011. From this sample universe, I eliminated firm-years that do not meet the following criteria: (i) all accounting

13 I only focus on manufacturing firms because Shimada (2015) shows that investment forecasts are more likely to be disclosed by manufacturing firms than by non-manufacturing firms.
periods from $t-4$ to $t$ must be 12 months in duration, (ii) no merger occurs between the $t-4$ and $t$ fiscal periods, (iii) accounting and market data are available to compute the variables.\textsuperscript{14} The final sample comprises 1,451 firms and 8,466 firm-years. As for data sources, investment forecast data were hand-collected from \textit{Toyo Keizai Kaisha Shiki Ho} (published by Toyo Keizai Inc.). Accounting data, including net income forecasts to estimate the implied cost of equity capital, and market data were collected from \textit{Toyo Keizai Kaisha Shiki Ho} and Yahoo! Finance using an automatic programming, respectively.

Table 2 presents the sample distribution by industry.\textsuperscript{15} This table shows the total number of firm-years and the percentages of firm-years that disclose capital and R&D investment forecasts for each industry. On average, 77.72\% and 69.48\% of the sample disclose capital investment forecasts and R&D investment forecasts, respectively. The percentage of firm-years is the largest for the pharmaceutical industry for both capital and R&D investment forecast disclosures. This result is consistent with the common-sense fact that pharmaceutical companies spend a large amount of money on capital and R&D investment activities. Furthermore, Table 2 indicates that the percentage of capital investment forecast disclosures is likely to be larger than that for R&D investment forecast disclosures in all industries.

[Insert TABLE 2 about here]

\textbf{4.2 Descriptive statistics}

Table 3 presents the descriptive statistics for this study. The mean and median values of change in the cost in capital are 0.0064 and 0.0014, respectively. This suggests that the cost of capital is likely to increase during this study’s sample period (from 2004 to 2011).\textsuperscript{16} In addition, for the independent variables in equation (2), statistical differences are detected at conventional significance levels between firms that disclose investment forecasts and firms

\textsuperscript{14} The numbers in the income statements cannot be compared equally when the accounting period changes. Mergers largely affect both balance sheets and income statements, and thus firms that merge or are merged are excluded.

\textsuperscript{15} Industry classifications are based on the TSE industry classification.

\textsuperscript{16} The mean and median values of the cost of capital in 2004 are 4.67\% and 4.25\%, while those in 2011 are 10.00\% and 6.79\%. 
that do not (untabled).\textsuperscript{17} This implies that the selection of variables pertaining to the determinants of investment forecast disclosure would probably make sense.

[Insert TABLE 3 about here]

Correlation matrices of the variables used in the regression model are shown in Table 4. Panel A and Panel B are correlation matrices of variables in equations (3) and (4), respectively. In both Panels, the bottom left shows Pearson’s correlation, and the top right shows Spearman’s correlation. The result of Panel A indicates that the signs of the correlation coefficients between determinants and voluntary disclosures are roughly as expected. Firms with larger market capitalisation, higher profitability, fewer liabilities, less board ownership, and actual achievement of direct financing are associated with both capital and R&D investment forecast disclosures. Capital investment forecast disclosures are positively related to tangible assets ($PPE_{t-1}$), implying that firms with large barriers to entry can more easily disclose highly confidential information about future capital investments. Conversely, negative association is found between R&D investment forecast disclosures and the level of tangible assets. One reason could be that firms that invest heavily in R&D activities seem to possess more intangible assets, and for such R&D-intensive firms, $PPE_{t-1}$ does not in turn become an adequate proxy for the entry barriers.

Meanwhile, Panel B exhibits that the correlation coefficients between the change in the cost of capital and investment forecast disclosures are negative for both capital investment forecasts and R&D investment forecasts. This means that, consistent with my expectation, there may negative relations between the cost of capital and voluntary investment forecast disclosures. All signs of the correlation coefficients between the cost of capital and the other control variables are as expected. This indicates that the selection of control variables is appropriate.

[Insert TABLE 4 about here]

\textsuperscript{17} White’s $t$-tests and rank sum tests are employed to test the mean and median differences.
5 Main results

5.1 Univariate analysis

Table 5 shows the results of univariate tests that examine the difference in the change in the cost of capital between firms disclosing investment forecasts and firms not disclosing. The differences in mean values are tested using White's $t$-tests because $F$-tests rejected the null hypothesis that the variances of the two groups are equal.

For capital investment forecast disclosure, the mean value for disclosing firms is 0.0046 and that for non-disclosing firms is 0.0130. Therefore, the level of change in the cost of capital is lower for firms disclosing capital investment forecasts than for firms not disclosing. Furthermore, the difference between the two groups is $-0.0084$, which is statistically significant at the 1% level ($t$-value is $-7.30$). Next, the mean value of the change in the cost of capital for firms disclosing R&D investment forecasts is 0.0050, while that for firms not disclosing is 0.0099, indicating that there is $-0.0049$ of difference between two. Like the results for capital investment forecasts, this difference is statistically significant at the 1% level ($t$-value is $-5.20$). Based on the above results, voluntary investment forecast disclosures lead to the lower level of the cost of capital. That is, both Ha and Hb are supported by the results of univariate tests.

[Insert TABLE 5 about here]

5.2 Treatment effect estimates model

Table 6 provides the results of multivariate tests using the treatment effect estimates model. The left-hand and right-hand columns show the results of capital and R&D investment forecast disclosures, respectively. The upper part shows the results estimating second-stage regressions, and the lower part shows those for first-stage regressions. The inverse Mill’s
ratio, $\rho$, $\chi^2$-values and $\sigma$ are shown at the bottom of the upper part of the table. Given that both $\chi^2$-values, which are test statistics testing the null hypothesis $\rho = 0$, are rejected at the conventional significance levels, I can conclude that $\rho$ is not equal to zero. This suggests that applying the treatment effect estimates model is appropriate and this estimation model is well specified.

From the results of the lower part of the table (first-step regressions), it is found that the determinants of capital investment forecast disclosures are market capitalisation, misvaluation, entry barrier and board ownership. Larger firms are likely to disclose because the coefficients of market capitalisation are positively significant. Next, the signs of coefficients of market-to-book ratio are negative and significant at the 5% level. This result presents the possibility that the market-to-book ratio does not capture future growth opportunities but rather the degree of market misvaluation. Firms undervalued in the market are motivated to correct investors’ valuation to match the level of manager valuation, which induces managers to proceed with self-motivated disclosures for the purpose of providing investors with information about the right valuation. Therefore, negatively significant coefficients would be detected for the market-to-book ratio. Moreover, firms with high barrier to entry disclose capital investment forecasts because they are less likely to face the risk that competitor imitate their strategies or business models. Finally, firms with high board ownership do not disclose capital investment forecasts since managers do not have to proactively release internal information due to the less-advanced separation of ownership control from management.

The results in the lower part of the right-hand column indicate that the coefficients of $M_{KCA}P_{t-1}$ and $NEWFIN_t$ are positively significant and those of $LEV_{t-1}$ and $BOARD_{t-1}$ are negatively significant at the conventional levels. This suggests that the determinants of R&D investment forecast disclosures are firm size, financial leverage, board ownerships and new financing from direct markets. Thus, firms that have large market capitalisation, extremely large amount of debt and small board ownership, and firms that have issued new shares or bonds are more likely to spontaneously publish R&D investment forecasts. In addition, it is confirmed that, consistent with the correlation coefficient, $PPE_{t-1}$ is negatively related to the R&D investment forecasts.

19 The inverse Mill’s ratios, calculated by multiplying $\rho$ by $\sigma$, are positively significant at the 1% level. This suggests that propensities that have stronger effects on the decision to disclose investment forecasts are more likely to heighten the disclosure hazards based on the observed data.
The results of the upper part (second-step regressions) indicate that both capital and R&D investment forecast disclosures negatively influence the change in the cost of capital. The coefficients of the dummy variable for capital investment forecast disclosures is \(-0.0071\), and that for R&D investment forecast disclosure is \(-0.0040\); both are significant at the 1% level. That is, the effects of investment forecast disclosures on the cost of capital remain significant, even when the sample selection and endogeneity issues are addressed. This suggests that the change in the cost of capital is 0.71% and 0.40% lower, respectively, if firms disclose capital and R&D investment forecasts. These results are consistent with the hypotheses, supporting both Ha and Hb.\(^\text{20}\)

Regarding the results of control variables in the second-step regressions, the coefficients of market capitalisation and market-to-book ratio are negatively significant at the 1% level where a dummy variable is input as the independent variable of either capital or R&D investment forecast disclosures. These results are consistent with Fama and French’s (1992) finding that the expected rate of stock returns is negatively related to firm size and positively (negatively) related to book-to-market ratio (market-to-book ratio).

[Insert TABLE 6 about here]

### 6 Additional analyses

#### 6.1 Propensity score matching

As mentioned above, the sample in this study has a problem of selection bias. That is, firms’ probability of disclosing investment forecasts is dependent on firm-specific characteristics. Such characteristics are associated with risk in business and expected returns. Therefore, a change in the cost of capital for firms with investment forecast disclosures should be compared with firms that have the same level of probability to disclose investment forecasts but do not actually disclose. To circumvent this problem, I use the propensity score matching model to control for any possible selection bias in the estimation.

\(^{20}\) The results of negative association between the presence of investment forecasts and change in the cost of capital still remains even if firm-years whose fiscal period is 2008 and 2009 are excluded, considering the financial crisis. The results of treatment effect estimation model using 6,060 firm-years shows that the coefficient of \(DISC_{FCAP_t}\) is \(-0.0064\) and that of \(DISC_{FRD_t}\) is \(-0.0047\), and the both coefficients are statistically significant at the 1% level (\(t\)-values are \(-3.49\) and \(-2.79\), respectively).
Equation (3), shown above, is utilised as a selection model, and the propensity scores for investment forecast disclosures are computed for each firm-year.\(^{21}\) The propensity score \(e(\cdot)\) is defined as \(e(\text{DET}_{t-1}) \equiv Pr(\text{DISC}_t = 1|\text{DET}_{t-1})\), \(\text{DISC}_t \in \{\text{DISC}_FCA, \text{DISC}_FRD\}\). For each sample firm-year, a matching firm-year is identified from the firm-years not disclosing investment forecasts in the same fiscal year. The matching firm-year is selected that demonstrates the nearest propensity scores to a particular sample observation. That is, for every firm-year with capital investment forecast disclosure, 6,580 matching firm-years are individually chosen from firms that do not disclose capital investment forecasts. Likewise, for every firm-year with R&D investment forecast disclosure, 5,882 matching firm-years are selected from firms that do not disclose R&D investment forecasts.\(^{22}\)

The upper row in Table 7 shows the result for capital investment forecast disclosures, and the lower row shows the result for R&D investment forecast disclosures. The mean value of \(\Delta COC_t\) for firms disclosing capital investment forecast disclosures is 0.0046, as shown in Table 5. The mean value of \(\Delta COC_t\) for matching firms based on capital investment forecast disclosures is 0.0060. Thus, the level of change in the cost of capital is smaller for sample firms than for matching firms. The result of a pairwise \(t\)-test shows that the difference between these two mean values (−0.0015) is statistically significant at the 1% level.

Likewise, with regard to R&D investment forecasts, the mean values for sample firms and matching firms are 0.0050 and 0.0075, respectively. It is confirmed that the former is lower than the latter, and a pairwise \(t\)-test shows the difference is significant at the 1% level. The mean values of change in the cost of capital for sample firms are smaller than those for matching firms, suggesting that R&D investment forecast disclosures are negatively related to the reduction of the cost of capital. Both Ha and Hb are supported even when the propensity score matching approach is employed, and it can safely be said that the results are robust.

[Insert TABLE 7 about here]

\(^{21}\) The only variables that are statistically significant in the first-stage regression of Table 6 are used as \(\text{DET}_{t-1}\) in estimating the propensity score.

\(^{22}\) The results of pairwise \(t\)-tests of mean differences show that there is no mean difference between the sample group and the matching group for each independent variable in equation (4). This implies that the matching process based on the propensity scores calculated from these independent variables makes sense.
6.2 Expanding the measurement periods for change in cost of capital

The effect of investment forecast disclosures on the cost of capital may not appear within one period because the outcomes from investment in operating activities such as capital and R&D investment are returned not immediately but over a prolonged period. It could be important for managers to expect the effect of investment forecast disclosures on the cost of capital to persist over time. In addition, the implied cost of capital estimated based on equation (1) incorporate a long-term perspective. The hypotheses are therefore examined using a different time period for change in the cost of capital. To do so, I extend the measurement period of change in cost of capital and apply change in the cost of capital from year $t-1$ to year $t+1$ ($\Delta COC_{t}$). In this subsection, I employ the treatment effect estimates model using equations (3) and (4) as in the main results.

The tested results are shown in Table 8, in which only the results of the second-stage regressions are presented.\(^{23}\) The results for capital and R&D investment forecasts are shown in the left- and right-hand columns, respectively.\(^{24}\) Table 8 reports that the coefficient of $DISC_{FCAP_t}$ is $-0.0137$ and the $t$-value is $-3.34$ (this indicates statistical significance at the 1% level), suggesting that the change in the cost of capital from year $t-1$ to year $t+1$ for firms with capital investment forecast disclosures is 1.37% lower than for firms without disclosures. Similarly to R&D investment forecasts, the coefficient of $DISC_{FCAP_t}$ is $-0.0094$ and negatively significant at the 5% level ($t$-value is $-2.51$). This also implies that quantitative disclosures of future R&D investment plans are effective against a reduction in the cost of capital. These results also support both Ha and Hb, although the test statistics ($t$-values) are slightly lower than those in Table 6. For control variables, statistically significant results consistent with the expected signs are observed. In addition, the coefficient of $RET_t$ reaches statistical significance, although in Table 6, that is insignificant. Therefore, it may be said that the momentum in stock prices influences the cost of capital over time.

[Insert TABLE 8 about here]

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\(^{23}\) The number of observations shrinks to 8,301 firm-years and 1,417 firms because for some observations $\Delta COC_{t}$ cannot be calculated.

\(^{24}\) For both columns, the inverse Mill’s ratios and $\rho$ are positively significant, implying that the application of the treatment effect estimates model is appropriate and such estimation models are specified well.
7 Concluding remarks

In theory and practice, the association between disclosures and the cost of capital is an important issue because this is closely related to the key ways of thinking about economics, like the agency problem and information asymmetry. In general, a negative association between the two is assumed. Theoretical research indicates that more disclosures lead to higher market liquidation as well as lower estimation risks (Verrecchia, 1983). Meanwhile, the empirical evidence suggests that firms hope to reduce their cost of capital and realise higher firm valuation by means of the lower cost of capital.

In this study, I examined economic effectiveness relating to investment forecast disclosures. In particular, the relationship between such disclosures and a decrease in the cost of capital is addressed. Disclosures of future investments are of significance because these business activities relate directly to future cash flows and operating incomes, both of which are foundational for firm valuations. Japan seems especially suited for an analysis of this kind given that Japanese firms voluntarily disclose their capital and R&D investment forecasts. Using a large sample of Japanese manufacturing firms, I showed that firms with investment forecast disclosures can enjoy a greater reduction in the cost of capital than firms without disclosures. Research on voluntary disclosures inevitably faces a problem of selection bias. To deal with this problem, I applied the treatment effect estimates model and reported the result that there is still a negative association between investment forecast disclosures and the cost of capital, even when potential determinants and other variables pertaining to the cost of capital are controlled. Furthermore, the results do not vary even when the change in the cost of capital is compared with matching firms based on the propensity scores and the change in the cost of capital measured in another different time-period.

Some caveats are worth mentioning. I did not examine the detailed content of the investment forecast disclosures to the extent that detailed information of such disclosures is not fully captured by a dummy variable for forecast disclosures. In addition, the credibility of the information should be considered in evaluating the impact of future information on the cost of capital because such forward-looking information includes much uncertainty. Further, the structure of corporate governance is of importance in assessing information credibility, as this study also considers the level of board ownership. Thus, other perspectives about corporate governance could also be considered in measuring the validity of the economic significance contained in future information.
These caveats notwithstanding, I do believe that the results in this study provide a variety of perspectives for future research. The effect of voluntary disclosures of future prospects could be thought of as a function of difference in the social and legal environments and in corporate structures and culture. Therefore, if possible, a comparison using international data would be helpful for us to better understand the features of voluntary disclosures. Furthermore, investment forecasts are disclosed not only qualitatively but also quantitatively, although most forward-looking information, like ESG information, is released in a descriptive and narrative way. Therefore, in the interest of objectivity and credibility, investment forecast disclosures could be expanded into the quantitative assessment of the precision of and trends in voluntary disclosures. Last, exploring the impacts of investment forecast disclosures on other economic consequences such as market liquidity (e.g., trading volume and bid-ask spread) would be worthwhile in future works.
REFERENCE


<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\Delta COC_t$</td>
<td>Change in the cost of equity capital from year $t-1$ to year $t$.</td>
</tr>
<tr>
<td>$DISC_{FCAP_t}$</td>
<td>Dummy variable that equals one if firms disclose capital investment forecasts during year $t$, and zero otherwise.</td>
</tr>
<tr>
<td>$DISC_{FRD_t}$</td>
<td>Dummy variable that equals one if firms disclose R&amp;D investment forecasts during year $t$, and zero otherwise.</td>
</tr>
<tr>
<td>$CFO_t$</td>
<td>Ratio of operating cash flows to total assets at year $t$.</td>
</tr>
<tr>
<td>$SDCFO_t$</td>
<td>Average of past five-year ratios of operating cash flows to total assets.</td>
</tr>
<tr>
<td>$MKCAP_t$</td>
<td>Logarithm of market capitalisation at year $t$.</td>
</tr>
<tr>
<td>$PBR_t$</td>
<td>Market-to-book ratio at year $t$.</td>
</tr>
<tr>
<td>$LEV_t$</td>
<td>Ratio of interest-bearing liabilities to total assets at year $t$.</td>
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<tr>
<td>$RET_t$</td>
<td>One-year buy-and-hold stock return during year $t$.</td>
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<tr>
<td>$ROE_t$</td>
<td>Ratio of net incomes to total assets at year $t$.</td>
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<tr>
<td>$BOARD_t$</td>
<td>Ratio of shares held by director board members to total outstanding shares at year $t$.</td>
</tr>
<tr>
<td>$NEWFIN_t$</td>
<td>Ratio of cash inflows from direct financing during year $t$ to total assets at year $t-1$.</td>
</tr>
</tbody>
</table>

Note: Table 1 presents the definition of each variable. All variables are winsorised at the 1st-percentile and 99th-percentile levels of the sample universe.
### TABLE 2: Sample distribution.

<table>
<thead>
<tr>
<th>Industry classification</th>
<th>All</th>
<th>N of capital investment forecast disclosures</th>
<th>% of capital investment forecast disclosures</th>
<th>N of R&amp;D investment forecast disclosures</th>
<th>% of R&amp;D investment forecast disclosures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food</td>
<td>759</td>
<td>576</td>
<td>75.89</td>
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<td>57.97</td>
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<td>57.48</td>
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<td>Pulp &amp; paper</td>
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<td>106</td>
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<td>81.18</td>
<td>926</td>
<td>75.78</td>
</tr>
<tr>
<td>Pharmaceutical</td>
<td>262</td>
<td>234</td>
<td>89.31</td>
<td>235</td>
<td>89.69</td>
</tr>
<tr>
<td>Oil and coal products</td>
<td>52</td>
<td>20</td>
<td>38.46</td>
<td>11</td>
<td>21.15</td>
</tr>
<tr>
<td>Rubber products</td>
<td>134</td>
<td>108</td>
<td>80.60</td>
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<td>64.93</td>
</tr>
<tr>
<td>Glass &amp; ceramics products</td>
<td>397</td>
<td>319</td>
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<td>74.81</td>
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<tr>
<td>Iron &amp; steel</td>
<td>353</td>
<td>231</td>
<td>65.44</td>
<td>153</td>
<td>43.34</td>
</tr>
<tr>
<td>Nonferrous metals</td>
<td>216</td>
<td>183</td>
<td>84.72</td>
<td>146</td>
<td>67.59</td>
</tr>
<tr>
<td>Metal products</td>
<td>481</td>
<td>350</td>
<td>72.77</td>
<td>308</td>
<td>64.03</td>
</tr>
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<td>Machinery</td>
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<td>997</td>
<td>77.59</td>
<td>926</td>
<td>72.06</td>
</tr>
<tr>
<td>Electric Appliances</td>
<td>1,450</td>
<td>1,165</td>
<td>80.34</td>
<td>1,136</td>
<td>78.34</td>
</tr>
<tr>
<td>Transportation equipments</td>
<td>624</td>
<td>485</td>
<td>77.72</td>
<td>408</td>
<td>65.38</td>
</tr>
<tr>
<td>Precision instruments</td>
<td>235</td>
<td>187</td>
<td>79.57</td>
<td>182</td>
<td>77.45</td>
</tr>
<tr>
<td>Other manufacturing</td>
<td>476</td>
<td>352</td>
<td>73.95</td>
<td>328</td>
<td>68.91</td>
</tr>
<tr>
<td><strong>All</strong></td>
<td>8,466</td>
<td>6,580</td>
<td><strong>77.72</strong></td>
<td>5,882</td>
<td><strong>69.48</strong></td>
</tr>
</tbody>
</table>

Note: Table 2 shows the sample distribution by industry. The TSE industry classification is used.
TABLE 3: Descriptive statistics.

<table>
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<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dv.</th>
<th>Min.</th>
<th>Median</th>
<th>Max.</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\Delta COC_t$</td>
<td>0.0065</td>
<td>0.0357</td>
<td>-0.0890</td>
<td>0.0014</td>
<td>0.2195</td>
<td>8,466</td>
</tr>
<tr>
<td>$DISC_{FCAP_t}$</td>
<td>0.7772</td>
<td>0.4161</td>
<td>0.0000</td>
<td>1.0000</td>
<td>1.0000</td>
<td>8,466</td>
</tr>
<tr>
<td>$DISC_{FRD_t}$</td>
<td>0.6948</td>
<td>0.4605</td>
<td>0.0000</td>
<td>1.0000</td>
<td>1.0000</td>
<td>8,466</td>
</tr>
<tr>
<td>$CFO_t$</td>
<td>0.0569</td>
<td>0.0534</td>
<td>-0.2238</td>
<td>0.0583</td>
<td>0.2086</td>
<td>8,466</td>
</tr>
<tr>
<td>$SDCFO_t$</td>
<td>0.0358</td>
<td>0.0254</td>
<td>0.0007</td>
<td>0.0291</td>
<td>0.1948</td>
<td>8,466</td>
</tr>
<tr>
<td>$MKCAP_t$</td>
<td>9.9570</td>
<td>1.7856</td>
<td>6.3568</td>
<td>9.7645</td>
<td>14.4429</td>
<td>8,466</td>
</tr>
<tr>
<td>$PBR_t$</td>
<td>1.0748</td>
<td>0.7921</td>
<td>0.2055</td>
<td>0.8680</td>
<td>6.1476</td>
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<tr>
<td>$LEV_t$</td>
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<td>0.1965</td>
<td>0.0695</td>
<td>0.4944</td>
<td>0.9548</td>
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<tr>
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<td>0.3075</td>
<td>-0.6887</td>
<td>-0.0664</td>
<td>1.2329</td>
<td>8,466</td>
</tr>
<tr>
<td>$MKCAP_{t-1}$</td>
<td>10.0264</td>
<td>1.7647</td>
<td>6.4657</td>
<td>9.8402</td>
<td>14.4485</td>
<td>8,466</td>
</tr>
<tr>
<td>$ROE_{t-1}$</td>
<td>0.0265</td>
<td>0.1575</td>
<td>-1.3005</td>
<td>0.0477</td>
<td>0.4034</td>
<td>8,466</td>
</tr>
<tr>
<td>$PBR_{t-1}$</td>
<td>1.1600</td>
<td>0.8309</td>
<td>0.2162</td>
<td>0.9470</td>
<td>6.3728</td>
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</tr>
<tr>
<td>$LEV_{t-1}$</td>
<td>0.4899</td>
<td>0.1969</td>
<td>0.0690</td>
<td>0.4995</td>
<td>0.9669</td>
<td>8,466</td>
</tr>
<tr>
<td>$PPE_{t-1}$</td>
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<td>0.1298</td>
<td>0.0787</td>
<td>0.4637</td>
<td>0.7959</td>
<td>8,466</td>
</tr>
<tr>
<td>$BOARD_{t-1}$</td>
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<td>0.0765</td>
<td>0.0001</td>
<td>0.0073</td>
<td>0.4874</td>
<td>8,466</td>
</tr>
<tr>
<td>$NEWFIN_t$</td>
<td>0.0096</td>
<td>0.0371</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.3666</td>
<td>8,466</td>
</tr>
</tbody>
</table>

Note: Table 3 provides sample descriptive statistics. The variable definitions are given in Table 1.
TABLE 4: Correlation matrices.

Panel A. Correlation matrix of variables for first-stage regression.

<table>
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<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>DISC_FCAP&lt;sub&gt;_t&lt;/sub&gt;</td>
<td>0.7745</td>
<td>0.1800</td>
<td>0.0309</td>
<td>0.1294</td>
<td>−0.0392</td>
<td>0.0576</td>
<td>−0.0836</td>
<td>0.0469</td>
</tr>
<tr>
<td>(2)</td>
<td>DISC_FRD&lt;sub&gt;_t&lt;/sub&gt;</td>
<td>0.7745</td>
<td>0.0788</td>
<td>0.0111</td>
<td>0.1013</td>
<td>−0.0441</td>
<td>−0.0521</td>
<td>−0.0174</td>
<td>0.0243</td>
</tr>
<tr>
<td>(3)</td>
<td>MKCAP&lt;sub&gt;−1&lt;/sub&gt;</td>
<td>0.1799</td>
<td>0.0829</td>
<td>0.3075</td>
<td>0.5500</td>
<td>−0.1499</td>
<td>0.1019</td>
<td>−0.5240</td>
<td>0.1161</td>
</tr>
<tr>
<td>(4)</td>
<td>ROE&lt;sub&gt;−1&lt;/sub&gt;</td>
<td>0.0331</td>
<td>0.0171</td>
<td>0.2229</td>
<td>0.4552</td>
<td>0.0221</td>
<td>−0.0741</td>
<td>−0.1066</td>
<td>0.0270</td>
</tr>
<tr>
<td>(5)</td>
<td>PBR&lt;sub&gt;−1&lt;/sub&gt;</td>
<td>0.0775</td>
<td>0.0727</td>
<td>0.4108</td>
<td>0.0782</td>
<td>0.2046</td>
<td>−0.0054</td>
<td>−0.2850</td>
<td>0.1452</td>
</tr>
<tr>
<td>(6)</td>
<td>LEV&lt;sub&gt;−1&lt;/sub&gt;</td>
<td>−0.0371</td>
<td>−0.0424</td>
<td>−0.1418</td>
<td>−0.1311</td>
<td>0.2213</td>
<td>0.1148</td>
<td>−0.1724</td>
<td>0.2254</td>
</tr>
<tr>
<td>(7)</td>
<td>PPE&lt;sub&gt;−1&lt;/sub&gt;</td>
<td>0.0563</td>
<td>−0.0529</td>
<td>0.0935</td>
<td>−0.0305</td>
<td>−0.0520</td>
<td>0.1129</td>
<td>−0.1133</td>
<td>0.0901</td>
</tr>
<tr>
<td>(8)</td>
<td>BOARD&lt;sub&gt;−1&lt;/sub&gt;</td>
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<td>−0.0272</td>
<td>−0.3188</td>
<td>−0.0359</td>
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<td>−0.1229</td>
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<td>−0.0994</td>
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<td>(9)</td>
<td>NEWFIN&lt;sub&gt;_t&lt;/sub&gt;</td>
<td>0.0229</td>
<td>0.0229</td>
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<td>0.0808</td>
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<td>0.0158</td>
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</tr>
</tbody>
</table>

Panel B. Correlation matrix of variables for second-stage regression.

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
<th>(6)</th>
<th>(7)</th>
<th>(8)</th>
<th>(9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>ΔCOG&lt;sub&gt;_t&lt;/sub&gt;</td>
<td>−0.0551</td>
<td>−0.0368</td>
<td>0.0439</td>
<td>0.0177</td>
<td>−0.0541</td>
<td>−0.0798</td>
<td>0.0033</td>
<td>−0.0164</td>
</tr>
<tr>
<td>(2)</td>
<td>DISC_FCAP&lt;sub&gt;_t&lt;/sub&gt;</td>
<td>−0.0986</td>
<td>0.7745</td>
<td>0.0596</td>
<td>−0.0952</td>
<td>0.1756</td>
<td>0.1218</td>
<td>−0.0407</td>
<td>−0.0083</td>
</tr>
<tr>
<td>(3)</td>
<td>DISC_FRD&lt;sub&gt;_t&lt;/sub&gt;</td>
<td>−0.0632</td>
<td>0.7745</td>
<td>0.0156</td>
<td>−0.0272</td>
<td>0.0759</td>
<td>0.0952</td>
<td>−0.0451</td>
<td>−0.0086</td>
</tr>
<tr>
<td>(4)</td>
<td>CFO&lt;sub&gt;_t&lt;/sub&gt;</td>
<td>−0.0410</td>
<td>0.0612</td>
<td>0.0153</td>
<td>−0.0519</td>
<td>0.2765</td>
<td>0.2083</td>
<td>−0.1660</td>
<td>0.1473</td>
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<tr>
<td>(5)</td>
<td>SDCFO&lt;sub&gt;_t&lt;/sub&gt;</td>
<td>0.0468</td>
<td>−0.1059</td>
<td>−0.0359</td>
<td>−0.1144</td>
<td>−0.2633</td>
<td>−0.0456</td>
<td>0.0911</td>
<td>−0.0345</td>
</tr>
<tr>
<td>(6)</td>
<td>MKCAP&lt;sub&gt;_t&lt;/sub&gt;</td>
<td>−0.1436</td>
<td>0.1762</td>
<td>0.0813</td>
<td>0.2731</td>
<td>−0.2296</td>
<td>0.5574</td>
<td>−0.1460</td>
<td>0.1471</td>
</tr>
<tr>
<td>(7)</td>
<td>PBR&lt;sub&gt;_t&lt;/sub&gt;</td>
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<td>0.4122</td>
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<td></td>
<td>$LEV_t$</td>
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<td></td>
<td></td>
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<td></td>
</tr>
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<td>---</td>
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<td>-------</td>
<td>-------</td>
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<tr>
<td>8</td>
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<td>-0.0388</td>
<td>-0.0436</td>
<td>-0.1586</td>
<td>0.0793</td>
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</tr>
<tr>
<td>9</td>
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<td>-0.0037</td>
<td>0.1443</td>
<td>0.3127</td>
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</tr>
</tbody>
</table>

Note: Table 4 presents correlation matrices. Panel A shows a correlation matrix for variables in equation (3), and Panel B shows a correlation matrix for variables in equation (4). In both Panels, the bottom left shows Pearson’s correlation, and the top right shows Spearman’s correlation. Variable definitions are given in Table 1.
## Table 5: Results of univariate tests.

<table>
<thead>
<tr>
<th></th>
<th>Disclosing firms</th>
<th>N</th>
<th>Undisclosing firms</th>
<th>N</th>
<th>Difference</th>
<th>t-values</th>
</tr>
</thead>
<tbody>
<tr>
<td>$DISC_{FCAP_t}$</td>
<td>0.0046</td>
<td>6,580</td>
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<td>1,886</td>
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<td>*** -7.30</td>
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<tr>
<td>$DISC_{FRD_t}$</td>
<td>0.0050</td>
<td>5,882</td>
<td>0.0099</td>
<td>2,584</td>
<td>-0.0049</td>
<td>*** -5.20</td>
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</tbody>
</table>

Note: Table 5 shows the results of univariate tests. White’s $t$-tests are employed to test the mean differences. Definitions are given in Table 1. *** denotes significance at the 1% level.
TABLE 6: Results of multivariate tests: Effects of investment forecast disclosure on change in cost of capital.

<table>
<thead>
<tr>
<th>Second-stage</th>
<th>Expected sign</th>
<th>Coefficients</th>
<th>[t-values]</th>
<th>Second-stage</th>
<th>Expected sign</th>
<th>Coefficients</th>
<th>[t-values]</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISC_FCAPX&lt;sub&gt;t&lt;/sub&gt;</td>
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<td>–0.0071</td>
<td>***</td>
<td>DISC_FRD&lt;sub&gt;t&lt;/sub&gt;</td>
<td>–</td>
<td>–0.0040</td>
<td>***</td>
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</tr>
<tr>
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<td></td>
<td>CFO&lt;sub&gt;t&lt;/sub&gt;</td>
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<td></td>
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<td>***</td>
<td>MKCAP&lt;sub&gt;t&lt;/sub&gt;</td>
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<td>–0.0024</td>
<td>***</td>
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<tr>
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<td>***</td>
<td>PBR&lt;sub&gt;t&lt;/sub&gt;</td>
<td>+/-</td>
<td>–0.0022</td>
<td>***</td>
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<tr>
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<td>RET&lt;sub&gt;t&lt;/sub&gt;</td>
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</tr>
<tr>
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<td>0.0021</td>
<td>***</td>
<td>$\text{Inverse Mill's ratio}$</td>
<td>+</td>
<td>0.0012</td>
<td>*</td>
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<tr>
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<td>***</td>
<td>$\rho$</td>
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<td>*</td>
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<td>$\text{First-stage}$</td>
<td>$\text{Expected sign}$</td>
<td>$\text{Coefficients}$</td>
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<td>0.1404</td>
<td>***</td>
<td>$\text{MKCAP}_{t-1}$</td>
<td>+</td>
<td>0.0365</td>
<td>***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[12.37]</td>
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<td></td>
<td></td>
<td>[3.50]</td>
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<tr>
<td>$\text{ROE}_{t-1}$</td>
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<td></td>
<td>[0.71]</td>
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<tr>
<td>$\text{PBR}_{t-1}$</td>
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<td>$\text{PBR}_{t-1}$</td>
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<td></td>
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</table>
(Continued)

<table>
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<th>Variable</th>
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<th>Variable</th>
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<td>$LEV_{t-1}$</td>
<td>$-0.1457$ ($-1.69$)</td>
</tr>
<tr>
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<td>$PPE_{t-1}$</td>
<td>$-0.1557$ ($-1.19$)</td>
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<td>$BOARD_{t-1}$</td>
<td>$-0.4462$ ($-2.12$)</td>
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<td>$NEWFIN_t$</td>
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<td>$FIRM~CLUSTER$</td>
<td>yes</td>
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<tr>
<td>$YEAR~FE$</td>
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<td>$YEAR~FE$</td>
<td>yes</td>
</tr>
<tr>
<td>$INDUSTRY~FE$</td>
<td>yes</td>
<td>$INDUSTRY~FE$</td>
<td>yes</td>
</tr>
<tr>
<td>Observations</td>
<td>8,466</td>
<td>Observations</td>
<td>8,466</td>
</tr>
</tbody>
</table>

Note: Table 6 shows the results of tests of the effect of investment forecast disclosures on changes in the cost of capital. The left-hand column shows results for the capital investment forecast disclosures, and the right-hand column provides results for the R&D investment forecast disclosures. The standard error correction with firm-level clusters has been used to estimate t-values. Definitions are given in Table 1. ***, **, and * denote significance at the 1%, 5%, and 10% levels, respectively.
TABLE 7: Additional analysis: Results of difference comparison between sample firms and matching firms.

<table>
<thead>
<tr>
<th></th>
<th>Sample firms</th>
<th>N</th>
<th>Matching firms</th>
<th>N</th>
<th>Difference</th>
<th>t-values</th>
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</thead>
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<tr>
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<td>6,580</td>
<td>-0.0015</td>
<td>*** -2.59</td>
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<tr>
<td>DISC_FRD_t</td>
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<td>5,882</td>
<td>0.0075</td>
<td>5,882</td>
<td>-0.0053</td>
<td>*** -3.98</td>
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</tbody>
</table>

Note: Table 7 shows the results of univariate tests. Pairwise t-tests are employed to test the mean differences. Definitions are given in Table 1. *** denotes significance at the 1% level.
## TABLE 8: Additional analysis: Results of expanding the measurement period of change in cost of capital.

<table>
<thead>
<tr>
<th>Second-stage</th>
<th>Expected sign</th>
<th>Coefficients</th>
<th>[t-values]</th>
<th>Second-stage</th>
<th>Expected sign</th>
<th>Coefficients</th>
<th>[t-values]</th>
</tr>
</thead>
<tbody>
<tr>
<td>$DISC_{FCAPX_t}$</td>
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<td>***</td>
<td>$DISC_{FRD_t}$</td>
<td>$-$</td>
<td>$-0.0094$</td>
<td>**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[-3.34]</td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>$CFO_t$</td>
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<td>$CFO_t$</td>
<td>$-$</td>
<td>$0.0077$</td>
<td></td>
</tr>
<tr>
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<td></td>
<td>[0.34]</td>
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</tr>
<tr>
<td>$SDCFO_t$</td>
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<td>$0.0490$</td>
<td>***</td>
<td>$SDCFO_t$</td>
<td>$+$</td>
<td>$0.0556$</td>
<td></td>
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<td></td>
<td>[1.22]</td>
<td></td>
</tr>
<tr>
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<td>***</td>
<td>$MKCAP_t$</td>
<td>$-$</td>
<td>$-0.0066$</td>
<td>***</td>
</tr>
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<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>$PBR_t$</td>
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<td>***</td>
<td>$PBR_t$</td>
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<td>***</td>
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<td></td>
<td></td>
<td>[-5.24]</td>
<td></td>
</tr>
<tr>
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<td>$LEV_t$</td>
<td>$+$</td>
<td>$0.0031$</td>
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<td></td>
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<td>[0.56]</td>
<td></td>
<td></td>
<td></td>
<td>[0.50]</td>
<td></td>
</tr>
<tr>
<td>$RET_t$</td>
<td>$+/-$</td>
<td>$0.0117$</td>
<td>***</td>
<td>$RET_t$</td>
<td>$+/-$</td>
<td>$0.0119$</td>
<td>***</td>
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<td>[3.48]</td>
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</tr>
<tr>
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<td>$+/-$</td>
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<td>***</td>
<td>$INTERCEPT$</td>
<td>$+/-$</td>
<td>$0.1228$</td>
<td>***</td>
</tr>
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<td></td>
<td></td>
<td>[9.41]</td>
<td></td>
<td></td>
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</tr>
<tr>
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<td></td>
<td></td>
<td>$YEAR FE$</td>
<td>yes</td>
<td></td>
<td></td>
</tr>
<tr>
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<td></td>
<td></td>
<td>$INDUSTRY FE$</td>
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<td></td>
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</table>
Inverse Mill’s ratio \(+\) 0.0040 *** \(\text{Inverse Mill’s ratio} \ + \ 0.0028 \ **\)

\[3.50\] \[2.01\]

\(\rho\) \(+\) 0.0558 *** \(\rho\) \(+\) 0.0391 **

\(\chi^2\)-values 12.82 \(\chi^2\)-values \[4.09\]

\(\sigma\) 0.0722 \(\sigma\) 0.0722

observations 8,301 observations 8,301

Note: Table 8 shows the results of only the second-stage regression that tests the effect of investment forecast disclosures on changes in the cost of capital using the treatment effect estimates model, setting \(\Delta COC_2\) as the dependent variable in the second stage. Standard error correction with firm-level clusters has been used to estimate \(t\)-values. Definitions are given in Table 1. *** and ** denote significance at the 1% and 5% levels, respectively.
EARNINGS MANAGEMENT MOTIVES AND FIRM VALUE FOLLOWING MANDATORY IFRS ADOPTION – EVIDENCE FROM CANADIAN COMPANIES

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Canada
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ABSTRACT

When Canada already has a set of well-established legal enforcement and investor protection mechanism to control earnings management; and the quality of Canadian GAAP is high, I examine if the accounting quality for Canada can still be improved since its adoption of IFRS mandatorily in 2011. The extant literature argues that IFRS adoption benefits firms domiciled in countries with strong legal and financial institutions. However, when the quality of IFRS is as good as the local standards for many Anglo-Saxon countries such as Canada, it is questionable for these countries to receive substantial economic consequences. Following the literature, I estimate a set of comprehensive measurements of earnings management as the proxies of accounting quality. Empirically, I document evidence that even though the results are mixed, there are still certain significant improvements in accounting quality. However, I find that firms issuing more equities are motivated to associate with lower earnings quality. Also, firms engaging in two distinct strategic directions (prospector vs. defender) have systemically dissimilar effects on earnings quality in IFRS adoption. Finally, I document evidence that firm value following IFRS adoption has been increased, but at the expense of lower accounting quality. Overall, my study shed some lights into the literature that accounting standards per se is not sufficient to ensure a uniform-level of accounting quality because firm-level earnings management motives are important factors too.
1. Background
The main objective of financial reporting is to fulfill the stewardship functions of managers by conveying the full picture of the enterprise’s operating performance and financial position. In doing so, managers are obligated to minimize the gap of information asymmetry between them and parties contracting with the firm such as shareholders, lenders suppliers, customers, etc. (Watts, 1977; Ball, 2001).

1.1 The measure of accounting quality by earnings management
Ball (2006) argues that although relevance and reliability represent the key areas of accounting quality, they are not clearly and well defined, therefore, these concepts are not very useful. Instead, Ball (2006) conjectures that high quality of accounting requires an accurate depiction of economic reality and low capacity for managerial manipulation. In reality, there have been waves from the mass media, the general public, regulators and politicians blame earnings management as the mastermind of those corporate scandals which were highly related to crafted opportunistic self-interests of managers. Nevertheless, Jiraporn, Miller, Yoon and Kim (2008) point out that there are distinguishing differences between the opportunistic and beneficial uses of earnings management. For instance, motives for managers to manipulate earnings for maximizing their compensation such as bonuses (Holthausen, Larker and Sloan, 1995); and manage earnings to meet capital market expectations, especially in the IPO process (Teoh, Welch and Wong, 1998). On the contrary, there are situations that managers exercise professional knowledge to discretionarily use discretionary accruals to convey more information content of future cash flows, earnings and dividends so that share price can be reflective of the current economic values (Subramanyam, 1996). Even though there may be some good sides on earnings management, the literature in generally contend that higher level of earnings management practices is interpreted as lower quality of accounting for the reported earnings (e.g. Barth et al., 2008).

Prior studies point out that given that IFRS is a set of accounting standards with one-size-fit-all adopted by most countries, there are still variations of firm-specific factors such as size, leverage and profitability between companies. Such factors are related to managers’ reporting incentives which are associated with dissimilar accounting quality (e.g. Ahmed, Neel and Wang, 2009). Nevertheless, it is still an empirical question to confirm if the accounting quality has been improved, because the extant studies have been producing mixed results (Christensen, Lee and Walker, 2008).

Besides firm-specific factors, the literature also emphasizes the importance of institutional factors that could be affecting accounting quality.

1.2 Institutional Factors and Accounting Quality
There are ample amount of research studies on the link between institutions and accounting quality. This is possible that because countries’ institutional structures play an important role in determining accounting quality through the countries’ legal and political systems (Burghstahler et al. 2006; Soderstrom and Sun 2007; Holthausen 2009). Instead of by accounting standards per se, in general, the literature supports the notion that strong legal structures, enforcement of laws, investor protections and established financial and capital market systems are positively associated with the level of accounting quality. Specifically, Daske et al. (2008) argue that the incremental economic benefits following the mandatory IFRS adoption only occur in countries where firms have incentives to be transparent and where legal enforcement is strong. In particular, Leuz, Nanda and Wysocki (2002) document empirical
evidences that since the quality of financial reporting is exogenous, systematic differences in earnings management across different clusters of countries are significantly and positively related to relatively dispersed ownership structure, high disclosure requirements, strong investor protection and legal enforcement, and large stock markets system because such institutional characteristics can mitigate insiders’ (mainly controlling shareholders and managers) incentives and ability to acquire private control benefits.

If institutional structures such as legal and capital market systems are able to deter managers’ incentives in managing earnings opportunistically, it also implies that emerging economies with “less-developed” institutions may have higher issues in earnings management, unless there are concurrent improvements of institutions and high quality of accounting standards in place. For instance, Jeanjean and Stolowy (2008) document strong evidence that in a coded law country such as France, earnings management is not reduced after IFRS adoption but actually increased. It is because a mere adoption of accounting rules is not a sufficient condition to create a common business language, and that management incentives and national institutional factors play an important role in framing financial reporting characteristics. In addition, Germany is another code-law country (La Porta et al., 1998) with limited investor protection and an insider orientation (Leuz and Wuestemann, 2004), and German accounting standards – HGB is generally regarded as lower quality than IFRS (e.g. Leuz and Verrecchia, 2000). Christensen, Lee and Walker (2008) argue that earnings management practice in Germany is not reduced after IFRS is introduced. However, for firms that are not connected with close connection with banks and outside shareholders and have strong incentives for adoption, they are associated with lower earnings management. On the other hand, studies on U.K. and other common law countries have different findings. For instance, Latridis (2010) finds that IFRS adoption decreases the earnings management in the U.K., because it has a strong institutions.

Latridis and Rouvolis (2010) investigate the effects of the transition from Greek GAAP to IFRS by examining any changes of earnings management. The findings support their hypotheses that there are volatility in key income statement and balance sheet measures of Greek public firms during in the first year of adoption, i.e. the transition period. However, the authors document evidence of reduced earnings management in the subsequence period, especially for those companies with larger firm size and needs for debt and equity financing. In addition, Rudra and Bhattacharjee (2012) study India sample to prove that adoption of IFRS in an emerging market cannot be associated with reduced earnings management, unless such high quality accounting standards are supported by the on-going developments of security laws, legal enforcement and investor protection. Due to the lack of liquidity in capital markets for emerging markets and appropriate institutional infrastructures to reinforce IFRS reporting rules, IFRS per sec cannot control earnings management in India. However, I found two issues in this study. First, Rudra and Bhattacharjee (2012) merely takes the sample from 2010 and sample size from BSE 100 companies which 67 belong to private sectors; and second, without examining a set of comprehensive proxies of earnings management, Rudra and Bhattacharjee (2012) and other prior studies only measure discretionary accruals from modified Jones model (1995) and Jones model (1991).

Therefore, it is evidenced that the impacts of IFRS adoption (e.g. higher quality of reported earnings) are complementary to the countries’ institutional background, even it is prior to the implementation of IFRS (Chua, Cheong and Gould, 2012). On the other hand, it is also possible that for countries with lower institutional infrastructures, firms can still receive the greater effects of economic consequences from IFRS adoption (such as lower implied cost of equity
capital) as long as firms have strong incentives. For instance, Kim, Shi and Zhou (2013) document evidence for greater cost of capital-reducing effect of IFRS adoption from countries with weak institutional infrastructures than they are from countries with strong institutions.

1.3 IFRS adoption, institutions and accounting quality
It is expected that IFRS adoption limits the options available for managers (Christensen, Lee and Walker, 2008). It requires more and better disclosures and fair value measurements; which requires more transparencies from managers to carry out their financial reporting duties. If the country is supported by a set of well-established financial systems, investor protections, legal and litigation structures, mandatory IFRS adoption should bring more close monitoring to managers’ Earnings Management Motives (EMM). Burgstahler, Hall and Leuz (2006) focus on the level of earnings management as one key dimension of accounting quality that is particularly responsive to firms’ reporting incentives and document evidence from E.U. public and private firms from 1997 to 2001 that the need to raising capital in public markets (market forces) and the level of institutional structures (especially legal enforcement) are negatively associated with public companies’ earnings management, rather than private companies. Therefore, legal institutions and capital market forces often appear to reinforce each other in reducing the level of earnings management for public companies. Therefore, level of earnings management should be lowered in the post-adoption period. In addition, more disclosures about the entity’s financial condition, performance and risk-factors may enhance transparency of financial reporting (Chiapello, 2005). IFRS aims at promoting such full disclosure, which will facilitate decision usefulness for investors who use all available disclosed information from reports and notes. Also, as discussed, when the literature supports the notion that strong institutions help confine, limit and deter managers’ opportunistic discretion in managing earnings, accounting quality should be enhanced along with IFRS adoption.

On the contrary, IFRS is a set of principles-based accounting standards, which may give rooms for managers to opportunistically manipulate their professional judgement at the expense of shareholders. Thus, such larger extent of flexibility as using fair value accounting possibly allow managers of IFRS adopting companies to actually increase their earnings management motives. Recently, Capkun, Collins & Jeanjean (2012) examine the earnings quality in the Europe following mandatory IFRS adoption and posit that the greater flexibility in IFRS than that of the local GAAP may lead to greater earnings management (smoothing). Given that there are inconsistent empirical results from the streams of research studies in incentives vs. standards that related to accounting quality and/or capital market consequences, it is still an open question to argue if IFRS adoption have an incremental or complimentary effects on accounting quality when there have been other changes implemented simultaneously by the adopting firms (Barth et al., 2010).

1.4 Accounting quality and strategies
Some prior studies advocate that business strategy systematically differs in accounting quality. Recent literature examines the how business strategies related to level of accounting quality (e.g. Houq, Kerr and Monem, 2013). Taking U.S. public companies as the sample, the authors collect evidence to show that firms taking defender-strategy (prospector-strategy) are negatively (positively) related to the level of earnings management.

In addition, there are prior studies trying to link the accounting quality with firms’ strategies. Cormier, Houle & Ledoux (2013) argue that the positive relationship between earnings
management and information asymmetry is weakened for diversified firms, those intensively investing in R&D. It is possible that since innovative strategy will signify that the firm is growing and expanding aggressively for maximizing shareholders’ values in the future, the company is being closely monitored by shareholders, analysts and other stakeholders in the capital markets. In this situation, it motivates managers to mitigate any opportunistic manipulation of earnings. As a result, R&D spending should be negatively associated with EM.

On the contrary, cost control strategy tightens discretion for managers to innovate and grow the business. It will not add value to the prospect of the firm. As a result, this kind of conservative and cautious attitude will not encourage any positive association with firm valuation.

1.5 IFRS adoption and firm value
If accounting quality is enhanced by the IFRS adoption, will the firm value also be increased due to the reduction of information asymmetry from full disclosure and transparency? When IFRS is regarded as a more rigorous set of high quality accounting standards, accounting and earnings information should be more valuable to capital markets. Provided managers fully comply with IFRS adoption, on average, firm value should be increased from investors’ perspectives. However, the literature suggests there are some differential effects from firm characteristics.

Fernandes and Ferreira (2007) argue that firm characteristics become relatively more important to influence the extent of variations in earnings management. The scholars find the extent of negative relation between firm value (proxied by Tobin’s Q) and earnings management is more pronounced for firms with more growth opportunities and need for external finance.

2. Research Hypotheses Development

2.1 Accounting Quality and Mandatory IFRS adoption in Canada
Blanchette (2011) suggests that since both Canadian GAAP and IFRS are principles-based standards, it does not require substantial changes for Canadian firms. Even though Canadian managers can avoid detail guidelines and extensive guidance in IFRS, it definitely depends on the judgement in applying various principles (such as fair value of accounting). As a result, it still opens door to earnings management and income smoothing.

Leuz, Nanda & Wysocki (2002) classify countries into cluster to study the relationship between earnings management and institutional factors. In particular, Canada, Singapore, UK, Hong Kong, and USA belongs to cluster 1 which have large stock market capitalization, dispersed ownership, established judicial system with anti-director rights and rule of law and high requirements of disclosure. Such institutions are negatively related to earnings management.

In the following, I extract the selected descriptive and rationale of Leuz, Nanda & Wysocki (2002) to review that Canada is already in a low earnings-management jurisdiction, even prior to the mandatory IFRS adoption. TABLE 1 shows that Canada not only has a set of strong institutions in legal systems and disclosure requirements (being ranked in the top level of outside investor rights, legal enforcement scores and 7th highest disclosure index), but also have
been enjoying a relatively very low ranking of earnings management (i.e. out of 31 countries, 

TABLE 1
Canada's Ranking (out of 31 countries) from Country Scores for Earnings Management 
Measures & Institutional Characteristics (Extracted from Leuz, Nanda & Wysocki (2002)

<table>
<thead>
<tr>
<th>CANADA</th>
<th>Earnings Smoothing Measures (EM1 &amp; EM2)</th>
<th>Earnings Discretion Measures (EM3 &amp; EM4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>EM1</td>
<td>EM2</td>
<td>EM3</td>
</tr>
<tr>
<td>C(OpInc)/c(CFO)</td>
<td>Rank Out of 31 countries</td>
<td>p(Acc, CFO)</td>
</tr>
<tr>
<td>(-)</td>
<td>(-)</td>
<td>(+)</td>
</tr>
<tr>
<td>0.649</td>
<td>4</td>
<td>-0.759</td>
</tr>
</tbody>
</table>

Note:
EM1 is the country’s median ratio of the firm-level standard deviations of operating income and operating cash flow (both scaled by lagged total assets).
EM2 is the country’s Spearman correlation of the change in accruals and the change in cash flow from operations (both scaled by lagged total assets).
EM3 is the country’s median ratio of the absolute value of accruals and the absolute value of the cash flow from operations.
EM4 is the number of “small profits” divided by the number of “small losses” for each country.

<table>
<thead>
<tr>
<th>CANADA</th>
<th>Legal Origin</th>
<th>Legal Tradition</th>
<th>Outside Investor Rights (Ranking 1 to 5, 5 being the highest)</th>
<th>Legal Enforcement Scores (1 to 10, 10 being the highest)</th>
<th>Importance of Equity Market</th>
<th>Rank Out of 31 countries</th>
<th>Ownership Concentration</th>
<th>Rank Out of 31 countries</th>
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<th>Rank Out of 31 countries</th>
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</thead>
<tbody>
<tr>
<td>English</td>
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<td>5</td>
<td>9.8</td>
<td>23.3</td>
<td>7</td>
<td>0.24</td>
<td>6</td>
<td>74</td>
<td>7</td>
<td>7</td>
</tr>
</tbody>
</table>

Note:
CM means Common Law Country

Even though a set of principles-based accounting standards may be vulnerable to earnings management and income smoothing, is it also theoretically sound that such strong institutions can deter managers and controlling shareholders incentives to manage reported earnings in order to conceal their private control benefits (Leuz, Nanda & Wysocki, 2002)? Prior to adopting IFRS, Canada already has a low level of earnings management. Assuming the institutions in Canada continues to be strong following its mandatory adoption of IFRS (in order to discourage managers and controller shareholders incentives to manage earnings), can the quality of reported earnings be better following IFRS adoption period (i.e. since January 1st 2011)? On the contrary, as discussed, there are no huge differences between IFRS and Canadian GAAP, it is still doubtful for Canada to receive any incremental benefits (such as higher accounting quality) from IFRS adoption? Is it possible that firms’ high reporting quality of accounting information within the strong institutions will get higher following the mandatory IFRS adoption?

Since Canada just adopted IFRS since January 1st 2011, the extant literature regarding effects of IFRS adoption on Canadian compares is rare. Recently, Liu and Sun (2014) study if IFRS
affect earnings quality of 461 Canadian firms (1,844 firm-year observations) from 2009 to 2010 being the pre- and 2011 to 2013 being the post-IFRS periods. Specifically, these authors document that accounting quality has been improved when income-increasing discretionary accruals for the sample are reduced, small positive earnings, earnings persistence and earnings response coefficient have been improved from the pre- to post-IFRS period. There are substantial differences for my study comparing to Liu and Sun (2014), First, I apply extensive periods of pre- (2005 to 2010) and post-IFRS adoption (2011 to 2014) and larger sample size (6620 firm-year observations) in order to make the comparisons more meaningful. Second, I think that it is not sufficient to conclude the level of accounting quality by discretionary accruals. Thus, I follow prior studies (e.g. Ahmed, Neel and Wang, 2010) to comprehensively compute and evaluate different proxies of accounting quality by individually and overall earnings management scores (Leuz, Nanda & Wysocki, 2002). In fact, empirical results that relying on one specific measure of discretionary accruals may not entirely capture the underlying phenomenon in accounting quality (Cormier, Houle & Ledoux, 2013). Third, I extend the study of association between effects of mandatory IFRS adoption and earnings management to any link with firm values and strategic directions.

Besides discretionary accruals, the extant literature also measures if following IFRS adoption, managers continue to manipulate earnings towards targets (e.g. small positive earnings) and recognize loss less timely since these principles-based standards allow so much flexibility for managers to have preference in smoothing reported earnings in accordance to their hidden agenda. Even though there are well established institutions, IFRS and auditors will be less effective in limiting such potential self-interested managerial discretion (Ahmed, Neel and Wang, 2009).

To advance my study, the following research hypotheses are developed to include both earnings management and income smoothing as the proxies of accounting quality.

H1: Accounting quality is higher when earnings management is reduced following IFRS adoption

Where:
Earnings management is measured by a: (i) Discretionary Accruals, (ii) Discretionary Accruals – ROA, (iii) Managed Earnings Towards Targets (METT); and (iv) Time Loss Recognition (TLR)

2.2 Earnings management motives: equity issues and strategic focus
Prior studies also argue that earnings-management practices detected in each country is expected to be affected by specific socio-economic features such as the Anglo-American and the Euro-Continental environments. Othmanl and Zeghal (2006) study 2475 Canadian firm-year observations over the period 1996-2000 on what factors motivate firms to engage earnings management in Anglo-Saxon and Euro-Continental models and find that for Canadian firms, issuing equity is a strong motive for earnings management as they show specific incentives matched with a dynamic capital market. Fernandes and Ferreira (2007) argue that there is a negative relation between earnings management and firm valuation, especially for firms with strong investment opportunities and need of external finance. It suggests that firms with great need for growth and expansion may have incentives to manipulate their earnings reports.
Therefore, I conduct my test with recent Canadian sample extending longer sampling period and hypothesize to have similar effects from the literature even though IFRS is adopted.

H2a: Accounting quality is lowered when equity issuance is higher following IFRS adoption

In addition, Houque, Kerr and Monem (2013) take a large sample of U.S. public companies from 1999 to 2009 and document strong evidence that defender- (prospector-) strategy firms are associated with higher (lower) levels of earnings management practice. However, in periods of high and low economic growth, the results are very different. In times of high economic growth, defender- (prospector-) strategy firms experience low (high) earnings management; but during the low economic growth periods, defender- (prospector-) strategy firms are associated with higher (lower) earnings management practices.

Thus, prior studies’ findings postulate certain direct evidence of the link between business strategy and earnings quality. Another recent and similar study by Pak, Selatan and Ehsan (2014) have identical results that due to competitors-oriented behavior and short term focus on financial performance, defender firms are likely to manage earnings within the boundary of accounting standards. On the other hand, prospector firms who are committed to product development and innovation will be likely to increase accounting conservatism (i.e. higher accounting quality). That is, an assessment of earnings quality may be incomplete and potentially misleading without understanding business strategy of the firms in question. Moreover, investors and other users of financial statements can develop insights into firms’ earnings quality by trying to identify their business strategy in the first place.

To study if accounting quality is also contingent to firm-level strategic focus, I conjecture that firms with high growth, innovation-oriented (defensive, cost-control) strategy may become the possible incentive for firms to engage with less (more) earnings management, I take this view to develop the following hypothesis:

H2b: Firms engaging with innovative (cost control) strategy following the mandatory IFRS adoption are associated with lower (higher) levels of earnings management

2.3 Earnings management and firm value following IFRS adoption

Most prior studies posit that earnings management has been detrimental to the firm, especially those lessons learnt from Enron and Worldcom. Since earnings management practice will jeopardize the quality of earnings, it will exhibit that managers manipulate the accounting numbers to show good results to the capital markets. Thus, it is expected that the more earnings management, the lower the firm valuation. Hence, if IFRS is mandated in Canada, and earnings management is lowered, then, it is possible that earnings management is negatively associated with firm value following the mandatory IFRS adoption.

In this study, I examine if the firm value for a market-based economy higher with the improved accounting quality following the mandatory IFRS adoption? I investigate that following the mandatory IFRS adoption if such high quality of accounting standards will associate with any significant changes in firm value and earnings management.

H3: Firm value is increased with lower level of earnings management following the mandatory IFRS adoption
3. Data collection

3.1 Data collection

Since the E.U. is a very diverse economic union with ample of data when it adopted IFRS mandatorily since 2005, prior studies between accounting quality and IFRS adoption mainly focus on the E.U. (Ahmed, Neel and Wang, 2010, Christensen, Lee and Walker, 2008, Zeghal, Chtourou and Fourati 2012). However, empirical results in such diversity in the union of economic systems may not be able to generalize in other jurisdictions. In this study, I focus on a single-country research examining if a country with strong institutions may have accounting quality improved following IFRS adoption.

As such, I collect financial statement and fiscal year-end share prices and financial statement information from CompuStat North America database for the period 2005 to 2014, covering sufficient period of time before and after the mandatory IFRS adoption as well as economic cycles for Canada. These data are used to calculate various accounting quality measures and relevant control variables. Due to special regulations, disclosure requirements and concerned controversies on IFRS and consistent to prior studies (e.g. Hung 2001: Leuz et al. 2003), I exclude sample data from financial institutions (i.e. banks, real estate, personal credits, investments that belong to Standard Industrial Classification (SIC) codes from 6000 to 6999). In addition, to maintain data integrity and control for potential outlier effects, I winsorize all continuous variables (except for indicator/dummy variables) at the 1st and 99th percentiles.

Initially, I collect more than 19,758 firm-year observations from CompuStat North America database. After removing financial industry-related data, and only include companies if they consist of all required financial statement data for calculations of various continuous variables and proxies of Earnings Management. Also, I only include companies with more than 1 year data in my sample, because it is required to capture the data for calculating the variables of change in sales and change in accounts receivable for Modified Jones Model. After cleaning up the database for financial and EM variables calculations, as well as calculating the variables of changes in financial statement items, I have trimmed my sample size to 6,616 firm-year observations as my final sample data for further models buildup and data analysis.

Table 2 illustrates that Canadian sample break down by industry (using North America Industry Classification Codes). As shown, the total sample size has been mostly occupied by mining, quarrying, oil and gas extraction; and manufacturing industry (more than 65% of the total sample); which also represents that Canada relies on resources and industrial sectors in growing the economy.

<table>
<thead>
<tr>
<th>North American Industry Classification Code</th>
<th>NAIC code</th>
<th># of firm-year observations</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, forestry, fishing and hunting</td>
<td>11</td>
<td>32</td>
<td>0.48%</td>
</tr>
<tr>
<td>Mining, quarrying, and oil and gas extraction</td>
<td>21</td>
<td>2284</td>
<td>34.52%</td>
</tr>
<tr>
<td>Utilities</td>
<td>22</td>
<td>171</td>
<td>2.58%</td>
</tr>
<tr>
<td>Construction</td>
<td>23</td>
<td>119</td>
<td>1.80%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>31-33</td>
<td>2062</td>
<td>31.17%</td>
</tr>
<tr>
<td>Sector</td>
<td>Code</td>
<td>Annual</td>
<td>Yoy %</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>------</td>
<td>--------</td>
<td>-------</td>
</tr>
<tr>
<td>Wholesale trade</td>
<td>42</td>
<td>199</td>
<td>3.01%</td>
</tr>
<tr>
<td>Retail trade</td>
<td>44-45</td>
<td>274</td>
<td>4.14%</td>
</tr>
<tr>
<td>Transportation and warehousing</td>
<td>48-49</td>
<td>203</td>
<td>3.07%</td>
</tr>
<tr>
<td>Information and cultural industries</td>
<td>51</td>
<td>569</td>
<td>8.60%</td>
</tr>
<tr>
<td>Real estate and rental and leasing</td>
<td>53</td>
<td>56</td>
<td>0.85%</td>
</tr>
<tr>
<td>Professional, scientific and technical services</td>
<td>54</td>
<td>308</td>
<td>4.66%</td>
</tr>
<tr>
<td>Administrative and support, waste management and remediation services</td>
<td>56</td>
<td>126</td>
<td>1.90%</td>
</tr>
<tr>
<td>Educational services</td>
<td>61</td>
<td>15</td>
<td>0.23%</td>
</tr>
<tr>
<td>Health care and social assistance</td>
<td>62</td>
<td>44</td>
<td>0.67%</td>
</tr>
<tr>
<td>Arts, entertainment and recreation</td>
<td>71</td>
<td>56</td>
<td>0.85%</td>
</tr>
<tr>
<td>Accommodation and food services</td>
<td>72</td>
<td>63</td>
<td>0.95%</td>
</tr>
<tr>
<td>Other services</td>
<td>81</td>
<td>35</td>
<td>0.53%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>6616</strong></td>
<td>100.00%</td>
</tr>
</tbody>
</table>

3.2 Benchmark-sample
Since it is a single-country study, I follow the extant literature (e.g. Liang and Shan, 2013) that it is possible to measure any significant dissimilar effects of earnings quality and firm value between the pre- and post-IFRS adoption periods. Instead of using a matched-sample that used by the prior studies on voluntary adoption of IFRS (e.g. Barth et al., 2008), I follow the approach used by Christensen, Lee and Walker (2008) to use all firm-year observations in the pre-adopting period as the benchmark for the firms prior to their mandatorily adopting IFRS to compare the effects in the same firms in the post-adopting period in my single-country setting.

4. Research Models for Accounting Quality

4.1 Discretionary Accruals
The literature always quote the measurement of accruals quality as the metric of earnings quality (e.g. Liu and Sun, 2014, Choi, Lee and Park, 2013, Ahmed, Neel and Wang, 2010, Niu, 2005). In accounting-based earnings management, managers basically choose to manipulate accruals in order to manage the reported income (Dechow et al., 2010, Liu and Sun, 2013). While accruals are used by managers in normal accounting, the role of accruals can also be applied to overcome problems in measuring firm performance by cash flows (Dechow and Dichev, 2002).

Absolute value of Discretionary Accruals (DA) have been widely used in the literature to measure the general usage of earnings management practice by firms. Hence, the very first measurement for gauging the level of earnings quality is discretionary accruals calculated by the modified Jones model (Dechow, Sloan & Sweeney, 1995). After controlling for factors that influence firm performance (for instance, changes in revenue, value of property, plant and equipment, and cash flow from operations), the absolute discretionary accruals are estimated as a proxy for the extent of earnings management (Frankel, Johnson & Nelson, 2002, Haw, Hu, Hwang & Wu, 2004, Kim & Yi, 2006).

The modified Jones model, suggested by Dechow et al. (1995), is used to calculate the extent of earnings management. In the estimation period, the regression parameters, a0, a1, and a2, are estimated from the model below:
\[ \text{Accruals} = \alpha_0 + \alpha_1 \left( \frac{\Delta \text{Sales} - \Delta \text{AR}}{\text{TA}_{t-1}} \right) + \alpha_2 \left( \frac{\text{PP&E}}{\text{TA}_{t-1}} \right) + \epsilon \]

Where:
- The total accruals (Accruals) = difference between net income and cash flow from operations,
- \( \Delta \text{Sales} \) = the change in net sales, scaled by total assets (TA) in the year \( t-1 \)
- \( \Delta \text{AR} = \) the change in net accounts receivables, scaled by total assets (TA) in the year \( t-1 \)
- \( \text{PP&E} = \) the value of property, plant and equipment, scaled by total assets (TA) in the year \( t-1 \)

Then, each firm-year observation is regressed to estimate the respective coefficients (\( \alpha_0, \alpha_1 \) & \( \alpha_2 \)). From the estimated coefficients of alphas, the discretionary accruals (DA) are calculated as:

\[ \text{DA} = \text{Accruals} = \frac{\alpha_0}{\text{TA}_{t-1}} + \alpha_1 \left( \frac{\Delta \text{Sales} - \Delta \text{AR}}{\text{TA}_{t}} \right) + \alpha_2 \left( \frac{\text{PP&E}}{\text{TA}_{t-1}} \right) + \epsilon \]

4.1.1 Discretionary Accruals adjusted by ROA (DA-ROA)
Kothari, et al. (2005) suggests using the modified Jones model after introducing an additional independent variable, the current ROA, to control for the impact of firm performance on discretionary accruals. Under this model, total accruals are defined as follows:

\[ \text{Accruals} = \alpha_0 + \alpha_1 \left( \frac{\Delta \text{Sales} - \Delta \text{AR}}{\text{TA}_{t-1}} \right) + \alpha_2 \left( \frac{\text{PP&E}}{\text{TA}_{t-1}} \right) + \alpha_3 \frac{\text{ROA}}{\text{TA}_{t-1}} + \epsilon \]

Where
- \( \text{ROA} = \) net income scaled by total assets in year \( t-1 \).
- Other variables are identical to those for the modified Jones model described above.

When Canada adopts IFRS mandatorily since January 1, 2011, I examine if it has any effects on discretionary accruals used by managers. In my study, I intend to capture the impact of the mandatory adoption of IFRS on absolute discretionary accruals. If the adoption of IFRS led to less accrual-based earnings management or better earnings quality, then, there should be a negative and significant coefficient.

4.1.2 Positive & Negative Discretionary Accruals
In addition to “absolute” value of discretionary accruals, I follow some prior studies (e.g. Liu and Sun, 2014) to study the direction of accruals. Specifically, I estimate if firms following IFRS will have significant effect on income-increasing discretionary accruals (i.e., positive discretionary accruals) and income-decreasing discretionary accruals (i.e., negative discretionary accruals) as the dependent variable separately. If the IFRS adoption can constrain income-increasing (income-decreasing) earnings management, such coefficient is expected to be negative (positive) and significant.

4.2 Managing Earnings Towards Targets (METT)
Prior studies document empirical evidence that managers with opportunistic behavior are likely to engage in managing reported earnings toward small positive level in order to avoid negative earnings but most of them study for voluntary adoption of IFRS (Burgstahler & Dichev, 1997; Leuz et al., 2003; Tang et al., 2008). In this study, I examine Canada as the country requiring to mandatorily adopt IFRS effective January 1, 2011, therefore, different from the prior studies.
I directly measure the two proxies of earnings management towards a target by running the following logistic regression model:

\[ \text{TowardTargets (SPOS)} = \alpha + \beta_1 \text{POST} + \beta_2 \text{Growth} + \beta_3 \text{Eissue} + \beta_4 \text{Leverage} + \beta_5 \text{Dissue} + \beta_6 \text{Turnover} + \beta_7 \text{Size} + \beta_8 \text{OCF} + \beta_9 \text{Auditor} + \beta_{10} \text{Int’l Exposure} + \epsilon \]

Where SPOS is an indicator variable equals to one if firms have annual net incomes scaled by total assets between 0 and 0.01 in any year. POST is the dummy variable equals one for the adoption period (i.e. from 2011 to 2014) or zero otherwise.

For empirical results with significant positive coefficient on POST, it suggest that firms manage earnings toward small positive level “more” likely and frequently in the post-adoption period that what they did in the pre-adoption period. It implies that the accounting quality is lower following the IFRS adoption in Canada.

### 4.3 Timely Loss Recognition (TLR)

The extent document has abundant research documenting evidence that the timely recognition of larges losses is an attitude of firms exercising higher accounting quality (Ball et al., 2000; Lang et al., 2006; Ball & Shivkumar 2005, 2006; Barth et al., 2007, 2008). In the era of voluntary IFRS adoption, Ball et al. (2007, 2008), controlling for certain incentives factors, argue that those adopting firms demonstrate a significant level of timely recognition of losses. Even though Chen, Tang, Jiang and Lin (2009) study on mandatory IFRS adoption in the E.U. becomes a regulation to follow without the potential incentives to voluntarily do so, this study intends to investigate that if firms seriously adopt IFRS with more transparency, and better and more disclosures, the accounting quality should be improved. Thus, to measure the reporting incentives of adopting IFRS completely or not, I run the logistic regression to examine if firms in Canada have a more timely recognition of large losses in the post-IFRS period:

\[ \text{TimelyLosses (LENG)} = \alpha_0 + \alpha_1 \text{POST} + \alpha_2 \text{EMV} + \alpha_3 \text{Size} + \alpha_4 \text{SalesGrowth} + \alpha_5 \text{EISSUE} + \alpha_6 \text{Leverage} + \alpha_7 \text{DISSUE} + \alpha_8 \text{ROA} + \alpha_9 \text{SalesTurnover} + \alpha_{10} \text{Auditor} + \alpha_{11} \text{Int’l Exp} + \alpha_{12} \text{Industry} + \epsilon \]

Where: TimelyLosses = a dummy dichotomous variable to be 1 if a firm-year observation has net income scaled by total assets (i.e. ROA) less than -0.20, and 0 otherwise. The definitions of other variables are the same as for previously above-discussed equations. The more significant and negative coefficient in the POST will be interpreted as the lower likelihood of reporting large negative net income in the post-adoption period relative to the pre-adoption period.

### 4.4 Research Model for Firm value

The extant literature argue that given that there is a higher perceived quality of accounting standards than many local Canadian GAAP. On one hand, transparency and more and better disclosures on financial reports may greatly reduce the information asymmetry between managers and investors. On the other hand, IFRS principles may allow lots of rooms for managers to apply their professional judgements in financial reporting, which may also end up with a higher degree of asymmetric information. It makes it more difficult for shareholders to monitor managers. Managers who understand this advantage may be better able to abuse their discretion in IFRS financial reporting by managing the earnings numbers opportunistically.
Prior studies examine the relations between the extent of earnings management and firm value to further investigate whether earnings management is opportunistic or beneficial (Jiraporn, Miller, Yoon and Kim, 2006). The underlying theoretical argument is that if managers manage earnings for self-serving purposes, and not for the purpose of maximizing shareholders’ wealth, we should find an inverse relation between the degree of earnings management and firm value. In other words, firms where earnings management occurs to a greater (lesser) extent are expected to have lower (higher) firm value. On the other hand, if earnings management is, by and large, intended to improve earnings information, thereby, facilitating communication between management, on one side, and stockholders and the public, on the other side, we should observe a positive relation between the extent of earnings management and firm value. In this study, I use TOBIN-Q as the measure of firm value, which is defined as the ratio of the market value to replacement values of a firm’s assets (Lang & Stulz, 1994; Morck, Shleifer & Vishny, 1988; Yermack, 1996):

\[
\text{Tobin-Q} = \frac{\text{BV of TA} - \text{BV of CE} + \text{MV of CE}}{\text{BV of TA}}
\]

Where: \( \text{BV of TA} = \text{Book values of total assets} \), \( \text{BV of CE} = \text{Book values of common equity} \) & \( \text{MV of CE} = \text{Market value of common equity} \)

5. Empirical Results

5.1 Univariate Comparisons – Comprehensive Analysis

Table 3 presents a set of comprehensive comparison between the pre- and post IFRS adoption for many variables used in research models. As presented, there are significant increases in discretionary accruals – negative effect (DA-negative) and absolute value of discretionary accruals adjusted by ROA - negative (DA-ROA-negative) for the post-IFRS period relative to the pre-IFRS period, signifying that reported earnings following IFRS adoption for Canadian firms have been more conservative to have more income-reducing effects; which represents improvement in accounting quality in an univariate way. On the other hand, the average of Managed Earnings towards Targets (measure of SPOS) is reduced and such magnitude is still measured as significant (at p-level of 1% significance), which may shed the direction for firms managing earnings toward small positive level become less likely and less frequently in the post-adoption period relative to the pre-adoption period. However, there has been no significant decrease for the Time Loss Recognition (measure of LENG). For the firm-specific characteristics, Table 3 shows that there are significant increases in firm size, leverage, equity value, unqualified auditor opinion, capital expenditures, growth of sales and income; but also significant decreases in total sales turnover (but higher net income even it is insignificant) and asset utilization ratio.

In sum, these initial descriptive statistics results show that after the IFRS adoption, earnings management components appear to have mixed effects. However, the good news is that Canadian firms seem to report more conservatively with using more discretionary accruals – negative effects between the pre- and post-period. When the ratio of market-price-to-book-price is lowered substantially, firm value (proxied by Tobin-Q) has been reduced, but not significantly.
Table 3 - Absolute value of Discretionary Accruals adjusted by ROA (DA-ROA)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Total Period N=6618</th>
<th>Pre-Adoption N=3636</th>
<th>Post-Adoption N=2982</th>
<th>Mean</th>
<th>Median</th>
<th>Std. Dev.</th>
<th>Mean</th>
<th>Median</th>
<th>Std. Dev.</th>
<th>Mean Diff.</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Δ NI</td>
<td>-0.02395</td>
<td>0.0033</td>
<td>0.3981</td>
<td>-0.00085</td>
<td>-0.0006</td>
<td>0.4171</td>
<td>0.0231</td>
<td>**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Δ CFO</td>
<td>0.004606</td>
<td>0.0003</td>
<td>0.3891</td>
<td>0.002608</td>
<td>0.0032</td>
<td>0.19969</td>
<td>-0.001998</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CFO</td>
<td>0.0368</td>
<td>0.0721</td>
<td>0.4481</td>
<td>0.03145</td>
<td>0.0705</td>
<td>0.2386</td>
<td>-0.00535</td>
<td>***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACC</td>
<td>-0.10635</td>
<td>-0.06366</td>
<td>0.584377</td>
<td>-0.09615</td>
<td>-0.06614</td>
<td>0.261045</td>
<td>0.0102</td>
<td>***</td>
<td></td>
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</tr>
<tr>
<td>Size</td>
<td>1249.52</td>
<td>173.54</td>
<td>3526.19</td>
<td>1709.65</td>
<td>237.05</td>
<td>4294.24</td>
<td>460.13</td>
<td>***</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>NI</td>
<td>-0.0705</td>
<td>0.02</td>
<td>0.4136</td>
<td>-0.0657</td>
<td>0.0158</td>
<td>0.3707</td>
<td>0.0048</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Δ Sales</td>
<td>46.898</td>
<td>4.227</td>
<td>462.06</td>
<td>65.543</td>
<td>5.532</td>
<td>377.454</td>
<td>18.645</td>
<td>*</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>A Rec.</td>
<td>5.6481</td>
<td>0.29</td>
<td>82.263</td>
<td>8.5373</td>
<td>0.541</td>
<td>63.293</td>
<td>2.8892</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PPE</td>
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<td>0.8965</td>
<td>88.429</td>
<td>10.3533</td>
<td>0.9752</td>
<td>124.264</td>
<td>1.3309</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M/P</td>
<td>2.7768</td>
<td>1.6189</td>
<td>6.3975</td>
<td>2.7581</td>
<td>1.5224</td>
<td>7.7831</td>
<td>-0.0187</td>
<td>***</td>
<td></td>
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</tr>
<tr>
<td>SPOS</td>
<td>0.15421</td>
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<td>0.3612</td>
<td>0.1375</td>
<td>0</td>
<td>0.3444</td>
<td>-0.01671</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LENG</td>
<td>0.0398</td>
<td>0</td>
<td>0.1957</td>
<td>0.03857</td>
<td>0</td>
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<td>1.712</td>
<td>1.2475</td>
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<td>[DA]</td>
<td>0.1115</td>
<td>0.0599</td>
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<td>0.10603</td>
<td>0.057</td>
<td>0.2127</td>
<td>-0.00547</td>
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<td>0.0094</td>
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<td>0.0571</td>
<td>0.0099</td>
<td>0.1613</td>
<td>0.0007</td>
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<tr>
<td>DA-Negative</td>
<td>-0.05632</td>
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<td>0.1904</td>
<td>-0.0488</td>
<td>0</td>
<td>0.1406</td>
<td>0.00752</td>
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<td>[DA-ROA]</td>
<td>1.0828</td>
<td>1.0535</td>
<td>0.2469</td>
<td>1.0709</td>
<td>1.0521</td>
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<td>0.00208</td>
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<td>0.001117</td>
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<tr>
<td>DA-ROA-Negative</td>
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<td>0.2489</td>
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<td>-1.0519</td>
<td>0.2121</td>
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<td>0.4289</td>
<td>0.2175</td>
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<td>2.033</td>
<td>5.4945</td>
<td>5.4682</td>
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<td>Sales Turnover</td>
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<td>0.5988</td>
<td>1.2265</td>
<td>0.7608</td>
<td>0.5616</td>
<td>0.7017</td>
<td>-0.0901</td>
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<td>***</td>
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<tr>
<td>Big Auditor</td>
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<td>1</td>
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<td>CAPX</td>
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<td>0.0906</td>
<td>0.0499</td>
<td>0.1089</td>
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<td>*</td>
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<tr>
<td>R&amp;D Strategy</td>
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<td>7.4463</td>
<td>0.3107</td>
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<tr>
<td>Cost Control Strategy</td>
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<td>0.5987</td>
<td>1.2265</td>
<td>0.7608</td>
<td>0.5616</td>
<td>0.7017</td>
<td>-0.0901</td>
<td>***</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

***, ** and * denote significance of p-value at the level of 1%, 5% and 10% respectively (two-tailed tests)
Financial data as control and other variables:
Size: natural logarithm of total assets
ΔNI = Change in net income amount in 2 years, scaled by total assets
ΔCFO = Change in cash flow from operation in 2 years, scaled by total assets
CFO = Cash flow from operation scaled by total assets
ACC = Amount of accruals, which is equal to net income subtract cash flow from operating, scaled by total assets for the year
Size = Log amount of total assets for the year
Δ Sales = Change in sales amount in 2 years
Δ Rec. = Change in accounts receivable amount in 2 years
PPE = Amount of PPE book value scaled by sales
M/P = Ratio of market price to book value of price
SPOS = Managed Earnings towards Targets, where SPOS is an indicator variable equals to one if firms have annual net incomes scaled by total assets between 0 and 0.01 in any year.
LENG = Timely Losses = a dummy dichotomous variable to be 1 if a firm-year observation has net income scaled by total assets (i.e. ROA) less than -0.20, and 0 otherwise.
Tobin-Q = Construct for the proxy of firm value = (BV of TA – BV of CE + MV of CE)/BV of TA
|DA| = Absolute value of discretionary accruals
DA-Positive = Discretionary accruals with income increasing effect
DA-Negative = Discretionary accruals with income reducing effect
[DA] = Discretionary accruals adjusted by ROA in absolute value
DA-ROA-Positive = Discretionary accruals adjusted by ROA with income increasing effect
DA-ROA-Negative = Discretionary accruals adjusted by ROA with income reducing effect
Leverage = ratio of total debts divided by total assets
Equity Size = log of market value of equity as of year-end
Disissue = equals 1 if new issue of debts for the year Turn. = Sales turnover amount for the year
Use of big auditors: equals 1 if any firm-year observation uses big 4 auditors, otherwise 0
Auditor opinion: equals 1 if unqualified audit opinion is given, otherwise 0
CAPX = Amount of capital expenditure for the year scaled by total assets
R&D Strategy = R & D Intensity = Amount of R&D expenses for the year scaled by total sales
Cost Control Strategy = Ratio of Asset Utilization = Total Sales scaled by Total Assets for the year

5.2 Multiple Regression Analysis
The previous descriptive statistics present inconclusive bivariate results if there are improvements in earnings management and income smoothing after IFRS adoption is mandated in Canada. In order to test all hypotheses, it is essential to run regression models so that more insights about the magnitude of relationship between earnings management variables and IFRS adoption period, along with different firm-specific factors can be measured.

5.2.1 Discretionary Accruals
Absolute value of Discretionary Accruals (DA) have been widely used in the literature to measure the general usage of earnings management practice by firms. TABLE 4 model A shows that IFRS adoption effect has a negative coefficient with absolute value of DA, even though it is not significant. I further such test by following Liu and Sun (2013) to partition DA into positive (income-increasing effect) and negative (income-reducing effect), model B exhibits that IFRS adopting firms in the adoption period are positively associated with positive DA (coefficient = 0.14 at P=0.05 level of significance). It implies that IFRS adoption is able to limit such DA effect but not significantly (model A). Instead, when IFRS becomes mandatory in Canada, such a set of high quality standards does not constrain firms to use discretionary accruals in reported earnings upwardly. Also, firms with profitability are highly related to income-increasing accruals, followed by capital expenditure, leverage and new issues of both equity and debt. These results can be interpreted that distortion on earnings by income-increasing accruals has not been improved since the IFRS adoption period.
Regarding income-decreasing effects of accruals, model C of TABLE 4 displays that IFRS adoption has a similar but larger coefficient that that of model B. It suggest that IFRS adoption has a strong positive impact on negative DA (coefficient = 0.022 at p=1% level), suggesting that firms are using discretionary accruals to reduce reported earnings following the IFRS adoption. Compared to model B, however, Panel C shows that auditors’ unqualified opinion is effectively increasing the income-reducing effects from accruals, suggesting that after IFRS adoption, auditors are more conservative to disallow use of accruals for increasing earnings; but possibly relaxed with more income-reducing discretionary accruals used in the reported earnings. In terms of firm characteristics that related to discretionary accruals, Table 4 models A & B exhibit that large-sized firms, probably due to political cost issue, are less likely to use discretionary accruals.

These initial results highlight that overall after mandatory IFRS adoption period, in general, Canadian firms are engaged with more positive DA and at the same time more negative DA with IFRS adoption. Thus, more discretionary accruals are being manipulated to result in higher and lower amounts of reported earnings; and it means that the respective accounting quality is lower. Therefore, based upon the measure of DA, hypothesis H1 is not supported.

To measure if firms with equity and debt financing following the mandatory IFRS adoption period have any association with discretionary accruals, models B1 and C1 present some interesting results. Specifically, models B1 and C1 show in the whole sample period, effect from firms issuing both equity and debt is mainly attributable to both income-increasing and decreasing discretionary accruals. However, following the IFRS adoption period, firms issuing both equity and debt have significant increase in using discretionary accruals income-increasing effects (model B1). In addition, it also shows that the coefficient of equity-issuing effect is much larger than the debt-issuing effect (i.e. 0.022 vs. 0.001, at 1% p-level significance). It infers that even though IFRS adoption is mandated, the needs for equity financing is possibly the major motive for firms in using more discretionary accruals to enhance reported earnings in the capital markets. Thus, this initial result is consistent with hypothesis 2a.

<table>
<thead>
<tr>
<th>Table 4: Estimate the effects of Earnings Management from IFRS adoption &amp; other firm characteristics using Discretionary Accruals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variables</strong></td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Coefficients</strong></td>
</tr>
<tr>
<td>(Constant)</td>
</tr>
<tr>
<td>Size</td>
</tr>
<tr>
<td>Leverage</td>
</tr>
<tr>
<td>ROA</td>
</tr>
<tr>
<td>CAPX</td>
</tr>
<tr>
<td>CFO * POST</td>
</tr>
<tr>
<td>Price-to-Book * POST</td>
</tr>
<tr>
<td>IFRS Adopters</td>
</tr>
<tr>
<td>Post-IFRS</td>
</tr>
<tr>
<td>% Change in CE</td>
</tr>
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</table>
Table 4 (continued)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model B1: Positive DA</th>
<th></th>
<th>Model C1: Negative DA</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficients</td>
<td>t-statistics</td>
<td>Coefficients</td>
<td>t-statistics</td>
</tr>
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<td>(Constant)</td>
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<td>-0.053***</td>
<td>-5.504</td>
</tr>
<tr>
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<td>-16.998</td>
<td>0.000</td>
<td>-0.342</td>
</tr>
<tr>
<td>Leverage</td>
<td>0.019***</td>
<td>2.092</td>
<td>-0.003</td>
<td>-0.299</td>
</tr>
<tr>
<td>ROA</td>
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<td>-35.193</td>
</tr>
<tr>
<td>CAPX</td>
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<td>3.716</td>
<td>0.036***</td>
<td>8.264</td>
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<td>0.001</td>
<td>1.462</td>
</tr>
<tr>
<td>Int'l Business</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IFRS Adoption</td>
<td>-0.013***</td>
<td>-2.397</td>
<td>-0.011*</td>
<td>-1.874</td>
</tr>
<tr>
<td>Post-IFRS</td>
<td><strong>0.009</strong></td>
<td><strong>1.729</strong></td>
<td><strong>0.014</strong></td>
<td><strong>2.446</strong></td>
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<tr>
<td>% Change in TL</td>
<td>0.002***</td>
<td>6.497</td>
<td>-0.002***</td>
<td>-5.293</td>
</tr>
<tr>
<td>% Change in CE</td>
<td>0.002***</td>
<td>2.822</td>
<td>-0.005***</td>
<td>-7.083</td>
</tr>
<tr>
<td>% Change in CE*POST</td>
<td><strong>0.022</strong>*</td>
<td><strong>7.921</strong></td>
<td>0.004</td>
<td>1.383</td>
</tr>
<tr>
<td>% Change in TL*POST</td>
<td><strong>0.001</strong></td>
<td><strong>1.697</strong></td>
<td>0.000</td>
<td>0.557</td>
</tr>
<tr>
<td>Industry effects</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># of Observations</td>
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<td>2988</td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
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<td>0.201</td>
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<tr>
<td>Durbin Watson</td>
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<td>1.774</td>
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<td>58.675***</td>
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<tr>
<td>VIF for each variable</td>
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<td>Less than 10</td>
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</tr>
<tr>
<td>Means of residual</td>
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<td>0</td>
<td></td>
</tr>
</tbody>
</table>

***, ** and * denote significance of p-value at the level of 1%, 5% and 10% respectively (two-tailed tests)
5.2.2 Discretionary Accruals adjusted by ROA (DA-ROA)

In order to control for performance factors, I follow some prior studies (e.g. Choi, Lee & Park, 2013) to construct the ROA-adjusted discretionary accruals (DA-ROA) and to test if mandatory IFRS adoption associates with firm-specific factors have significant impacts. When IFRS adoption in Table 4 model A is negatively related with DA insignificantly, Table 5 model A shows that it has a negative but statistically significant coefficient with DA-ROA. Similar to Table 4, firms with more operating cash flows in the post IFRS period in Table 5 model A express significant and positive coefficients with DA-ROA, and it is mainly come from substantially less negative DA-ROA.

Table 5 models B and C differ from Table 4 with insignificant result with DA-ROA positive and significant positive effect on income-reducing DA-ROA (p=1% level significance). In addition, the increase in issuing equities and debts have shown significant effects on DA-ROA, which is originated from less income-reducing DA-ROA. It is consistent with the results from Table 5 that profitability and equity/debt financing are the major motives for Canadian firms to exercise discretionary accruals, even after IFRS has been adopted mandatorily. Hence, when DA-ROA is measured, it is consistent with hypothesis 1 that DA-ROA is negatively associated with IFRS adoption.

Taken the results of DA and DA-ROA together, there are mixed results relating to IFRS adoption. DA is increased but DA-ROA is reduced. However, an increase in using discretionary accruals is not associated with reduced earnings management.

In addition, model B shows that when firm value (proxied by Tobin-Q) in the post-period is controlled, it have significant negative coefficient on positive DA-ROA and negative coefficient effect on negative DA-ROA. It can be interpreted that firms with high values are well aware of the monitoring functions performed by strong legal enforcement and capital market regulations in Canada, along with the IFRS adoption. As a result, these firms are not associated with significant increase in both income-increasing and -reducing DA-ROA effects.

Overall, Table 5 is contradicted with Table 4 that IFRS adoption brings higher accounting quality when it presents significant effect on using less DA-ROA and mainly belongs to income-reducing DA-ROA measure. Similar with Table 4 results, firms with issuing both equity and debt continue to be highly related with DA-ROA, but such effect comes from less income-reducing DA-ROA. As a result, it further reinforces that hypothesis 2a is highly supported.
Table 5: Estimate the effects of Earnings Management from IFRS adoption & other firm characteristics using Discretionary Accruals–ROA

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model A: DA–ROA</th>
<th>Model B: Positive DA–ROA</th>
<th>Model C: Negative DA–ROA</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
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<td>-1.117***</td>
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<td>-0.001***</td>
<td>-0.002</td>
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<tr>
<td>Leverage</td>
<td>0.033***</td>
<td>0.003</td>
<td>-0.033***</td>
</tr>
<tr>
<td>ROA</td>
<td>-0.326***</td>
<td>1.016***</td>
<td>0.046***</td>
</tr>
<tr>
<td>CAPX</td>
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<td>0.005***</td>
<td>0.047***</td>
</tr>
<tr>
<td>CFO * POST</td>
<td>0.397***</td>
<td>-0.043***</td>
<td>-0.454***</td>
</tr>
<tr>
<td>Price-to-Book * POST</td>
<td>0.001***</td>
<td>-0.001</td>
<td>-0.001</td>
</tr>
<tr>
<td>Post-IFRS</td>
<td>-0.041***</td>
<td>-0.003</td>
<td>0.052***</td>
</tr>
<tr>
<td>% Change in CE, t</td>
<td>0.007***</td>
<td>0.000</td>
<td>-0.006***</td>
</tr>
<tr>
<td>% Change in TL, t</td>
<td>0.005***</td>
<td>0.000</td>
<td>-0.005**</td>
</tr>
<tr>
<td>Unqualified Audit Opinion</td>
<td>-0.047***</td>
<td>-0.004*</td>
<td>0.044***</td>
</tr>
<tr>
<td>Tobin-Q*POST</td>
<td>-0.002**</td>
<td>-2.456</td>
<td>-0.007**</td>
</tr>
<tr>
<td>Industry effects</td>
<td>Included</td>
<td>Included</td>
<td>Included</td>
</tr>
<tr>
<td># of Observations</td>
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<td>R²</td>
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<td>0.304</td>
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<td>Durbin Watson ANOVA F-Test</td>
<td>1.848</td>
<td>1.990</td>
<td>1.828</td>
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<td>Tolerance for each variable</td>
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<td>More than 0.1</td>
<td>More than 0.1</td>
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<td>VIF for each variable</td>
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<td>Less than 10</td>
<td>Less than 10</td>
</tr>
<tr>
<td>Means of residual</td>
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<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

***, ** and * denote significance of p-value at the level of 1%, 5% and 10% respectively (two-tailed tests)

Besides equity and debt issuance, following some prior studies, I test hypothesis H2b to examine if firms’ strategic directions can be the motive to associate with different level of Earnings Management following IFRS adoption. In the following Table 6, the findings document that firms conducting R & D (cost control) strategy has significant negative (positive) effect on employing more absolute value of discretionary accruals – ROA. It suggests that innovation-strategy firms experience higher accounting quality relative to their counterparts using cost-control-strategy. Meanwhile, IFRS adoption has significant and negative impact. **Thus, hypothesis 2b is highly supported.**

Taken together, it is evident that both equity-issuance and different strategic directions of firms have systematically variation effects on earnings quality along with IFRS adoption.
Table 6: To examine if strategic direction is related with earnings management following IFRS adoption

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model A: DA</th>
<th>Model B:</th>
<th>DA-ROA</th>
<th>Coefficients</th>
<th>t-statistics</th>
<th>Coefficients</th>
<th>t-statistics</th>
</tr>
</thead>
<tbody>
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<td>(Constant)</td>
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<td>107.245</td>
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<tr>
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<td>ROE</td>
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<td>3.912</td>
<td>0.005***</td>
<td>11.178</td>
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<tr>
<td>Big auditor</td>
<td>-0.023***</td>
<td>-3.157</td>
<td>0.011</td>
<td>1.491</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IFRS adopters</td>
<td>-0.001</td>
<td>-3.157</td>
<td>0.016*</td>
<td>1.95</td>
<td></td>
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</tr>
<tr>
<td>Post-IFRS</td>
<td>-0.009</td>
<td>-1.102</td>
<td>-0.038***</td>
<td>-4.406</td>
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</tr>
<tr>
<td>Int’l exposure</td>
<td>0.004</td>
<td>0.378</td>
<td>-0.011</td>
<td>-1.057</td>
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<td></td>
</tr>
<tr>
<td>R &amp; D</td>
<td>-0.001</td>
<td>-1.503</td>
<td>-0.003***</td>
<td>-3.478</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Cost control</td>
<td>0.007</td>
<td>1.274</td>
<td>0.018***</td>
<td>2.925</td>
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<td>Industry effects</td>
<td>Included</td>
<td>Included</td>
<td>Included</td>
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</tr>
<tr>
<td># of Observations</td>
<td>6618</td>
<td>6618</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>0.116</td>
<td>0.207</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Durbin Watson</td>
<td>1.797</td>
<td>1.843</td>
<td></td>
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</tr>
<tr>
<td>ANOVA F-Test</td>
<td>33.128***</td>
<td></td>
<td>67.535***</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Tolerance for each variable</td>
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<td>More than 0.1</td>
<td></td>
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</tr>
<tr>
<td>VIF for each variable</td>
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<td>Less than 10</td>
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<tr>
<td>Means of residual</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

***, ** and * denote significance of p-value at the level of 1%, 5% and 10% respectively (two-tailed tests)

5.3 Managing Earnings Towards Targets - METT (Logistic regression results)

Crafted managers may also adopt another type of earnings management practice to engage in managing reported earnings toward small positive level in order to avoid negative earnings. Table 8 Panel A reveals that IFRS adoption (with a negative coefficient) reduces the likelihood of firms in managing their earnings toward targets. Apparently, this result is also in agreement with hypothesis 1b.

Table 7 shows that even though Canada requires CEO and CFO to certify the financial statements and it helps reducing the tendency of managing earnings toward targets, it is not a significant factor. Moreover, consistent to the literature that managers facing large leverage have debt covenants to comply will be very likely motivated to managing the earnings toward targets to avoid any potential non-compliance issues (coefficient = 1.224 at p=0.1% level). Also, large cash flows from operations will motivate firms to use such accruals in managing targets.

When Tobin-Q is involved with managing earnings toward targets in the model, panel B of Table 7 shows that IFRS adoption period following 2011 January becomes a major and positively effect for managers to manage earnings, unless firms with large valuation in the capital market (with Tobin-Q’s significant and positive coefficient). The results suggest that the efficacy of mandatorily adopting a set of high quality of accounting standards in minimizing managers’ opportunistic behavior to manage earnings to targets is conditional to those firms with large growth valuation only. IFRS adoption (Tobin-Q in the post-adoption period)
continues to add (reduce) the likelihood of managing earnings toward targets. In addition, for firms to engage in different strategic directions, panel C of Table 7 show that firms engaging in cost control strategy are associated with more likelihood that managers will manage the earnings to their targets (significant at p=5% level). On the other hand, the more innovative strategy (i.e. higher R&D intensity) the firms are, the less likely in managing earnings toward targets, even though not in significant level. As a result, hypothesis 2b is supported when cost control (innovative) strategic oriented firms are associated with more (less) earnings management along with IFRS adoption.

The results suggest that the outcome of accounting quality is also contingent to IFRS adoption, firm valuation and different strategic directions.

Table 7: Estimate the effects of Income Smoothing from IFRS adoption & other firm characteristics using Managed Earnings Towards (Small Profit) Target (Logistic regression models)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model A:</th>
<th>Model B:</th>
<th>Model C:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>-3.284***</td>
<td>-3.328***</td>
<td>-3.018***</td>
</tr>
<tr>
<td>Equity size</td>
<td>-0.021</td>
<td>0.018</td>
<td>0.029</td>
</tr>
<tr>
<td>Leverage</td>
<td>1.224***</td>
<td>1.205***</td>
<td>1.157***</td>
</tr>
<tr>
<td>CEO Certified</td>
<td>-0.358</td>
<td>-0.329</td>
<td>0.481</td>
</tr>
<tr>
<td>Sales Growth</td>
<td>0.000</td>
<td>0.000</td>
<td>0.021</td>
</tr>
<tr>
<td>Sales Turnover</td>
<td>-0.477***</td>
<td>-0.451***</td>
<td>-0.722***</td>
</tr>
<tr>
<td>CFO</td>
<td>0.615***</td>
<td>0.576***</td>
<td>0.749***</td>
</tr>
<tr>
<td>Big Audit firm</td>
<td>-0.137</td>
<td>0.230</td>
<td>1.504</td>
</tr>
<tr>
<td>Post-IFRS</td>
<td>-0.113</td>
<td>0.696</td>
<td>0.665**</td>
</tr>
<tr>
<td>Post*Tobin-Q</td>
<td>-0.784***</td>
<td>14.244</td>
<td>0.732**</td>
</tr>
<tr>
<td>Cost Control Strategy</td>
<td></td>
<td></td>
<td>1.492**</td>
</tr>
<tr>
<td>% Change in CE, t</td>
<td>-0.035</td>
<td>0.497</td>
<td>0.121</td>
</tr>
<tr>
<td>% Change in TL, t</td>
<td>0.004</td>
<td>0.384</td>
<td>0.272</td>
</tr>
<tr>
<td>Unqualified Audit Opinion</td>
<td>0.663***</td>
<td>0.622***</td>
<td>0.650***</td>
</tr>
<tr>
<td>Cdn Exchange</td>
<td>0.656***</td>
<td>0.665***</td>
<td>0.621***</td>
</tr>
<tr>
<td>Industry effects</td>
<td>Included</td>
<td>Included</td>
<td>Included</td>
</tr>
<tr>
<td># of Observations</td>
<td>6618</td>
<td>6618</td>
<td>6618</td>
</tr>
<tr>
<td>Nagelkerke R²</td>
<td>0.041</td>
<td>0.053</td>
<td>0.062</td>
</tr>
<tr>
<td>Cox &amp; Snell R²</td>
<td>0.012</td>
<td>0.015</td>
<td>0.017</td>
</tr>
</tbody>
</table>

Note:
This table presents Logistic regressions where the dependent variable is Reported Small Positive Income (SPOS) which equals 1 if NI (scaled by total assets) is between 0.0 and 0.01, and 0 otherwise. Post equals 1 if the firm-year observations fall into mandatory IFRS adoption period (i.e. 2011 and after) and 0 otherwise. All other variables are defined as per Table 3. I include industry fixed effects and Wald statistics in parentheses. ***, ** and * denote significance of p-value at the level of 1%, 5% and 10% respectively (two-tailed tests)
5.4 Timely Loss Recognition (Logistic regression results)

When timely recognition of large losses is an attitude of firms exercising higher accounting quality (Ball et al., 2000; Lang et al., 2006; Ball & Shivkumar 2005, 2006; Barth et al., 2007, 2008) I follow prior studies to adopt the dummy dichotomous variable to be 1 if a firm-year observation has net income scaled by total assets less than -0.20, and 0 otherwise. Using logistic regression models, Table 9 exhibits multivariate data analysis in different perspectives. Table 8 Model A shows that IFRS adopters have negative and significant effects on large loss recognition (coefficient = -0.310 at p=0.05 level) on timely large loss recognition. It suggests that even though there are strong institutions to enforcing a set of new accounting standards that requires more transparency, it operates complementarily with IFRS adoption that results in firms are less likely to recognize their large losses on a timely basis relative to the pre-adoption period. **Hence, hypothesis 1b is not supported.**

Overall, these results suggest that, on average, mandatory IFRS adoption does NOT result in a higher accounting quality for firms to recognize their losses in a timely basis. However, model B and model C of Table 8 illustrate that under certain conditions, some firms demonstrate significant effects on loss recognition following IFRS adoption.

Specifically, when firm-value variable (proxied by Tobin-Q) is included in model B of Table 8, it shows a significant positive relation with large loss recognition. When managers, on one hand, strive very hard to increase firm values in the capital markets, on the other hand, managers are associated with more likelihood to recognize large losses more frequently in the post-adopting period they do in the pre-adopting period. However, for all models A, B and C, I find that issuing equities have strong and negative effects (at p=1% level significance) to reduce the likelihood for managers to recognize the losses at a timely basis. It suggests that the more equities firms issue, the more unwilling firms to recognize their losses without delay. It signals that the accounting quality is reduced. Accordingly, **hypothesis 2a is in agreement again.**

Also, to continue testing on hypothesis 2b for firms engaging in cost control strategy vs. innovative strategy, Table 8 model C shows that these two distinct strategies behave differently in large loss recognition relative to managed earnings toward target. With its significant and negative coefficient in the model, cost control strategy seems to discourage managers from timely recognizing large losses in their earnings reports. It results in lower accounting quality. It is probably because managers are trying to reduce the total operating expenses and improve the losses outcomes; which may lead to temptations of not recognizing large losses timely. On the other hand, with a significant positive coefficient, innovative strategy, it is possible that accounting standards require R&D to expense in income statements unless firms can fulfill several conditions, then it is justified to be capitalized. Therefore, managers have to incur large losses when they happen, which lead to higher accounting quality. **As a result, innovative firms recognize losses at a more timely fashion which results in higher quality. Thus, hypothesis 2b is supported.**
Table 8: Estimate the effects of Income Smoothing from IFRS adoption & other firm characteristics using Timely Loss Recognition (Logistic regression models)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficients</th>
<th>Wald-statistics</th>
<th>Coefficients</th>
<th>Wald-statistics</th>
<th>Coefficients</th>
<th>Wald-statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>1.150*</td>
<td>4.576</td>
<td>1.195**</td>
<td>4.981</td>
<td>-1.531**</td>
<td>5.113</td>
</tr>
<tr>
<td>Equity size</td>
<td>-0.476***</td>
<td>245.825</td>
<td>-0.502***</td>
<td>261.092</td>
<td>-0.515***</td>
<td>266.233</td>
</tr>
<tr>
<td>Leverage</td>
<td>0.398*</td>
<td>3.786</td>
<td>0.428**</td>
<td>4.368</td>
<td>3.512**</td>
<td>6.068</td>
</tr>
<tr>
<td>Sales Growth</td>
<td>0.000</td>
<td>0.017</td>
<td>0.000</td>
<td>0.021</td>
<td>1.000</td>
<td>0.018</td>
</tr>
<tr>
<td>Sales Turnover</td>
<td>-0.116**</td>
<td>6.069</td>
<td>-0.116***</td>
<td>6.268</td>
<td>-0.048</td>
<td>0.636</td>
</tr>
<tr>
<td>CFO</td>
<td>-6.527***</td>
<td>469.056</td>
<td>-6.280***</td>
<td>430.828</td>
<td>-5.812***</td>
<td>332.308</td>
</tr>
<tr>
<td>Big Audit firm</td>
<td>0.315***</td>
<td>7.829</td>
<td>0.394***</td>
<td>11.908</td>
<td>1.385***</td>
<td>11.218</td>
</tr>
<tr>
<td>Post-IFRS</td>
<td>-0.310**</td>
<td>5.157</td>
<td>-0.761***</td>
<td>21.660</td>
<td>-0.509***</td>
<td>10.994</td>
</tr>
<tr>
<td>IFRS Adopters</td>
<td>-0.066</td>
<td>0.196</td>
<td>0.016</td>
<td>0.011</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post*Tobin-Q</td>
<td></td>
<td></td>
<td>0.239***</td>
<td>26.849</td>
<td>-0.232***</td>
<td>25.350</td>
</tr>
<tr>
<td>Cost Control Strategy</td>
<td></td>
<td></td>
<td>-0.303***</td>
<td>5.723</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R&amp;D Strategy</td>
<td></td>
<td></td>
<td>1.196***</td>
<td>8.977</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Change in CE, t</td>
<td>-0.079***</td>
<td>4.719</td>
<td>-0.111***</td>
<td>7.665</td>
<td>-0.120***</td>
<td>8.118</td>
</tr>
<tr>
<td>% Change in TL, t</td>
<td>-0.034*</td>
<td>2.756</td>
<td>-0.032</td>
<td>2.440</td>
<td>-0.031</td>
<td>2.250</td>
</tr>
<tr>
<td>Unqualified Audit Opinion</td>
<td>-0.734***</td>
<td>35.189</td>
<td>-0.746***</td>
<td>35.656</td>
<td>-0.736***</td>
<td>34.323</td>
</tr>
<tr>
<td>Cdn Exchange</td>
<td>-0.551***</td>
<td>16.500</td>
<td>-0.568***</td>
<td>17.391</td>
<td>-0.558***</td>
<td>16.669</td>
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<tr>
<td>% of Observations</td>
<td>6618</td>
<td>6618</td>
<td>6618</td>
<td>6618</td>
<td>6618</td>
<td>6618</td>
</tr>
<tr>
<td>Nagelkerke R²</td>
<td>0.568</td>
<td>0.492</td>
<td>0.499</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cox &amp; Snell R²</td>
<td>0.321</td>
<td>0.279</td>
<td>1.282</td>
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<td></td>
</tr>
</tbody>
</table>

Taken together the results from Table 7 and 8, I document mixed evidence between use of strategy and level of income smoothing:

**Summary of Table 7 and 8**

<table>
<thead>
<tr>
<th>Strategic-focus</th>
<th>Managed Earnings Towards Target (METT)</th>
<th>Timely Loss Recognition (TLR)</th>
<th>significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>R &amp; D strategy</td>
<td>Less</td>
<td>More</td>
<td>Yes</td>
</tr>
<tr>
<td>Cost control strategy</td>
<td>More</td>
<td>Less</td>
<td>Yes</td>
</tr>
</tbody>
</table>
5.5 Effects of IFRS Adoption and Accounting Quality on Firm Value

Before running the regression models to test if IFRS adoption and accounting quality have association with firm value, I partition all firm-year observations by higher (lower) than median of Tobin-Q value as high (low) level of firm value, and examine their levels on earnings quality. As indicated in Table 9A, firms with high value tend to have more accruals and discretionary accruals, but less discretionary accruals-ROA. In addition, high-valued firms appear to be smaller in size, less levered, less profitable but with more capital spending. Also, higher equity value with much higher market price-to-book ratio are important but sales growth and use of big audit firms are not their major concerns.

Table 9A: Average accounting quality by partitioning high- and low-firm value

<table>
<thead>
<tr>
<th></th>
<th>High TOBIN-Q</th>
<th>Low TOBIN-Q</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tobin-Q</td>
<td>3.0095</td>
<td>0.9590</td>
</tr>
<tr>
<td>Size</td>
<td>4.9697</td>
<td>5.3586</td>
</tr>
<tr>
<td>Leverage</td>
<td>0.4014</td>
<td>0.4367</td>
</tr>
<tr>
<td>ROA</td>
<td>-0.1161</td>
<td>-0.0529</td>
</tr>
<tr>
<td>[Accruals]</td>
<td>100.552</td>
<td>78.664</td>
</tr>
<tr>
<td>[Discretionary Accruals]</td>
<td>0.0938</td>
<td>0.0903</td>
</tr>
<tr>
<td>[Discretionary Accruals, ROA]</td>
<td>0.8348</td>
<td>0.9270</td>
</tr>
<tr>
<td>Equity Value</td>
<td>5.5460</td>
<td>4.4938</td>
</tr>
<tr>
<td>Big Auditor</td>
<td>0.7903</td>
<td>0.8315</td>
</tr>
<tr>
<td>Sales Growth</td>
<td>1.2432</td>
<td>2.7285</td>
</tr>
<tr>
<td>Price-Book/share</td>
<td>5.3356</td>
<td>1.0422</td>
</tr>
</tbody>
</table>

In order to understand if firm value have been influenced by IFRS adoption and their respective accounting quality, Table 9B reveals that IFRS adopters have significant negative effects on firm value when both discretionary accruals and discretionary accruals-ROA included in models A and B. However, following IFRS adoption period, firm value has been enhanced significantly. It suggest that IFRS adoption to Canadian firms probably creates uncertainties about the firm value; until that capital markets appreciate IFRS adoption when it was actually implemented after January 1, 2011. On the other hand, both uses of accruals and discretionary accruals have a highly positive coefficient (p=1% level significance) that relates with Tobin-Q in model A, but discretionary accruals – ROA have an insignificant negative association in model B. It can be inferred that firms striving for high value may be involved with lower earnings quality. In sum, it is documented that even though firms with high value are associated with the positive effect following IFRS adoption, such higher firm value is also related to a significant increase in earnings management. It implies that since IFRS adoption begins, firms striving to achieve higher values are also involved with using discretionary accruals to manipulate their reported earnings.

In sum, even though IFRS adoption is positively related to firm value, accounting quality is lower (when DA is also positively related with Tobin-Q). As a result, it is not consistent to fully endorse hypothesis 3.
Table 9B: To examine the effects of IFRS adoption and accounting quality on firm value

<table>
<thead>
<tr>
<th>Variables</th>
<th>Model A: Tobin-Q</th>
<th></th>
<th>Model B: Tobin-Q</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficients</td>
<td>t-statistics</td>
<td>Coefficients</td>
<td>t-statistics</td>
</tr>
<tr>
<td>(Constant)</td>
<td>2.164***</td>
<td>13.240</td>
<td>2.407***</td>
<td>9.276</td>
</tr>
<tr>
<td>Size</td>
<td>-0.093***</td>
<td>-7.703</td>
<td>-0.099***</td>
<td>-7.396</td>
</tr>
<tr>
<td>Leverage</td>
<td>-0.523***</td>
<td>-4.549</td>
<td>-0.516***</td>
<td>-4.485</td>
</tr>
<tr>
<td>ROA</td>
<td>-1.480***</td>
<td>-18.848</td>
<td>-1.508***</td>
<td>-19.144</td>
</tr>
<tr>
<td>ROE</td>
<td></td>
<td></td>
<td>0.040***</td>
<td>3.198</td>
</tr>
<tr>
<td>CAPX</td>
<td>0.116</td>
<td>0.768</td>
<td>0.116</td>
<td>0.765</td>
</tr>
<tr>
<td>% Change in CE</td>
<td>0.085***</td>
<td>10.968</td>
<td>0.088***</td>
<td>11.309</td>
</tr>
<tr>
<td>% Change in TL</td>
<td>-0.004</td>
<td>-1.234</td>
<td>-0.003</td>
<td>-0.965</td>
</tr>
<tr>
<td>Big audit</td>
<td>-0.039</td>
<td>-0.600</td>
<td>-0.050</td>
<td>-0.765</td>
</tr>
<tr>
<td>IFRS adopters</td>
<td>-0.249***</td>
<td>-3.573</td>
<td>-0.248***</td>
<td>-3.546</td>
</tr>
<tr>
<td>POST</td>
<td>0.180***</td>
<td>2.808</td>
<td>0.180***</td>
<td>2.794</td>
</tr>
<tr>
<td>DA</td>
<td>0.349***</td>
<td>3.032</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DA-ROA</td>
<td></td>
<td>-0.175</td>
<td>0.469</td>
<td></td>
</tr>
<tr>
<td>Accruals</td>
<td>0.255***</td>
<td>2.381</td>
<td>0.035</td>
<td>0.154</td>
</tr>
<tr>
<td>Industry effects</td>
<td>Included</td>
<td></td>
<td>Included</td>
<td></td>
</tr>
<tr>
<td># of Observations</td>
<td>6618</td>
<td></td>
<td>6618</td>
<td></td>
</tr>
<tr>
<td>R²</td>
<td>0.143</td>
<td></td>
<td>0.146</td>
<td></td>
</tr>
<tr>
<td>Durbin Watson</td>
<td>1.999</td>
<td></td>
<td>1.990</td>
<td></td>
</tr>
<tr>
<td>ANOVA F-Test</td>
<td>39.133***</td>
<td></td>
<td>38.783***</td>
<td></td>
</tr>
<tr>
<td>Tolerance for each variable</td>
<td>More than 0.1</td>
<td></td>
<td>More than 0.1</td>
<td></td>
</tr>
<tr>
<td>VIF for each variable</td>
<td>Less than 10</td>
<td></td>
<td>Less than 10</td>
<td></td>
</tr>
<tr>
<td>Means of residual</td>
<td>0</td>
<td></td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

In sum, the regression test results indicate that in general, mandatory IFRS adoption in Canada per se provides a set of mixed results for accounting quality. While discretionary accruals are still high, discretionary accruals-ROA presents significant improvements. Also, the good news is that Canadian managers appear to have lower tendency to manipulate earnings towards target. However, accounting conservatism is not enhanced by IFRS adoption since managers also don’t show any improvement in recognizing losses timely. On the other hand, earnings management motives (EMM) seem to be a major factor to systematically differ in earnings quality, even after IFRS is adopted. Parallel to the literature, issuing equities continue to motivate managers to use more discretionary accruals and discretionary accruals-ROA; and this definitely lead to reduced accounting quality. In addition to issuing equities, I document consistent evidence from various regression models that different strategic focus also associates with firms’ variation in accounting quality. Specifically, defender (cost-control) vs. prospector (innovation) strategies are highly related with lower (higher) earnings quality. Finally, firm values have been increased with IFRS adoption, but at the expense of lower accounting quality.
Table 10: Summary of Test Results on Hypotheses 1 to 3 following IFRS Adoption

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Table 4: DA</th>
<th>Table 5: DA-ROA</th>
<th>Table 6: Strategies on DA-ROA</th>
<th>Table 7: METT</th>
<th>Table 8: TLR</th>
<th>Table 9B</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: DA is lowered</td>
<td>Not supported</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1: DA-ROA is lowered</td>
<td></td>
<td>Supported</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1: METT is lowered</td>
<td></td>
<td></td>
<td>Supported</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1: TLR is lowered</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Not supported</td>
</tr>
<tr>
<td>H2a: Eissue has lower acctg. quality</td>
<td>Supported</td>
<td>Supported</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H2b: Innovation has higher acctg. quality</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H2b: Cost control has lower acctg. quality</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td>Supported</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H3: Firm value is higher when accounting quality is higher</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Not supported</td>
</tr>
</tbody>
</table>

6. Conclusions, caveats and suggested future research

In this study, I conjecture that accounting quality has been improved by mandatory IFRS adoption in a market-based economy such as Canada where there are strong and well-established legal enforcement, capital markets and investor protections. In addition to such solid macro-institutions and principles-based Canadian GAAP that are proved to deter managers from crafting and manipulating reported earnings, can IFRS adoption, that perceived to be of high quality, add values to reducing earnings management for Canada is still an open question.

By using more measures of accounting quality proxies, discretionary accruals (absolute, modified with ROA and positive-and-negative signed). Also, managing-earnings-toward-target, and small loss recognition have been calculated into separate research models in order to capture the overall evaluation of accounting quality change. These metrics have been estimated and compared between the pre- and post-adopting period.

Empirical results show that there are positive even mixed initial results. Although discretionary accruals (DA) do not have an improvement, discretionary-accruals adjusted by ROA (DA-ROA) is reduced, implying a better accounting quality. Also, managers are more conservative to reduce their practice to managing earnings towards targets, but not timely enough to recognize losses.

In addition to the earnings quality in relation to accounting standards, I also study if firms issuing new equities and strategic difference following IFRS adoption are also associated with earnings quality in different level. As expected, all regression models present consistent results that prospector firms with innovation strategy tend to have higher accounting quality than those of defender firms with cost control strategy.
In addition to accounting quality, I also compare if firm value differs systematically with changes in accounting quality following IFRS adoption. Specifically, I document evidence that firm value has been increased after IFRS adoption. However, it is possible that this association comes at the expense of lower accounting quality.

Overall, those empirical results support my conjectures that in strong institutions where legal enforcement and investor protection are well established, accounting quality is high. With IFRS adoption, accounting quality has been partly improved. However, we should not ignore that firms are still subject to their underlying motives to manage their earnings, especially for issuing equities and engaging with innovation strategy.

My study sheds some lights into the extant literature that IFRS adoption per se is not necessarily the major player to enhance accounting quality. Firm-specific motivation for the equity-financing and strategic directions cannot be ignored. Further research is highly encouraged to examine this direction in more diverse measurement metrics with cross country sample so that more insight can be explored systematically.

In terms of caveats, there are a few shortcomings for this research study. First, as mentioned, while IFRS adoption requires more detail disclosures than that of Canadian GAAP, especially on financial risks (IFRS 7). However, due to the controversial and complex issues in IFRS applications, the scope of sample size excludes financial, investments and real estate industries. As a result, such differential effects cannot be captured in my multivariate analysis. Future studies maybe worth including financial sectors in an attempt to investigate the potential impacts of IFRS adoption. In addition, one of the major shifts from Canadian GAAP to IFRS adoption is the relatively more extensive use of fair value accounting, instead of historical cost accounting principle (Deloitte, 2009). Such requirement necessitates even more professional judgements from managers who apply fair values in reporting economic realities in such areas as capital lease accounting, hedge accounting and revenue recognition criteria (Blancheete, 2011). Thus, future research may need to focus on the link between fair value accounting and earnings management practice.
REFERENCES


Our study is based on a rapid growth of the Mid-tier audit firms in Indonesia recently. Is audit quality of Mid-tier firms equal to Big 4 firms? Audit quality is measured by the tendency of the Big 4 and Mid-tier firms to issue going-concern opinion, and by the reporting accuracy of the going-concern opinion issued. By using 1,057 firm-year observations from 2004-2011, we found evidence that the Big 4 firms have a lower tendency to issue going-concern opinion than the Mid-tier firms. Further, by using 928 firm-years from 2004-2010, we found that the Big 4 firms and Mid-tier firms do not differ in their reporting accuracy. We conclude that the audit quality of Mid-tier firms is considerable equal to the Big 4 firms. Our results suggest that Mid-tier audit firms may be considered as an alternative of higher audit quality in addition to the Big 4 firms. Our findings are robust after considering the sensitivity tests we have done.

**Keywords:** audit quality, Big 4, Mid-tier, non-Big 4, going-concern opinion, reporting accuracy
WHOSE AUDIT QUALITY IS HIGHER: BIG FOUR VERSUS MID-TIER FIRMS?
EMPIRICAL EVIDENCE FROM INDONESIA

INTRODUCTION

Auditor independence is questioned since the Enron gate in 2001 and after the issuance of SOX in 2002. The Indonesian government also issued various regulations with the aim to enhance the independence of auditors, including the Act No. 5 of 2011. Is auditor independence increase along with the changing of audit environment across the world as well as Indonesia?

Several previous studies found that the larger the size of the audit firms the higher the audit quality (e.g., Becker et al., 1998; Francis, 2004; Geiger and Rama, 2006). Big N audit firms have higher audit quality than non-Big N firms in their competence, i.e. in reducing earnings management behavior (Becker et al., 1998). Big N tends to issue going concern (GC) opinion higher than non-Big N indicating that the Big N has higher level of independence compared to the non-Big N (Francis, 2004). Big N firms have more reporting accuracy in their GC opinion compared with non-Big 4 firms (Geiger and Rama, 2006, Francis, 2004).

The emergence of new evidence that the role of Second-tier firms increased along with the implementation of SOX in America (Carver et al., 2011). Regulators are also encouraged to use Second-tier audit services as an alternative to the Big 4 (Cassell et al. 2008; Boone et al., 2010). Cassell et al. (2008) for example find evidence that the credibility of audited financial statements by the Second-tier is increase. They found that the credibility of audited financial statements by the Second-tier firm is higher than the smaller audit firm, and is equivalent to the Big 4 (Cassell et al., 2008). Boone et al. (2010) also found that there is a little difference in audit quality between Big 4 and Second-tier firms. They found weak evidence that the Big 4 have higher tendency to issue GC opinion to their clients that are experiencing financial difficulties compared with the Second-tier. In the Indonesia, there is a rapid growing rate of the audit firms categorized as Mid-tier. If the Big 4 firms handle primarily on more international and listed companies, the Mid-tier audit firms handle smaller foreign companies as well as local clients (Hadibroto 2010 in Hayes and Torrijos, 2010).

Our study differs from the previous studies because of: first, previous studies mostly done in the countries under the common law, where the level of transparency of financial reporting, investor protection, and the size of the capital markets are much higher than in the countries under the civil law, such as Indonesia, Vietnam, and so on. Second, previous studies put more tests on the competence of the audit firms in reducing earnings management, but little to test the level of independence of the audit firms in issuing GC opinion as well as examining the accuracy of the GC opinion itself (Becker et al., 1998; Francis et al., 1999).

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1 Largest audit firm-size in previous studies are represented by the Big 8/6/5 or Big 4 (Tuanakotta, 2007). Audit firms in Indonesia are affiliated with the Big 8/6/5 or Big 4, and we use Big N in this study for the identification of these largest audit firms.

2 The average growing rate for Mid-tier firms is 18 percent (Hayes and Torrijos, 2010).

3 The Big 4 includes the biggest audit firms i.e., PWC, Deloitte & Touche, Ernst & Young, and KPMG, while the Second-tier includes the fifth and the sixth largest rank i.e., the Grand Thornton and BDO Seidman. Boone et al. (2010) did the rankings in 2006, while the seventh and the eighth ranking are Crowe Chizek, and McGladrey Pullen that are relatively smaller than Grant Thornton and BDO Seidman. This study uses the Mid-tier grouping for its research purpose, which includes among others are Paxity, Mazars, RSM AAJ Associates, Moores Stephens International, in addition to the Grant Thornton (Hendra winata Gani & Hidayat) and BDO International (Tanubrata Sutanto & Partners) as been categorized as the Second-tier by Boone et al. (2010).
Hurusetya (2004) for example, found no evidence that the Big 4 firms in Indonesia have higher reporting accuracy of GC opinion compared with the non-Big 4. Third, our study investigate the difference between audit quality of the Big 4 and Mid-tier firms in their independence, i.e., whether audit quality of the Big 4 is higher than the Mid-tier in the propensity to issue GC opinion and its reporting accuracy. In addition, in most studies in the United States, Big 4 firms are subject to the PCAOB as an independent institution under the SOX, while the Big 4 in Indonesia is not subject to these rules so that audit quality of the Big 4 firms in Indonesia is possibly different from as in the United States (Gordon et al., 2013).

Further discussions in this study are as follows. Section II discusses literature review and hypotheses development. Section III discusses the research methodology. Section IV discusses the findings of the test, and Section V is the Conclusions, implications and suggestions for further research.

HYPOTHESIS DEVELOPMENT

Audit Firm Size and Audit Quality

Audit firm size that was associated with the audit quality was introduced firstly by DeAngelo (1981). Auditors of the larger firms try to avoid compromise in order not to lose their credibility to obtain audit assignments in the future. In other words, auditors from the larger size of audit firms try to keep their reputation and act independently when audit their clients (DeAngelo, 1981; Watts and Zimmerman, 1981). Therefore early researches on audit quality used audit firm size as a proxy of audit quality, for example Big 8/6/5 or Big 4.

Big 4 and Going-Concern Opinion

DeAngelo (1981) defines audit quality consisting of the dimension of competence and independence. Audit is perceives to have value by the users of audit services if the auditor has technical competence and independence (Watts and Zimmerman, 1981). Previous research found that audit quality of Big 6 is higher than non-Big 6 (e.g., Becker et al., 1998, Francis et al., 1999). Larger audit firm has the ability to detect earnings management higher than smaller firm, because of its ability to detect earnings management. Teoh and Wong (1993) also found that the financial statements audited by the Big 8 has higher earnings response coefficient than non-Big 8. These studies indicate that the Big N has a higher level of competence than non-Big N⁴.

It seems that higher audit firm size does not frequently provide higher audit quality which is reflected in the attitude of auditor independence, eventhough it has higher competence (Fitriany 2011, Francis, 2004). This is understandable with the notion that the auditors still have economic dependence inherent to the contractual relationship with their client to keep audit assignment with their clients (DeAngelo, 1981; Reynolds and Francis, 2001). If going-concern opinion (GC) is a form of audit outcomes that can be be observed, then independence of auditors can be measured by how much the auditors are willing to issue a GC opinion against their clients (Bamber and Bamber, 2009; Francis, 2004). The auditor

⁴ Past studies for the Big N considers the audit quality of the entire Big N is more homogeneous, but Francis and Yu (2009) found that the Big 4 with greater operating offices have less aggressive earnings management behavior than the Big 4 with smaller operating offices measured by the absolute discretionary accruals. Francis and Yu (2009) found that Big 4 with larger offices have higher tendency to issue GC opinion than Big with smaller office. Our study did not distinguish between Big 4 that has larger or smaller office, because Big 4 in Indonesia is centralized in large cities, such as Jakarta. There are about 400 offices of audit firms in Indonesia, and three-quarters are based in Jakarta (Hayes and Torrijos, 2010).
will issue a GC opinion if an auditor believes that an entity cannot survive within the next twelve months from the balance sheet date (Geiger and Rama, 2006; Francis, 2004).

Studies in the United States found that the propensity of auditors to issue GC opinion for clients with financial difficulties has decreased throughout the period of 1992-1993 and 1999-2000 (Geiger and Raghunandan, 2002), consistent with Geiger and Rama (2006) i.e., from the period of 1991 to 2001. Auditors are more conservative after the SOX period (Lobo and Zhou, 2006). The change in the audit environment in the United States also changes the audit environment around the world. Fargler and Jiang (2008), for example investigate the trend of auditors in issuing GC opinion between the periods before and after 2000 to 2002, and found that auditors tend to issue GC opinion after the period of 2000-2002 compared with the period before 2000-2002. Using a sample of 8,917 observations during 1995-2004 in China, Chen et al. (2010) found evidence that the tendency of receiving modified audit opinion is higher in the period after 2001 compared to the period of 1995-2000 when the auditor economic interests of the client is measured individually.

Previous studies showed that the Big N has higher tendency to issue GC opinion. Francis and Khrisnan (1999) found that auditors are more conservative for companies with higher accrual by issuing modified opinion. Further analysis of Francis and Khrisnan (1999) found that the auditor conservatism of the Big 6 is higher than the non-Big 6 in issuing modified opinion. However in line with the implementation of SOX in 2002, there is some evidence that the Second-tier firms are starting to play a role in auditing the listed companies (Carver et al., 2011). Cassell et al. (2008) for example, found that the financial statements audited by the Second-tier firms have more credibility equivalent to the Big 4 firms. Cassel et al. (2008) found that the cost of equity capital and the earnings response coefficients of the client being audited by the Second-tier are equivalent to the Big 4. Boone et al. (2010) found a little difference between audit quality of the Big 4 and the Second-tier. Boone et al. (2010) found a little evidence that the Big 4 firms have higher tendency to issue GC opinion to the companies that are experiencing financial difficulties compared to the Second-tier. This evidence gives interpretation that audit quality of the Big 4 is not much different from the Second-tier.

In the context of Indonesia, there is a steady grow of the Mid-tier firms. These Mid-tier firms handle smaller foreign companies and local clients (Hayes and Torrijos, 2010). We have not much evidence from previous studies in Indonesia whether the audit quality of Mid-tier firms are higher than the Big 4. Based on the above arguments we suspect that the Big 4 have a higher tendency to issue GC opinion as compared with the Mid-tier, therefore our hypotheses to be tested is:

H1: Big 4 firms have higher tendency to issue GC opinion as compared with the Mid-tier firms

**Big 4 and Reporting Accuracy**

Carcello and Palmrose (1994) found that only 30% of the bankrupt companies have been preceded by the GC opinion, in other words 70% of the audited companies experienced the type 2 statistical errors or false negative. They found that auditors that did not issue GC opinion prior to the bankruptcy have been charged as much as twice penalty and pay higher compensation. Francis and Krishnan (2002) found that six of seven GC opinions experience

---

5 For comparison, Big 4 employs around 600-800 staff respectively. PWC is estimated to have 600 staff, KPMG around 650 staff, while Deloitte and EdY has about 800 staff. On the other hand, the largest Mid-tier firm has about 300 staff (Hadibroto in Hayes and Torrijos, 2010).
false positive. These findings indicate that the auditors become more conservative and give implications for client dissatisfaction and auditor dismissals (Krishnan, 1994).

Previous research documented that the Big N has higher audit quality than the non-Big N in reporting GC opinion (Lennox, 1999; Weber and Willenborg, 2003; Geiger and Rama, 2006). Lennox (1999) found that Big 4 auditors have higher GC reporting accuracy in the United Kingdom. Weber and Willenborg (2003) found that audit report of the Big 4 prior to the initial public offering (IPO) is more accurate in predicting future stock returns and subsequent delistings than the smaller firm. Geiger and Rama (2006) found that the Big 4 has smaller reporting error rate, both in type 1 and type 2 than the non-Big 4. Conversely, Geiger and Rama (2006) found no difference between Second-tier national firms and regional/local third-tier firms relating to the second type of reporting error. The study of Geiger and Rama (2006) showed that Big 4 has accuracy rate of reporting higher than non-Big 4. In a study in Indonesia, Herusetya (2004) did not find any evidence that the Big 4 have GC reporting accuracy higher than the non-Big 4 for both types of reporting error.

Several recent studies indicate the development of audit firms’ role for Second-tier firms post-SOX legislation, and found that the audit quality of the Second-tier firms are not as much different as the Big 4 firms (Carver et al., 2011; Boone et al., 2010; Cassel et al., 2008). The study also found that the Mid-tier role in Indonesia is growing (Hayes and Torrijos, 2010), but as far as we know there is no evidence that the Mid-tier firms in Indonesia have higher audit quality than the Big 4, including their reporting accuracy.

Based on the above arguments, we suspect that the GC reporting accuracy of the Big 4 firms are higher than the Mid-tier firms, so our hypotheses to be tested are:

**H2**: Big 4 firms have higher GC reporting accuracy than the Mid-tier firms

**METHODS**

**Sample and Data**

Population of this research is all non-financial companies listed on the Indonesia Stock Exchange (IDX) for the year 2004 to 2011. Our sample selection are done using purposive sampling method with the criteria as follows: (i) all public listed companies publish their annual financial report in Rupiah currency each and ended at December 31; (ii) we exclude all companies that perform initial public offering, being delisted, merged, and change the status of its industry sector during the period of 2004-2010.

The results of our final sample according to the above criteria for our empirical models are in Table 1. Based on our criteria, the total number of sample observations obtained for Models 1 and 2 are 1,057 firm-years (2004-2011) and 928 firm-years (2004-2010) respectively. Sources of financial data are taken from the annual reports and audited financial statements published by the Indonesia Capital Market Directory (ICMD) and/or the Indonesia Stock Exchange (IDX).

**Empirical Model**

**Testing Model of Hypothesis 1**

To test hypothesis 1 we used Model 1, i.e., how is the effect of audit quality reflected in the Big 4 and Mid-tier firms on the going concern reporting opinion. Our empirical model that represents the hypothesis H1 is as follows:

\[ GCO_{it} = \beta_0 + \beta_1 BIG4MID_{it} + \beta_2 PRIORGC_{it} + \beta_3 SIZE_{it} + \beta_4 LEV_{it} + \beta_5 LOSS_{it} \]
The statistical form of hypothesis H1 is represented by the coefficient of \( \beta_1 \), i.e., \( \beta_1 > 0 \), and all of the control variables are \( \beta_{2,3} < 0 \), \( \beta_{4,5,6,7} > 0 \). All variables in Model 1 are defined as in the Table 2.

Coefficient \( \beta_1 \) (BIG4MID) is positively predicted toward GCO as a dependent variable, because Big 4 is expected to have higher tendency to issue GC opinion (Francis, 2004). Another variable that are used to control other factors that may affect the GC opinion is PRIORGC, SIZE, LEV, LOSS, LLOSS, CASH.

Setyarno, et al. (2006), as well as Praptitorini and Januarti (2007) found a positive effect of prior GC opinion (PRIORGC) on the current year GC opinion (GCO). Firm size (SIZE) is total assets of the client and it is predicted negative toward GCO. Larger companies have better management in managing the company and are capable of generating reliable financial statements than small firms (Junaidi and Hartono, 2010). Therefore, the auditor would defer to issue GC opinion for larger companies in the hope that these companies will be able to overcome the adverse conditions in the coming year. Praptitorini and Januarti (2007) found that companies with high debts but have lesser assets will face higher bankruptcy risk. Carcello and Neal (2000) found that leverage (LEV) has positive effect on the provision of GC opinion. The company with reported loss (LOSS) has positive effect on GC opinion (Francis and Yu, 2009). Likewise, the company that suffered loss in prior year (LLOSS) is predicted to be positively associated with GC opinion. Companies that have more current assets (CASH) will be able to face financial difficulties better than companies with fewer liquid assets. Therefore CASH is negatively predicted toward GC opinion (Francis and Yu, 2009).

**Testing Model of Hypothesis 2**

To test hypothesis 2 we use Model 2, i.e., the effect of audit quality expressed in the Big 4 and Mid-tier firms toward GC opinion-reporting accuracy. Empirical model that represents the hypothesis H2 is as follows:

\[
\text{RGCA}_t = \lambda_0 + \lambda_1 \text{BIG4MID}_t + \lambda_2 \text{PRIORGC}_t + \lambda_3 \text{SIZE}_t + \lambda_4 \text{LEV}_t + \lambda_5 \text{LOSS}_t \\
+ \lambda_6 \text{LLOSS}_t + \lambda_7 \text{CASH}_t + \epsilon_t \]

The statistical form of hypotesis H2 is represented by the coefficient of \( \lambda_1 \), i.e., \( \lambda_1 > 0 \), and all of the control variables are \( \lambda_{2,3,4,5,6,7} > 0 \). All variables in Model 2 are defined as in the Table 2.

Coefficient of \( \lambda_1 \) (BIG4MID) is predicted positively toward GC reporting accuracy. RGCA. Geiger and Rama (2006) found that Big 4 has higher accuracy in issuing GC opinion than non-Big 4. Another variable that are used to control other factors that may affect the reporting accuracy of GC opinion is PRIORGC, SIZE, LEV, LOSS, LLOSS, CASH.

PRIORGC is predicted to have positive effect on RGCA, because auditors can predict more accurately using previous year’s GC opinion. Firm size (SIZE) is predicted positive toward RGCA. The larger the company’s size the more flexibility that the company has in using its resources to be able to survive, and that auditor could be expected to predict the survival rate of companies more accurately. Total debt to total assets (LEV), reported loss (LOSS), and loss on prior year (LLOSS) have positive effect toward GC reporting accuracy.
respectively (Herusetya, 2012). With the information about the debts and losses of the company, auditor may report GC opinion more accurately than previous year where the company reported net income and has lesser debt but will face financial distress in the next year. CASH is predicted to have positive effect on the GC reporting accuracy, because of the amount of cash and cash equivalents has higher level of liquidity, so that the auditor has more ability to predict the sustainability of the company when facing financial distress.

**Variable Measurements**

Dependent variable in this study consists of going concern opinion (GCO) in Model 1 and reporting accuracy of GC opinion (RGCA) in Model 2. Our main variable as an independent variable is audit quality proxied by the size of the firm (BIG4MID).

**Going Concern Opinion (GCO)**

GC opinion is used as a measure of audit quality because it reflects the auditor’s independence (DeAngelo, 1981). Previous research shows that the higher the frequency of the auditor that provides GC opinion, the higher the auditor's independence. GCO variable as a dummy variable, given 1 if an audit firm issues a GC opinion, and 0 otherwise.

**Reporting Accuracy of Going Concern Opinion (RGCA)**

Audit report is the only ex-ante audit quality that can be observed, since it does not always represent the audit quality based on error reporting type 1 and 2 (Francis, 2004). Reporting accuracy of GC opinion (RGCA) is a dummy variable with criteria: (i) given 1, if the audit firm issues GC opinion in the current year, and within the next year the client experiences financial distress condition, and 0 if otherwise (type 1 error reporting); or (ii) given 1, if the audit firm does not issue a GC opinion in the current year, and within the next year the client does not experience financial distress condition, and 0 if otherwise (type 2 error reporting) (Herusetya, 2012). While the financial distress of a client should meet at least one of the following conditions: (i) negative operating cash flow (CFO); and/or (ii) net loss (Reynolds and Francis, 2001).

**Audit Quality (BIG4MID)**

Audit quality is measured using the size of audit firm (Teoh and Wong, 1993; Becker et al., 1998). BIG4MID is measured using a dummy variable, given 1 if the audit firm is the Big 4, and 0 if the Mid-tier firm.

**Additional tests**

Additional tests using Model 3 and 4 are to test the sensitivity of the main test results of Hypothesis H1, while Model 5 and 6 are to test the sensitivity of the main result of hypothesis H2.

**Sensitivity Test of GC Opinion**

In Model 3, we would like to further examine whether the Big 4 firms (BIG4) have higher tendency to issue GC opinion than non-Big 4 firms, including the Mid-tier firms, while in Model 4 we would like to test further whether the Mid-tier firms (MTIER) have higher tendency to issue GC opinion compared with the non-Mid-tier firms and non-Big 4 firms.

\[
GCO_{it} = \alpha_0 + \alpha_1 BIG4_{it} + \alpha_2 SIZE_{it} + \alpha_3 CASH_{it} + \alpha_4 LEV_{it} + \alpha_5 PRIORGC_{it} + \alpha_6 LOSS_{it} + \alpha_7 LLOSS_{it} + \varepsilon_{it} \]

\ldots................................................. Model 3
GCO_{it} = \delta_0 + \delta_1 \text{MTIER}_{it} + \delta_2 \text{SIZE}_{it} + \delta_3 \text{CASH}_{it} + \delta_4 \text{LEV}_{it} + \delta_5 \text{PRIORGC}_{it} + \delta_6 \text{LOSS}_{it} + \delta_7 \text{LLOSS}_{it} + \varepsilon_{it} ................................................................. Model 4

All variables in Model 3 and Model 4 are defined as in the Table 2.

**Sensitivity Test of Reporting Accuracy**

In Model 5, we are going to test further whether the Big 4 firms (BIG4) have reporting accuracy of GC opinion higher than the non-Big 4 firms, including the Mid-tier firms, while in Model 6 we are going to test further whether the Mid-tier firms (MTIER) have reporting accuracy of GC opinion higher than the non-Mid-tier firms and non-Big 4 firms.

RGCA_{it} = \varphi_0 + \varphi_1 \text{BIG4}_{it} + \varphi_2 \text{SIZE}_{it} + \varphi_3 \text{CASH}_{it} + \varphi_4 \text{LEV}_{it} + \varphi_5 \text{PRIORGC}_{it} + \varphi_6 \text{LOSS}_{it} + \varphi_7 \text{LLOSS}_{it} + \varepsilon_{it} ................................................................. Model 5

RGCA_{it} = \zeta_0 + \zeta_1 \text{MTIER}_{it} + \zeta_2 \text{SIZE}_{it} + \zeta_3 \text{CASH}_{it} + \zeta_4 \text{LEV}_{it} + \zeta_5 \text{PRIORGC}_{it} + \zeta_6 \text{LOSS}_{it} + \zeta_7 \text{LLOSS}_{it} + \varepsilon_{it} ................................................................. Model 6

All variables in Model 5 and Model 6 are defined as in the Table 2.

**RESULTS AND DISCUSSIONS**

**Descriptive Statistics**

Each variable in Table 3, both for Model 1 and 2 have a relatively small standard deviation, indicating that the degree of variation for each variable is low enough so that our data is homogeneous, and also normally distributed as the skewness is within the range of ± 0-2 (Acock, 2008).

The average companies that receive GC opinion (GCO) is 0.24 from a scale of 1 compared to the companies that do not receive GC opinion (Table 3, Panel 1), while the average of reporting accuracy of GC opinion (RGCA) is 0.45 of a scale of 1 (Panel 2). BIG4MID variable is the proportion of clients that are audited by the Big 4 firms compared to the Mid-tier firms, i.e. 54% and 55% for Model 1 and 2 respectively. This indicates that the number of client observations audited by the Big 4 firms and Mid-tier firms is proportional or comparable.

The correlation between variables is in Table 4. In the Table 4, Panel A, BIG4MID variable has a negative correlation with GCO at 0.01 (\rho = -0.13), contrary with our initial prediction, while BIG4MID has a positive correlation with RGCA at 0.01 (\rho = 0.11), contrary with our initial prediction (Table 4, Panel B).

Testing Results of Hypothesis 1

Hypothesis testing result of H1 in Table 5, Panel A shows that Model 1 has Nagelkerke R-square and Cox & Snell R-square 77.70% and 52.0% respectively with a value of -2log likelihood 395.78. Coefficient \beta_1 (BIG4MID) has a negative value of -0.73 significant at 0.01 (Wald test = 7.46), in contrast to our earlier prediction. This indicates that
the Big 4 firms have lower tendency to issue GC opinion than the Mid-tier firms. In other words, the Big 4 firms have a lower degree of independence than the Mid-tier firms measured by the level of propensity to issue GC opinion. This finding is in line with the findings of Challen and Siregar (2011), who found that the accrual earnings management in the companies audited by the Big 4 firms is higher than the companies audited by the non-Big 4 firms. This finding is also in line with the findings of Boone et al. (2010), i.e., they found weak evidence that the Big 4 firms have higher tendency to issue a GC opinion compared to the Second-tier firms. Thus our hypothesis H1 is not supported.

The test results on the control variables mainly show consistent with our earlier predictions which include PRIORGC, LEV, LOSS, LLOSS, while CASH and SIZE are not significant at 0.10.

=============== Insert Table 5. Hypothesis 1 Testing Results ================

Testing Results of Hypothesis 2
Hypothesis testing result of H2 in Table 6, Panel A shows that Model 2 has Nagelkerke R-square and Cox & Snell R-square relatively small, which is 9.70% and 6.80% respectively with a value of -2log likelihood 1,037.61. Our main coefficient \( \lambda_1 (BIG4MID) \) has a value of 0.23 not significant at 0.10 (Wald test = 2.05). We found no evidence on the hypothesis testing results indicating that there is no difference in the reporting accuracy of GC opinion of the Big 4 and Mid-tier firms. In other words, the audit quality of Big 4 and Mid-tier firms do not differ in terms of reporting error of GC opinion, both in the reporting error type 1 and type 2. Some test results of the control variables show consistent results with our earlier predictions, i.e., SIZE and CASH, but some show different results with our previous prediction (i.e., PRIORGC and LEV), and some show no evidence (i.e., LOSS and LLOSS).

=============== Insert Table 6. Hypothesis 2 Testing Results ================

Sensitivity and Robustness Tests
We test the sensitivity of our main results in Model 1 which found that the audit quality of the Big 4 firms are lower than the Mid-tier firms in the propensity to issue GC opinion. In the test of Model 3 we use sample that covers for all types of audit firms, both Big 4 and Mid-tier firms, and either non-Big 4 or non-Mid-tier firms. In the test of Model 4, we use sample that covers only the Mid-tier firms and non-Mid-tier firms that do not include the Big 4 firms.

The result of our sensitivity test of Model 3 in Table 5, Panel B shows that the BIG4 coefficient (\( \alpha_1 = -0.56, \text{ Wald} = 5.55 \)) is negative and significant at 0.05. This indicates that the Big 4 firms have lower tendency to issue GC opinion than all non-Big 4 including the Mid-tier firms. While the test result from Model 4 in Table 5, Panel C shows that the MTIER coefficient (\( \delta_1 = -0.23, \text{ Wald} = 0.68 \)) is not significant at 0.10. The results of this tests give interpretation that there is no difference between the Mid-tier and non-Mid-tier firms (excluded from the Big 4 firms) for the tendency to issue GC opinion. Thus, the results of our sensitivity tests in Model 3 and 4 provide strong support to our main test results that the Big 4 firms have lower tendency to issue GC opinion compared to the Mid-tier firms.

To test the robustness of our main results in Model 2, we perform another sensitivity test in Model 5 using a sample that covers all types of audit firms that includes both Big 4, Mid-tier, and non-Big 4 and non-Mid-tier firms, while in Model 6, our sample includes only
the Mid-tier and non-Mid-tier firms (excluded from the Big 4 firms). The results of our sensitivity test in Model 5 (Table 6, Panel B) shows that the coefficient of BIG4 ($\varphi_1 = 0.31$, Wald = 4.46) is positive and significant at 0.05. This suggests that the Big 4 firms have higher reporting accuracy than the non-Big 4 which is including the Mid-tier firms. However, to further examine whether there are differences in the accuracy of reporting of GC opinion between the Mid-tier and non-Mid-tier firms (excluded from the Big 4 firms), we obtain evidence that MTIER coefficient ($\zeta_1 = 0.36$, Wald = 3.46) is positive and significant at 0.10 (Table 6, Panel C). These findings indicate that the Mid-tier firms have higher reporting accuracy than the non-Mid-tier firms which is excluded from the Big 4 firms. Thus, the results of our sensitivity tests in Models 5 and 6 provide evidence to support the main test results in Model 2, i.e. there is no difference in the reporting accuracy of the GC opinion between the Big 4 and the Mid-tier firms.

CONCLUSIONS

We investigate whether the audit quality of the Big 4 firms is higher than the Mid-tier firms, both in terms of the propensity to issue GC opinion and its reporting accuracy. By using a sample of 1,057 firms-year observations from listed companies audited by the Big 4 and Mid-tier firms in the Indonesia Stock Exchange (IDX) for the period of 2004-2011, we find evidence that the Big 4 firms have lower tendency to issue GC opinion compared with the Mid-tier firms. Furthermore, by using a sample of 928 firms-year observations for the period of 2004-2010, we find no difference in the reporting accuracy of GC opinion of the Big 4 and Mid-tier firms. Overall, our findings suggest that the audit quality of the Big 4 is not much higher than the Mid-tier firms. These findings are robust due to our sensitivity tests that support to the main findings.

Our findings provide some implications, i.e., (i) the Big 4 firms have lower level of conservatism in issuing GC opinion compared with the Mid-tier firms, but the Big 4 firms have higher audit quality in issuing GC opinion equal to the Mid-tier firms than the non-Big 4 nor the non-Mid-tiers firms; (ii) These findings provide recommendation for the standard setters and decision-making in the capital market, where audit quality of the Mid-tier firms can be considered as an alternative of high audit quality in addition to the Big 4 firms. Some of the weaknesses of our study to be considered in drawing the conclusions are (i) the sample used are listed companies in the IDX, the results of this study may be different if the sample used are private companies; (ii) the study does not control any changes in the regulation of public accounting firms throughout the period of observation which might affect the main results. Further research are suggested to test the audit quality of the audit firms from the closed companies in addition to the public listed companies, and are suggested to consider any changes to the regulation of public accounting firms during the period under observation.
REFERENCE


## Table 1
Sample Description

<table>
<thead>
<tr>
<th>Description</th>
<th>Total</th>
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<tbody>
<tr>
<td>Number of firm-years observation from listed company at IDX for the year of 2003-2011</td>
<td>4,336</td>
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<tr>
<td>Number of firm-years observation in financial industry</td>
<td>(912)</td>
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<tr>
<td>Total preliminary sample</td>
<td>3,424</td>
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<tr>
<td>Number of firm-years observation from new listing companies during 2004-2011</td>
<td>(928)</td>
</tr>
<tr>
<td>Number of firm-years observation from delisted companies during 2004-2011</td>
<td>(416)</td>
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<tr>
<td>Number of firm years observation with uncomplete data for the year of 2003-2011</td>
<td>(592)</td>
</tr>
<tr>
<td>Number of firm-years observation using foreign currencies</td>
<td>(88)</td>
</tr>
<tr>
<td>Number of sample for Model 1 and Model 2 (firm-years)</td>
<td>1,400</td>
</tr>
</tbody>
</table>

**Model 1**

| Number of sample for Model 1 (firm-years)                                   | 1,400  |
| Number of firm-years observation audited by non-Big 4 and non-Mid-tiers     | (331)  |
| Number of sample for Model 1 for the year of 2003-2011 (firm-years)         | 1069   |
| Number of firm-years observation with outlier data                          | (12)   |
| Number of final sample of Model 1 for the period of 2003-2011 (firm-years)  | 1,054  |

**Model 2**

| Number of sample for Model 2 (firm years)                                   | 1,400  |
| Number of unused firm years observation for 2011 in Model 2                 | (138)  |
| Number of firm-years observation audited by non-Big 4 and non-Mid-tiers      | (331)  |
| Number of sample for Model 2 for the year of 2004-2010 (firm years)         | 931    |
| Number of firm-years observation with outlier data                          | (3)    |
| Number of final sample of Model 2 for the period of 2004-2010 (firm years)  | 928    |
Table 2
Variable Description

<table>
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<th>Variables</th>
<th>Description</th>
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<tr>
<td><strong>Model 1 - 2, and Model 3-6 (Sensitivity Tests)</strong></td>
<td></td>
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<tr>
<td>GCO</td>
<td>Dummy variable for going-concern opinion, 1 if the company receive going-concern opinion, and 0 otherwise</td>
</tr>
<tr>
<td>RGCA</td>
<td>Dummy variable for reporting accuracy, 1 if the company receive going-concern opinion and the company experience financial distress within the next year, or if the company does not receive going-concern opinion and the company does not experience financial distress within the next year; and 0 if otherwise. The condition of financial distress should meet at least one of these conditions: (i) negative operating cash flows, and/or (ii) net loss</td>
</tr>
<tr>
<td>BIG4MID</td>
<td>Dummy variable, 1 if audit firm is Big 4, and 0 if Mid-tier firm</td>
</tr>
<tr>
<td>BIG4</td>
<td>Dummy variable, 1 if audit firm is Big 4, and 0 otherwise</td>
</tr>
<tr>
<td>MTIER</td>
<td>Dummy variable, 1 if audit firm is Mid-tier, and 0 if non-Mid-tier and non-Big 4 firm</td>
</tr>
<tr>
<td><strong>Control Variables</strong></td>
<td></td>
</tr>
<tr>
<td>PRIORGC</td>
<td>Dummy variable, 1 if the company receive going-concern opinion in the prior year, 0 otherwise</td>
</tr>
<tr>
<td>SIZE</td>
<td>Natural logarithm of total assets</td>
</tr>
<tr>
<td>LEV</td>
<td>Leverage ratio, defined as total liabilities divided by total assets at the end year t</td>
</tr>
<tr>
<td>LOSS</td>
<td>Dummy variable for loss firm, 1 if the company report net loss in the current year t, 0 otherwise</td>
</tr>
<tr>
<td>LLOSS</td>
<td>Dummy variable, 1 if the company report net loss in the prior year t-1, 0 otherwise</td>
</tr>
<tr>
<td>CASH</td>
<td>Cash and cash equivalent scaled by total assets</td>
</tr>
<tr>
<td>$\varepsilon_{it}$</td>
<td>Residual errors</td>
</tr>
<tr>
<td>Subscript i,t</td>
<td>Identification for firm i and year t</td>
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Table 3
Descriptive Statistics

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<tr>
<th>Variable</th>
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<th>Minimum</th>
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<th>Skewness</th>
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All variables are defined as in Table 2.
### Table 4
Correlation among Variables for Model 1-2

#### Panel 1. Model 1

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<thead>
<tr>
<th>Variable</th>
<th>GCO</th>
<th>BIG4MID</th>
<th>PRIORGC</th>
<th>SIZE</th>
<th>LEV</th>
<th>LOSS</th>
<th>LLOSS</th>
<th>CASH</th>
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<tr>
<td>GCO</td>
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<td></td>
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<td>BIG4MID</td>
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<td></td>
<td></td>
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<tr>
<td>SIZE</td>
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***, ** indicate significant correlation at 0.01 and 0.05, respectively (two-tailed test). All variables are defined as in Table 2.

#### Panel 2. Model 2

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<thead>
<tr>
<th>Variable</th>
<th>RGCA</th>
<th>BIG4MID</th>
<th>PRIORGC</th>
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<th>LEV</th>
<th>LOSS</th>
<th>LLOSS</th>
<th>CASH</th>
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</thead>
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<td>0.220***</td>
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<td>-0.255***</td>
<td>-0.174***</td>
<td>-0.162***</td>
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### Table 5
#### Testing Results of Hypothesis 1

**Model 1**

\[
GCO_{it} = \beta_0 + \beta_1 BIG4MID_{it} + \beta_2 PRIORGC_{it} + \beta_3 SIZE_{it} + \beta_4 LEV_{it} + \beta_5 LOSS_{it} + \beta_6 LLOSS_{it} + \beta_7 CASH_{it} + \epsilon_{it}
\]

**Model 3**

\[
GCO_{it} = \alpha_0 + \alpha_1 BIG4_{it} + \alpha_2 PRIORGC_{it} + \alpha_3 SIZE_{it} + \alpha_4 LEV_{it} + \alpha_5 LOSS_{it} + \alpha_6 LLOSS_{it} + \alpha_7 CASH_{it} + \epsilon_{it}
\]

**Model 4**

\[
GCO_{it} = \delta_0 + \delta_1 MTIER_{it} + \delta_2 PRIORGC_{it} + \delta_3 SIZE_{it} + \delta_4 LEV_{it} + \delta_5 LOSS_{it} + \delta_6 LLOSS_{it} + \delta_7 CASH_{it} + \epsilon_{it}
\]

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Prediction</th>
<th>Panel A. Model 1</th>
<th>Panel B. Model 3</th>
<th>Panel C. Model 4</th>
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<tr>
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<td></td>
<td>Coefficient</td>
<td>Wald</td>
<td>Sig.</td>
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<tr>
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</tr>
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<td>Nagelkerke R-Square</td>
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<td>Cox &amp; Snell R- Square</td>
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***, **, * indicate significant correlation at 0.01, 0.05, and 0.10 respectively (two-tailed test). All variables are defined as in Table 2.
Table 6
Testing Results of Hypothesis 2

Model 2
\[ \text{RGCA}_{it} = \lambda_0 + \lambda_1 \text{BIG4MID}_{it} + \lambda_2 \text{PRIORGC}_{it} + \lambda_3 \text{SIZE}_{it} + \lambda_4 \text{LEV}_{it} + \lambda_5 \text{LOSS}_{it} + \lambda_6 \text{LLOSS}_{it} + \lambda_7 \text{CASH}_{it} + \varepsilon_{it} \]

Model 5
\[ \text{RGCA}_{it} = \varphi_0 + \varphi_1 \text{BIG4}_{it} + \varphi_2 \text{PRIORGC}_{it} + \varphi_3 \text{SIZE}_{it} + \varphi_4 \text{LEV}_{it} + \varphi_5 \text{LOSS}_{it} + \varphi_6 \text{LLOSS}_{it} + \varphi_7 \text{CASH}_{it} + \varepsilon_{it} \]

Model 6
\[ \text{RGCA}_{it} = \zeta_0 + \zeta_1 \text{MTIER}_{it} + \zeta_2 \text{PRIORGC}_{it} + \zeta_3 \text{SIZE}_{it} + \zeta_4 \text{LEV}_{it} + \zeta_5 \text{LOSS}_{it} + \zeta_6 \text{LLOSS}_{it} + \zeta_7 \text{CASH}_{it} + \varepsilon_{it} \]

| Independent Variable | Prediction | Panel A. Model 2 | | Panel B. Model 5 | | Panel C. Model 6 |
|----------------------|------------|-----------------|-----------------|-----------------|-----------------|
|                      |            | Coefficient     | Wald            | Sig.            | Coefficient     | Wald            | Sig.            | Coefficient     | Wald            | Sig.            |
| Constant             | ?          | 0.128           | 0.031           | 0.860           | -0.015          | 0.001           | 0.980           | -0.061          | 0.006           | 0.936           |
| BIG4MID              | +          | 0.232           | 2.047           | 0.153           | 0.311**         | 4.463           | 0.035           | 0.358*          | 3.457           | 0.063           |
| BIG4                 | +          |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| MTIER                | +          |                 |                 |                 |                 |                 |                 |                 |                 |                 |
| PRIORGC              | +          | -0.653***       | 15.104          | 0.000           | -0.513***       | 12.873          | 0.000           | -0.625***       | 11.250          | 0.001           |
| SIZE                 | +          | 0.084*          | 2.790           | 0.095           | 0.070           | 2.609           | 0.106           | 0.076           | 1.742           | 0.187           |
| LEV                  | +          | -0.536**        | 4.214           | 0.040           | -0.079          | 0.900           | 0.343           | 0.004           | 0.021           | 0.885           |
| LOSS                 | +          | 0.007           | 0.975           | 0.164           | 0.027           | 0.024           | 0.876           | -0.071          | 0.109           | 0.742           |
| LLOSS                | +          | -0.281          | 1.936           | 0.164           | -0.139          | 0.674           | 0.412           | -0.065          | 0.088           | 0.767           |
| CASH                 | +          | 1.808*          | 3.774           | 0.052           | 1.046*          | 2.794           | 0.095           | -0.118          | 0.196           | 0.658           |
| Nagelkerke R-Square  |            | 0.097           |                 |                 | 0.058           |                 |                 | 0.061           |                 |                 |
| Cox & Snell R-Square |            | 0.068           |                 |                 | 0.041           |                 |                 | 0.042           |                 |                 |
| -2 Loglikelihood     |            | 1,037.606       |                 |                 | 1,449.897       |                 |                 | 927.171         |                 |                 |
| n                    |            | 928             |                 |                 | 1,225           |                 |                 | 806             |                 |                 |

***, **, * indicate significant correlation at 0.01, 0.05, and 0.10 respectively (two-tailed test). All variables are defined as in Table 2.
EXPLORING THE OVERVIEW OF FORENSIC ACCOUNTING AND THE DEMAND FOR BUSINESS AND EDUCATION TRAINING IN VIETNAM

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ABSTRACT

In the process of development of the global economy, along with the achievements and successes in many fields, it has still existed many uncertainties and fraud that occurring in a lot of organizations or individuals and they are illegal activity which is going on. Most of these circumstances are related to the financial data and accounting information, or concerned to the physical and valuable elements. Currently, Vietnam has not had any firms or staffs who have specialized experience in the investigation or lawsuit events associated with the court or other disputes. So, the education of students who are able to do the investigation professionally and help the governmental agency to detect the errors or frauds of companies or public sector entities’ financial data is significant for present economy conditions in Vietnam nowadays. Therefore, the main purpose of this article is to provide an overview picture about the history, main content and role of forensic accounting, a relatively new field in Vietnam, and needs of human resources in this field. Based on that information, this paper also proposed four requirements for business and education that Vietnam should identify and establish for law enforcement personnel to accounting. The results indicated the cycle of establishment forensic accounting onto education in Vietnam in the following years.

Keywords: accounting, business, investigation, forensic accounting, education
1. Introduction

The economy of Vietnam has stabilized for many years but has been developed below the trend. For the year 2014, the country’s economy boosted principally on manufactured exporting goods. The government seems to be pushing on with structural reforms of State Owned Enterprises and the financial - banking field. But it remains to be considered whether its current efforts will be efficient to restore economic growth on time for the nation to change itself to high-income industrialized economy in the longer-term future (Pan, 2014).

The Vietnam economy showed further signs of continued macroeconomic stabilization throughout 2014. Beside achieved successes, Vietnamese economic system has rebounded in the context of unsustainable global recovery after the global financial crisis. Vietnam has had some limitation in financial and monetary system with accounting records that unclear. With objectives and subjective purposes, state budget has been drawn and uncontrolled by daily activities. A lot of risk affect to the transaction of many organizations day by day and make negative results to their business. Some common fraud types are:

In addition, the financial and accounting system is still facing pressure on uncollectible debt, cross-ownership, governance improvement and standardization of operation norms under international standards and integration commitments. Adding to these problems, Huynh
Phong Tranh (2014) remarked in his speech that the corruption in the public sector remains serious, especially in finance and banking, land management, natural resources exploitation, and public investment have been increased with high amount. The Government also revealed that, Vietnam’s GDP growth promises to go ahead its upward trend while macro-economy will also be improved for the fiscal year of 2015, making the country’s economy even brighter than in 2014. For getting this objectives, Vietnam should apply some new tools for controlling and supervising the organizations when they have operated (Nguyen, 2015). One of the significant methods which used in many sectors at many countries is forensic accounting. However, it seems very new sector in Vietnam industrial market as well as accounting system. Hence, the purpose of this article is to show the general picture of forensic accounting, its history and roles, some contents of that field and ideas for applying it in Vietnam for the coming years.

2. Overview about Forensic Accounting and current development

2.1. Comprehensive view

Before going to new sector of this accounting, income from any job will be interested in by a lot of persons. About the salary or income of forensic accountant, the table will indicate comparison in their income between some careers or hottest jobs for university graduation as following details:

<table>
<thead>
<tr>
<th>Jobs</th>
<th>Income and wages information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forwarding Manager</td>
<td>Plan, implement and control flow of goods or services: $35,000-$118,000</td>
</tr>
<tr>
<td>Company Librarian</td>
<td>More firms need specialists to manage information: $37,000-$93,000</td>
</tr>
<tr>
<td>Media Specializer</td>
<td>For web content and online marketing technology: $26,500-$100,000</td>
</tr>
<tr>
<td>Physical Trainer</td>
<td>Aging baby boomers will derive the increasing need: $34,600-$74,000</td>
</tr>
<tr>
<td>Information Security</td>
<td>Workers plan, do and support network security: $47,000-$122,000</td>
</tr>
<tr>
<td>Forensic Accountant</td>
<td>Combines accounting, auditing and investigative skills: $35,000-$150,000</td>
</tr>
</tbody>
</table>

*Source: AICPA and EY 2015*
Based on statistic of salary about accountant for that type, the income expectations for Forensic Accountants start around $35,000, the senior-level government employees can earn between $80,000 to $90,000 and one can earn from $125,000 to $150,000 if they work in the private sector. So, what is forensic accounting and why is it with high wage in the world? According to Lynn (2014), the survey conducted in 2001 has had results that nearly 40 percent of the country’s top 100 accounting firms are increasing their forensic and fraud services and the average organization loses 6 percent of revenue to employee fraud and abuse. So, forensic accounting must be established for preventing these frauds from the past to the present and future (Dorrell & Gadawski, 2012).

2.2. Historical aspects of Accounting and Forensic Accounting

The brief history of modern forensic accounting Theory will be described as following timeline:

Actually, articles on arbitration, fraud, investigation, and expert witnesses began appearing in the late 1800s. In North America, this accounting can be traced back as far as 1817 to Meyer v. Sefton, a Canadian case, which allowed an ‘expert witness’ to testify in court. In 1896, New York State legislated the first CPA law. After a comment in 1925 by the Chairman of the US. Board of Tax Appeal, the Journal of Accountancy proposed that educational institutions should start including in their curricula the study of the law of evidence (Emma, 2009).

For more than 20 years later, the phrase “Forensic Accounting” is born by event that Maurice E. Peloubet coined those words in print in 1946. Max Lourie wrote a paper and also used them, 7 years after Peloubet. Lourie’s article voiced 3 important positions: (i) an accountant should not have to attend law school to learn art of expert testimony; (ii) colleges and universities should deliver forensic accounting training; (iii) its reference books and
textbooks should be developed for students. The remarkable thing is the first forensic accounting book appeared in 1982.

In 1986, the AICPA broke forensic accounting into 2 broad areas: investigative accounting and litigation support. The types of litigation services were further broken down in Practice Aid 7, listing: damages, antitrust analyses, accounting, valuation, general consulting, analyses. In the early 1980s, companies began to use computers to perform their record keeping. The intense competition caused auditing fees to fall as much as 50% from the mid-1980s to the mid-1990s. Auditors cut costs by reducing the process of reviewing hundreds of corporate accounts.

2.3. Definition

The word of this type of accounting is broken into two parts for considerations and clearly understandings. First, the word ‘forensic’ means a forum in Latin. That is to refer to a public place or court and it also focus about suitable one for use in a plate of law, and it is to that standard and potential outcome that forensic accountants generally have to work. Furthermore, the global dictionary also said that forensic is belonging to the courts of justice (Black’s Law Dictionary, 8th Edition, 2004). In commerce or business, things forensic are generally those things that relate to a legal forum or court and refers to items used in debate or argument. Second, the next part is the word ‘accounting’. It is very familiar with entrepreneur person and seems to be like the language of business which provided quantifying data for financial purposes. Accounting mentions many activities that relate to financial accounts (Lynn, 2014).

Therefore, forensic accounting is special practice part of bookkeeping that describes engagements that result from actual or anticipated disputes or lawsuit. It is the action of identifying, recording, payment, extracting, sorting, reporting, and verifying past financial data or other accounting activities for settling current or prospective legal differences or using such past financial data for estimating future financial data to settle legal variety. So, forensic accounting refers to the use of accounting for legal purposes (Suiwah, 2015). The use of intelligence-gathering techniques and accounting to develop information and opinion for use by attorneys involved in civil litigation and give trial testimony if called upon.
3. Roles of Forensic Accountant and the demand for Vietnam

When checking the internal control and control procedures of any companies, there are two objects, such as auditors and managers. The management is responsible for adopting sound accounting policies and for establishing and maintaining internal control that will, among other things, initiate, record, process and report transactions (events or conditions) consistent with management’s assertions embodied in the financial statements. Whereas, AICPA (2004) said that the auditor has responsibility to plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether caused by error or fraud. But, even good persons can get error or fraud if under enough pressure. Besides that, the greater the pressure, the more likely an individual will rationalize committing fraud. So, any country should establish the forensic accounting which work together accounting department for detecting frauds in the organizations if any. According to US Department of Justice (2005), the narrow approach of forensic accounting is to demonstrate as 3-circle exhibit. However, the broad approach of forensic accounting is just to view as following exhibit:
Forensic accounting is the application of accounting, tax, auditing, finance, quantitative analysis, investigative and research skills, and an understanding of the legal process for the purpose of identifying, collecting, analyzing, and interpreting financial or other data or issues in connection with: (i) litigation services: providing assistance for actual, pending or potential legal or regulatory proceedings before a trier of fact in connection with the resolution of disputes between parties, or (ii) non-litigation services: performing analyses or investigations that may require the same skills used in above, but may not involve the litigation process (Tariq, 2014).

The person who is in charge of task for forensic accounting is called forensic accountants. They also related to as forensic auditors or investigative auditors, often have to give expert evidence at the eventual trial (US Department of Justice, 2005). So, the differences and contrasting auditing, forensic accounting, and fraud examination should be made clearly as details:

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Audit</th>
<th>Fraud examination</th>
<th>Forensic accounting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time perspective:</td>
<td>Historical</td>
<td>Historical</td>
<td>Future and historical</td>
</tr>
<tr>
<td>Primary focus:</td>
<td>Periodic</td>
<td>Reactive</td>
<td>Proactive, ongoing</td>
</tr>
<tr>
<td>Investigation scope:</td>
<td>Narrow</td>
<td>Narrow</td>
<td>Broad ranging</td>
</tr>
</tbody>
</table>
Main work product is: | Audit opinion | Fraud case report | Forensic audit report |
---|---|---|---|
Main responsibility to: | Company and public | Defrauded party | Concerned principal or third party |
Guidelines are: | Rules-based | Principles-based; under audit rules, it is rule-based | Principles-based |
Purpose of report: | Ensure GAAP is followed | Identify perpetrator of fraud | Fraud risk assessment and strategic services |
Professional stance: | Non-adversarial | Adversarial | Adversarial and non-adversarial |

All of the larger accounting companies, as well as many medium-sized and boutique firms, have specialist forensic accounting departments. Within these groups, there may be further sub-specializations: some forensic accountants may, for example, just specialize in insurance claims, personal injury claims, frauds, construction, or royalty audits (Wikipedia, 2014). They have utilized understanding of company information and system of financial reports, accounting and auditing standards and procedures, evidence gathering and investigative techniques, litigation processes and procedures to perform their work. Forensic accountants are also increasingly playing more proactive risk reduction roles by designing and performing extended procedures as part of the statutory audit, acting as advisers to audit committees, fraud deterrence engagements, and assisting in investment analyst research.

According to SR Education Group (2015), forensic accounting is where law enforcement meets finance and accounting. In this career, you will be working side-by-side with police to uncover illegal financial activity. Individuals hoping to work in this profession should
anticipate to do matters such as security fraud, embezzlement and insider stock trading, contract disputes, money laundering, and healthcare, bankruptcy, and insurance fraud. For doing that event in Vietnam, this paper give the oriented solution as following steps if the governmental bodies would like to establish forensic accounting onto education at universities in next time:

4. Conclusion

Forensic accountants can investigate occupational fraud and abuse, investigate fraudulent financial reporting, serve as a litigation services specialist and expert witness, and trace assets in bankruptcy or divorce cases, consulting and work for government agencies or law enforcement agencies. Forensic accounting is a specialised branch of accounting that utilises investigative skills to determine the accuracy of financial statements in a legal dispute (civil or criminal). Forensic accounting concerns looking beyond the numbers and grasping the substance of situations.

It’s more than accounting and detective work. It is a combination that will be in demand for as long as human nature exists. It also asks the most important quality an individual can possess: the ability to understand. Far from being an ability that is specific to success in any particular field, developing the ability to think enhances a person’s chances of success in life, thus increasing a person’s worth in today’s society.

Moreover, a lot of current major corporate scandals in Vietnam and other countries have prompted business owners to turn to Forensic Accountants for proactive fraud checkups. The Board of company must now certify that their financial statements are faithful representations of the financial health and business position and results of operations of their companies and
rely more heavily on internal controls to detect any misstatement that would otherwise be contained in these finance.

Thus, publicly held companies are likely to see the necessity for forensic accounting as a part of a strong internal control effort to comply with governmental and market demands for accurate reporting. Forensic accountants who work for private companies help prevent and detect misuse of company resource. It means that Vietnam should get this accounting into the practice and teaching at the colleges for forming the human resources related to this because the person who graduate at this major can work throughout the business world, in public accounting, corporations, and in all branches of government.
REFERENCES


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INTRODUCTION THE 2015 LAW ON PUBLIC INVESTMENTS AND RECOMMENDATION TO PUBLIC SECTOR ACCOUNTING IN VIETNAM

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ABSTRACT

The public sector has a key role to play in enhancing the local goods and services. The Government is fully aware of the fact that Vietnam needs a proper public sector as a product of the state’s public policy, which provides high-quality and well-functioning educational, healthcare or social security systems through the effective management and use of public funds. These services should be needed investments onto them for getting the objectives set by the official organizations as well as Vietnam does. Furthermore, Vietnam is in the stage of improving its economy, adopting market economy mechanisms, and integrating into the world economy. So, Vietnam should change investment environment and make the advantages for accounting of using state budget. This paper aims to introduce the content of law on public investments in Vietnam and it will be effect on the year 2015. It employs an overview of this law and investigates the role of public investment on infrastructure on economic performance for the case of Vietnam. Moreover results suggest that there may be some effects to public sector accounting in Vietnam, particular on some aspects related with administration and non-business accounting. This study compares between the 2015 law with accounting in governmental tasks organizations in some aspects for clearly clarification. The results demonstrated three aspects of transparency, bookkeeping and expense for investment in public sector.

Keywords: accounting, public sector, public investment, public service
1. Introduction

Vietnam Public Investment Law 2014 No. 49/2014/QH13 dated June 18th, 2014 with 63 pages shall be valid from January 01, 2015. It has decided to only pay outstanding debts in capital construction arising before its time; at the same time, encouragement of organizations and individuals to make direct investment or investment in the form of public-private partnership for socio-economic infrastructure and public-service provision projects (Nguyen, 2012). This law is promulgated to drastically to innovate operation of planning and investment. Especially, the Vietnam Public Investment Law 2014 institutionalizes process of determination on investment policy (Vietnam News Agency, 2015). According to leaders of Ministry of Planning and Investment, this law will contribute to complete, create uniform legal system, synchronized in all phases, activities and the public investment management process of all public capital investment sources (Pham, 2013).

Besides, the Law also details some public investment sectors such as investment in socio-economic infrastructure programs and projects; investment to serve activities of state agencies, non-business units, political organizations and socio-political organizations; investment in and support of the provision of public-utility products and services and state investment in projects to be implemented in form of public-private partnership. Depending on their importance and size, public investment projects shall be classified into national important projects; group-A, group-B and group-C projects (Quang Dong, 2014). A national important project is an independent investment project or a cluster of closely linked works which being financed by public investment funds of VND 10 trillion or more; exerting great environmental impacts or having the latent possibility of exerting serious environmental impacts, including nuclear power plants; using land requiring change of use purpose of land of a national park; a nature reserve; a protected landscape area (Tuong Thuy, 2014).

The public investment activities must assure publicity and transparency (Anh Mai, 2014). Management of the use of public investment funds according to regulations applicable to each funding source; assurance of concentrated, synchronous, quality, efficient, effective investment and resource balancing capability; avoidance of losses and waste; conformity with national socio-economic development strategy and five-year socio-economic development plans, and socio-economic development and sectorial development master plans (Jake, 2015).
2. Overview the content of Vietnam Public Investment Law

2.1. Investment in public sectors and rules of public investment management

- **Investment in public sectors**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Investment in socio-economic infrastructure programs and projects</td>
</tr>
<tr>
<td>2</td>
<td>Investment in ancillary facilities for regulatory agencies, public service providers, political institutions and socio-political organizations</td>
</tr>
<tr>
<td>3</td>
<td>Investment and assistance in public product and service supply activities</td>
</tr>
<tr>
<td>4</td>
<td>Governmental investment in projects to be executed in the form of a public-private partnership</td>
</tr>
</tbody>
</table>

- **Rules of public investment management**

  The public investment management will help to observe legal regulations on the management and use of the budget capital for public investment. It conform to socio-economic development strategy, five-year socio-economic development plan, socio-economic development planning and sectorial development planning; exercise proper rights and responsibilities of State management agencies, organizations and individuals involved in the management and use of the budget capital for public investment (Francesca & Susana, 2015). It also manages the use of the budget capital for public investment according to appropriate regulations on each capital source; ensure sufficiency, consistency, cost efficiency, effectiveness and capability of balancing all relevant resources for public investment activities; avoid any possible loss and mismanagement; ensure the public disclosure and transparency for public investment activities; as well as encourage organizations and individuals to carry out direct investment or investment activities in the form of public-private partnership for socio-economic infrastructural and public utility development projects.

2.2. Classification of public investment projects

- **Classified methods**

  Depending on the nature of public investment projects, they are classified into the followings two types: (i) construction projects such as new construction, renovation, upgradation and expansion of existing investment and construction projects, including the procurement of assets, devices and equipment; (ii) non-construction projects such as asset procurement; receipt of the disposition of land use right; purchase, repair and upgradation of equipment and machinery; and other projects that are not subject to (i) regulations. Basides that, depending
on the significance and size of public investment projects, they are classified into national important projects; Group-A, Group-B and Group-C projects which conform to the regulated criteria (World Bank, 2012).

- Particular types of public investment projects
  
  a. National important projects

  National important projects are independent investment projects or a cluster of closely combined projects which meet one of five following criteria: (i) using a sum of above VND 10,000 billion as the budget capital for public investment; (ii) creating or facing the possibility of creating substantial impacts on the environment, including nuclear power plants or use of a land parcel that requires the conversion of land use purpose such as a national park; a wildlife sanctuary; a protected landscape area; a forest covering an area of above 50 hectares that serves the purpose of scientific research and experiment; a protection forest covering an area of above 500 hectares which is aimed at barricading wind flow, sand, wind wave and encroaching on the sea as well as protecting the environment; a production forest covering an area of above 1,000 hectares; (iii) utilizing a land parcel, covering an area of 500 hectares, which requires the conversion of land use purpose from the land parcel used for wet rice agriculture with more than two crops; (iv) migrating and resettling more than 20,000 residents at mountainous regions and more than 50,000 residents at other regions; (v) other projects that require the application of special regulations and policies, which are subject to the National Assembly’s decisions.

  b. Criteria for Group-A projects

  - Regardless of the total investment, such projects are classified according to following criteria: projects located in the vicinity of special national sites; projects located at extremely important areas in terms of national defense and security according to legal regulations on national defense and security; national defense and security projects that are characterized as the state secrets; hazardous substance and explosive manufacturing projects; infrastructural construction projects for industrial, processing and exporting zones.

  - Projects financed by the total investment amount of more than VND 2,300 billion and classified by the following sectors: traffic infrastructure, including wharfs at the sea or river, airport, railroads and national highways; power generation industry; oil and gas extraction; chemical, fertilizer and cement; mechanical engineering and metallurgy; mineral extraction and processing; residential construction;

  - Projects financed by the total investment amount of more than VND 1,500 billion and classified by following sectors: traffic infrastructure; irrigation; water supply and drainage
and technical infrastructure; electrical engineering; communication and electronic device manufacturing; pharmaceutical chemistry; material production; mechanical construction; post and telecommunications.

- Projects financed by the total investment amount of more than VND 2,300 billion and classified by the following sectors: agriculture, forestry and aquaculture; national park and wildlife sanctuary; technical infrastructure for new urban zones; industrial sector.

- Projects financed by the total investment amount of above VND 800 billion and classified by the following sectors: health care, culture and education; scientific research, information science, radio and television broadcasting; treasure; tourism and sport; civil construction;

c. Criteria for Group-B projects

There are 4 types as following: Projects classified by the sectors stipulated in above 2nd item and financed by the total investment amount ranging from VND 120 billion to below VND 2,300 billion; Projects classified by the sectors stipulated in above 3rd item and financed by the total investment amount ranging from VND 80 billion to below VND 1,500 billion; projects classified by the sectors stipulated in above 4th item and financed by the total investment amount ranging from VND 60 billion to below VND 1,000 billion; Projects classified by the sectors stipulated in above 5th item and financed by the total investment amount ranging from VND 5 billion to below VND 800 billion.

d. Criteria for Group-C projects

There are 4 types as following: Projects classified by the sectors stipulated in above 2nd item and financed by the total investment amount ranging below VND 120 billion; Projects classified by the sectors stipulated in above 3rd item and financed by the total investment amount ranging below VND 80 billion; projects classified by the sectors stipulated in above 4th item and financed by the total investment amount ranging below VND 60 billion;Projects classified by the sectors stipulated in above 5th item and financed by the total investment amount ranging below VND 45 billion.

3. The articles affected to public sector accounting in Vietnam

3.1. The transparency in investment and accounting

Contents that require the public disclosure and transparency in public investment activities are composed of: (a) policies, laws and the introduction of such policies and laws on the management and use of the budget capital for public investment; (b) principles, criteria and allotment of the budget capital for public investment activities; (c) principles, criteria and bases for the determination of project portfolio in mid-term and annual public investment
plan; (d) planning, proposal and program for public investment activities at local areas where project sites are located; allotment of the budget capital for specific public investment programs, which depends much on each fiscal year, progress of execution and disbursement of project fund; (e) project portfolio throughout local areas where project sites are located, including size, total investment amount, schedule and construction site; evaluation report on common effects of such projects on local areas where project sites are located (James & Holger, 2015).

3.2. The related expenses
Expenses incurred from formulation, appraisal, supervision, monitoring, evaluation and inspection of public investment plans, programs and projects are proceeded by following procedures:

- Expenses incurred from the formulation and appraisal of report on investment intentions for national target programs or public investment programs funded by allocated expenditures from the state budget granted to the agency and unit in charge of these tasks.

- Expenses incurred from the formulation and appraisal of pre-feasibility study report and report on investment intentions, financed by the fund for the preparation of investment projects.

- Expenses incurred from the formulation and appraisal of public investment plans funded by allocated expenditures or current expenditures from the state budget granted to the agency or unit in charge of these tasks.

- Expenses incurred from the supervision, monitoring and evaluation of public investment plans, programs and projects funded by allocated expenditures or current expenditures from the state budget granted to the agency or unit in charge of these tasks.

- Expenses incurred from public investment plans’ inspection, programs or projects funded by current expenditures allocated from the state budget to the agency or unit in charge of this task.

- In respect of public investment programs and projects financed by ODA funds and overseas concessional loans, foreign donors are encouraged to provide financial support to cover these expenses as regulated.
### 3.3. Other articles effect on Vietnamese accounting

<table>
<thead>
<tr>
<th>Items</th>
<th>Regulated in Law 2015</th>
<th>To accounting regime</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjects controlled by law</td>
<td>public investment includes investment in socio-economic infrastructure programs and projects; investment serving activities of state agencies, non-business units, political organizations and socio-political organizations; investment in and support of the provision of public products and services; and state investment in public-private partnership projects</td>
<td>The same as subjects, such as accountants from administration and non-production units attending the training workshop was provided with guidelines stipulated at the Decision 19 for the year 2006 on how to make accounting treatments for new economic activities that have arisen and will arise</td>
</tr>
<tr>
<td>Budgets</td>
<td>Public investment funds include funds from the state budget, funds from national and government bonds and municipal bonds, official development assistance loans, concessional loans of foreign donors, state development investment credit, retained revenues for investment not yet included in the state budget balance and other loans borrowed by local budgets for investment purposes (Ringa &amp; Kaide, 2015)</td>
<td>including accounting for receiving and using funds at non-production units which follow the financial autonomy mechanism and at state agencies which follow mechanism on autonomy and self-responsibility for using permanent staff and administrative expenditures; accounting for production and business activities; tax accounting with breakdown of each tax line at units engaging in production and business activities and agencies implementing assistance projects and enjoying VAT refund, business income tax accounting</td>
</tr>
<tr>
<td>Timing for preparation of project and planning</td>
<td>Stipulation on investment planning, which should be made on a five-year basis instead of annual plans in the past. The move is in accordance with the country’s five-year socio-economic development plans, which will facilitate the allocation of investment resources and help ministries and localities make suitable investment decision; maximize the efficiency of public investment, especially amid limited capital sources, and to facilitate transparent use of the State and local budget, admitting that other overall</td>
<td>Financial statements of accounting units engaged in State budget revenue and expenditure activities shall be made at the end of monthly, quarterly and annual accounting periods. Financial statements of administrative or non-business accounting units or organizations using the State budget shall be made at the end of the quarterly and annual accounting periods. The budget settlement reports of accounting units engaged in State budget revenue and expenditure activities shall be the revised financial statements of the</td>
</tr>
</tbody>
</table>
4. Conclusion

The 2015 Law on Public Investment can be considered a revolution in the management of public investment. The law provides a consistent legal framework on the management and use of public investment resources, and on overcoming constraints created by the previous public investment law. The new law has some strengths, including preventing entities from making casual, subjective decisions. As all know, public investment uses taxpayers' money. So investment regulations must be tight and strict, and follow prescribed administrative procedures. For example, the first chapter of the law covers rights and obligations of Government agencies and offices, particularly individuals engaged in public investment projects. Another progressive point in the 2015 law is that it will help eliminate the problem of fragmented, wasteful and delayed completion of projects. The law also gives specific procedures for all projects. The law also emphasizes a pre-requisite in which entities must have money available to implement the project and show the project's priority level as it is prescribed in the Public Investment Law. People is confident that if all ministries, sectors and localities strictly abide by the law, public investment projects will be implemented efficiently and successfully. The development of a midterm investment plan will help ministries, sectors and localities be proactive in developing their plans for accounting activities, with the objective of creating strong links between public investment plans and other socio-economic development plans in the next five years. This is a good and progressive model that helps accountants use our limited resources efficiently.
REFERENCES


BRAND EFFECTS ON FIRMS’ PERFORMANCE BY INDUSTRY

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ABSTRACT

The purpose of this study is to make clear that each industry has different brand effects on firms’ performance. Keller (1998, 2008) proposed a theory of ‘Customer Based Brand Equity’ and suggested brand awareness, favorable brand association, and unique brand association as sources of the brand equity. Based on the theory, I selected as brand strength index, brand awareness ratio, favorability of brand ratio, and unique attractiveness of brand ratio from a survey called ‘Brand Japan’ published every year. This survey is conducted through internet and 50 brands are shown for each person. For each brand questions are asked if he/she knows the brand, if he/she likes the brand, and if he/she thinks that the brand has uniqueness which other brands don’t have. As firms’ performance, return on asset (operation profit divided by total asset) is used. I analyzed the two variables the brand strength and ROA by structural equation modeling (SEM). More concretely, two empirical studies are conducted; the first one is to compare the standardized regression coefficient between a group made of alcoholic drink and soft drink and a group of the other industries. It is proved that there is variance in the coefficient between the two groups, meaning that the group of alcoholic drink and soft drink has larger brand effects on firms’ performance than the other industries.

The second study is to compare 11 industries which have more than 60 samples from all the industries except bank, insurance, and securities. Non-manufacturing industries such as retail, wholesale, and service have high coefficient and larger brand effects on firms’ performance as shown below. This implies that firms in these industries should invest in brand building, particularly in unique brand association which affects firms’ performance.
1. Introduction

These days importance of brand, which is one of intangibles, has been recognized in Japan. In order to encourage industries in rural areas, there are many cases that brand names are given to products in the rural areas. The purpose of branding is to differentiate the products from other similar products, which makes possible to increase sales volume and to set higher prices on the products. In addition to sales volume and higher prices, effects of brand are to exploit new markets by synergy, to secure sales network, to reduce advertising expenses, to give income to companies by licensing brands and by selling brands (Ministry of Economy, Trade and Industry (METI) Kigyo Hosei Kenkyukai 2002). Looking at the academic studies in the past, Aaker (1991) and Keller (1998, 2008) also raised the effects of brand on companies. Aaker (1991) suggested that brand provides values to firms by enhancing efficiency and effectiveness of marketing programs, brand loyalty, prices/margins, brand extensions, trade leverage, and competitive advantage. Keller (2008) insisted that strong brand provides ten advantages to firms.

There are previous studies that brand provides positive effects on firms’ performance and on share’s performance. According to the recent study of Fukuda (2014), out of the sources of brand equity raised by Keller (1998, 2008), ‘unique brand association’ affects firms’ performance. Keller (1998, 2008) raised brand awareness, strong, favorable, and unique brand association as the sources of brand equity. However, this paper deals with all the Japanese industries, and there is no analysis about brand effects by each industry.

Are the effects of brand on firms’ performance the same for all the industries? There are opinions that the effects are different by industry. For example, Interbrand announcing global top 100 brands every year shows that there are products and services in which a brand role is large in purchase.

This paper aims at making clear that there is variance in brand effects on firms’ performance by industry. If we can find out the industries in which brand effects are large, we can say that firms belonging to the industries should invest in brand building. This will also lead to finding out views of customers and of internal process to reach the financial results in balanced scorecards.

2. Reviewing the Literature and Establishing Hypothesis

2.1. Reviewing the literature

Let me review the empirical studies about brand effects on firms’ performance.
Aaker and Jacobson (2001) showed that change in attitude to brand (like ~ dislike) provides positive effects on ROE afterwards.

Kim et al. (2003) made clear that out of the components of brand equity, brand loyalty, brand awareness, and brand image are positively associated with sales per hotel room based on survey of Korean luxury hotels.

Smith and Wright (2004) indicated that using data of personal computer firms during 1994 and 2000, brand loyalty of customers improves average prices, sales growth, and ROA.

Verbeeten and Vijn (2010) showed that differentiation out the four pillars of Young & Rubicam provides positive impacts on ROI (EBIT/total asset) and on operating cash flow using data of 89 brands of Dutch firms in 1997, 2000, and 2003.

Fukuda (2014), based on ‘customer based brand equity’ of Keller (1998, 2008), picked up brand awareness, favorable brand association, and unique brand association as sources of brand equity. As index for them he selected brand awareness ratio, favorability of brand ratio, and unique attractiveness of brand ratio from ‘Brand Japan’ published every year. As firms’ performance he used return on asset (ROA, operating profit divided by the total asset) in the same year and next year, and return on sales (ROS, operating profit divided by sales) in the same year and next year. His study showed that unique brand association expressed by unique attractiveness of brand provides positive effects on firms’ performance. Concept of ‘unique’ is similar to concept of differentiation. Verbeeten and Vijn (2010) and Bergesen (2002) showed that differentiation of Young and Rubicam’s brand assets provides positive effects on firms’ performance.

These studies are about specific industries or about all the industries except financial industries, but are not comparing plural industries.

Next, let us review the studies about brand effects among industries or among products.

Simon and Sullivan (1993) calculated ratio of brand values occupying the intangible asset value by each US industry (SIC). According to this, the highest ratio is apparel’s 61%, the 2nd highest is publishing’s 58%, and the 3rd highest is tobacco’s 46%. The lowest ratios are Stone/Glass/Clay, Metals, Paper and allied products.

Fischer et al. (2010) investigated importance of brand for 20 products in five countries including Japan. The importance of brand was measured by seven scale questions when those products were purchased. In Japan the highest score
of brand importance was 3.81 of medium-sized vehicles and the lowest score was 2.21 of paper tissues. However, there was no proof that there is variance among the scores.

Interbrand showed role of brand index (RBI) in purchase factors of status, trust, perceived quality, price and so on when they calculate brand values. According to Tanaka (2006), in Japan the RBIs are 90% for perfume, 85% for beer, 70% for food, 60% for automobiles, 50% for household electrical, 40% for financial services, 20% for medicines, and 10% for industrial materials. According to Lindemann (2004), in the US, RBIs are 95% for perfume, 85% for beer, 55% for household applications, 40% for financial services, 30% for hotel, and 10% for bulk chemicals.

As these papers show, study about variance in brand effects among industries or products are limited to brand value ratio in the intangible asset, brand importance in the purchase, or role of brand in the purchase. However, there are scarce studies about variance in brand effects on firms’ performance by industry, as far as I know.

2.2. Establishing hypothesis

The top two of Interbrand RBI at the time of purchase in Japan and the US are perfume, alcoholic drinks, and soft drinks. It is also assumed that brand in the three industries will give larger effects on firms’ performance. Therefore, I set the following hypothesis.

H1: Brand in perfume, alcoholic drinks, and soft drinks, compared with the other industries, provides larger effects on firms’ performance.

The reasons for selecting corporate brand, not product brand will be explained in the next chapter of research design.

Secondly, we have to measure brand effect on firms’ performance in other industries than perfume, alcoholic drinks, and soft drinks. I set the following hypothesis.

H2: There is variance in brand effects on firms’ performance among industries.

3. Research Design

In order to study these hypotheses, I will proceed the study as below. Following the research way of Fukuda (2014), I will use ‘brand awareness’, ‘brand favorability’ and ‘unique attractiveness of brand’ in “Brand Japan”, as the index to measure the brand strength. As Keller (1998, 2008) suggested,
brand awareness, favorable brand association, and unique brand association are sources of brand equity and ‘brand awareness’, ‘brand favorableness’ and ‘unique attractiveness’ in “Brand Japan” are variables to represent them.

As variables of firms’ performance, I will use return on asset (ROA, operating profit divided by the asset) in the same year and the next year and return on sales (ROS, operating profit divided by sales) in the same year and the next year. The reason for selecting the operating profit is that effects of brand are increase in sales, higher price, efficient marketing expense etc, to appear in the operating profit. Some papers in the past used return on equity (ROE) to measure the firms’ performance, but the purpose of this paper is to make clear the impact of brand on firms’ performance, not on firms’ equity. ROE is affected by corporate finance of mixing capital and liquidity and corporate tax management. Therefore, ROA is better than ROE to measure the brand effects.

The indices of brand strength and firms’ performance will be analyzed by Structural Equation Model (SEM). The software of SEM is AMOS. The model is as figure 1. There are data of plural years, so dummies for years are included.

Figure 1: Model for brand strength and firms performance

Before conducting group analysis by industry for hypothesis 1 and hypothesis 2, I will analyze the total samples.

Regarding hypothesis 1, number of samples is not large enough. Perfume, alcoholic drink, and soft drink are treated as one industry. The firms of the other industries are treated as another industry. Simultaneous analysis of two groups will be made to check if the regression coefficients between the industries are statistically different.
Regarding hypothesis 2, multi group analysis of SEM will be made and check if there is variance in the standardized regression coefficient among industries. Data used is as follows.

3.1. The indices of brand strength
Brand awareness, brand favorability, and unique attractiveness are taken from “Brand Japan”, which were published annually. The data I use is BtoC survey during 2005 to 2011. The survey is shown in %, ratio of those who answered that he/she knows a brand. Twenty brands are shown to each person. The survey is conducted through internet every year. Every year about 30,000 persons answered to the questionnaires regarding the top 1000 brand. Some of the brands are changed, but the same questions were asked. In this study, corporate brands only are chosen and product brands are out of study. This is because it is unclear for outside persons that how much each product brand affects the total firm performance.

3.2. Financial Figures
To calculate ROA and ROS, operating profit, the total asset, and sales are taken from “Nikkei NEEDS Corporate Financial Data”. Consolidated figures are taken and if there are not consolidated data, non consolidated figures are taken. Financial figures less than 12 months are removed.

3.3. Industry
There are three candidates for industry category, Nikkei Gyoshu Bunrui (Nikkei industry category), Tosho Gyoshu Bunrui (Tokyo Stock Exchange industry category), and Brand Japan industry category. The outline is shown in Table 1.

Table 1: Kinds of industry category

<table>
<thead>
<tr>
<th>Categories</th>
<th>Nikkei Gyoshu Bunrui</th>
<th>Tosho Gyoshu Bunrui</th>
<th>Brand Japan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large (manufacturing, non-manufacturing)</td>
<td>Large (10 industries)</td>
<td>Large (33 industries)</td>
<td>57 industries</td>
</tr>
</tbody>
</table>
When I analyze each industry, ROA as firms’ performance is used. ROA is operating profit divided by total asset. To make adequate analysis of each industry, manufacturing and non-manufacturing should not be included in one industry, as total asset of manufacturing and non-manufacturing are quite different. From this viewpoint, “Brand Japan” industry category is not adequate because it includes both manufacturing and non-manufacturing in one industry. “Tosho Gyoshu Bunrui” does not have small category, which may not be convenient for analysis in detail. Therefore, “Nikkei Gyoshu Bunrui” is the most adequate industry category.

When “Nikkei Gyoshu Bunrui” is not detail enough, for further small category, “Brand Japan industry category” will be used.

Bank, insurance, and securities are out of this study, because financial figures are so different from the other industries.

4. Results
4.1. Analysis of the total industry
4.1.1. Statistics

Basic statistics of indices of brand strength and of financial figures are shown in Table 2.

<table>
<thead>
<tr>
<th></th>
<th>Brand awareness</th>
<th>Brand favorability</th>
<th>Unique attractiveness</th>
<th>ROA next year</th>
<th>ROS next year</th>
<th>ROA same year</th>
<th>ROS same year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>86.3%</td>
<td>24.2%</td>
<td>9.6%</td>
<td>5.6%</td>
<td>6.1%</td>
<td>5.8%</td>
<td>6.2%</td>
</tr>
<tr>
<td>Median</td>
<td>94.6%</td>
<td>22.2%</td>
<td>8.4%</td>
<td>5.0%</td>
<td>4.9%</td>
<td>5.1%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Minimum</td>
<td>17.0%</td>
<td>0.7%</td>
<td>0.0%</td>
<td>-41.7%</td>
<td>-113.0%</td>
<td>-41.7%</td>
<td>-113.0%</td>
</tr>
<tr>
<td>Maximum</td>
<td>100.0%</td>
<td>68.6%</td>
<td>49.7%</td>
<td>43.2%</td>
<td>58.9%</td>
<td>46.2%</td>
<td>63.6%</td>
</tr>
<tr>
<td>Std. dev.</td>
<td>17.4%</td>
<td>13.7%</td>
<td>6.6%</td>
<td>5.7%</td>
<td>8.1%</td>
<td>5.7%</td>
<td>8.3%</td>
</tr>
</tbody>
</table>
Correlation coefficients among the variables are shown in Table 3. Brand favorability and unique attractiveness have high correlation. Regarding financial figures, there is high correlation coefficient of 0.7 between ROA of the next year and ROS of the next year, ROA of the same year and ROS of the same year.

**Table 3: Correlation coefficient**

<table>
<thead>
<tr>
<th></th>
<th>Brand awareness</th>
<th>Brand favorability</th>
<th>Unique attractiveness</th>
<th>ROA next year</th>
<th>ROS next year</th>
<th>ROA same year</th>
<th>ROS same year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Favorability</td>
<td>0.6284</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unique a.</td>
<td>0.4755</td>
<td>0.7682</td>
<td>1.0000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROA n. y.</td>
<td>-0.0222</td>
<td>0.0566</td>
<td>0.1711</td>
<td>1.0000</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROS n. y.</td>
<td>-0.0047</td>
<td>-0.0176</td>
<td>0.0761</td>
<td>0.748</td>
<td>6</td>
<td>1.0000</td>
<td></td>
</tr>
<tr>
<td>ROA s. y.</td>
<td>-0.0072</td>
<td>0.0666</td>
<td>0.1537</td>
<td>0.629</td>
<td>4</td>
<td>0.4474</td>
<td>1.0000</td>
</tr>
<tr>
<td>ROS s. y.</td>
<td>0.0231</td>
<td>-0.0205</td>
<td>0.0628</td>
<td>0.453</td>
<td>6</td>
<td>0.5041</td>
<td>0.7429</td>
</tr>
</tbody>
</table>

Number of samples is 2101. This is divided into each industry in Table 4. For the research of hypothesis 2, industry more than 60 samples will be objective of the study, which are 11 industries.

**Table 4: Number of sample by industry**

<table>
<thead>
<tr>
<th>order</th>
<th>Nikkei Gyoshu Bunrui: Middle name</th>
<th>code</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Retail</td>
<td>45</td>
<td>366</td>
</tr>
<tr>
<td>2</td>
<td>Service</td>
<td>71</td>
<td>337</td>
</tr>
<tr>
<td>3</td>
<td>Food</td>
<td>1</td>
<td>237</td>
</tr>
<tr>
<td>4</td>
<td>Electric appliance</td>
<td>23</td>
<td>180</td>
</tr>
<tr>
<td>5</td>
<td>Medicine</td>
<td>9</td>
<td>108</td>
</tr>
<tr>
<td>6</td>
<td>Other manufacturing</td>
<td>33</td>
<td>104</td>
</tr>
<tr>
<td>7</td>
<td>Communication</td>
<td>65</td>
<td>94</td>
</tr>
</tbody>
</table>
4.1.2. Results of SEM

The results of the total industry are shown in Table 5. Since multi collinearity is observed between brand favorability and unique attractiveness, brand favorability is removed. Brand awareness does not show statistically significant relation with the four financial figures, but unique attractiveness does. This is in line with the study of Fukuda (2014). In other words, out of indices of brand strength, it is unique attractiveness that has positive relationship with the four financial figures. This indicates that unique brand association represented by unique attractiveness affects positively firms’ performance.

Year dummies of 2009 and 2010 show statistically significant figures of negative with the four financial figures. The results of the Lehman Brothers shock appeared in these two years.

Because CFI (Comparative Fit Index) is 0.991 and RMSEA (Root Mean Square Error of Approximation) is 0.072, the model is not rejected. Usually GFI (Goodness of Fit Index) and/or AGFI (Adjusted Goodness of Fit Index) is used. In this study CFI is used, because AMOS has prediction function of missing value by maximum likelihood estimation (Yamamoto and Onodera 2002 p.46).

Table 5: Results of SEM for the total industries

<table>
<thead>
<tr>
<th></th>
<th>unstandardized regression coefficient</th>
<th>standardized regression coefficient</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unique attractiveness</td>
<td>0.139</td>
<td>0.163</td>
<td>1%</td>
</tr>
<tr>
<td>→ ROA next year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unique attractiveness</td>
<td>0.083</td>
<td>0.068</td>
<td>1%</td>
</tr>
<tr>
<td>→ ROS next year</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unique attractiveness</td>
<td>0.124</td>
<td>0.144</td>
<td>1%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>total</td>
<td>36 industries</td>
<td>2101</td>
<td></td>
</tr>
</tbody>
</table>
Table 5 shows that unique attractiveness has statistically significant positive figures with all the financial figures, but the largest regression coefficient is ROA of the next year. For analyzing comparison of 11 industries, ROA of the next year will be used.

4.2. Two group analysis

In order to study hypothesis 1, two group analysis of SEM was conducted; a group consisting of perfume, alcoholic drink, and soft drink and another group consisting of the other industries.

The results are shown in the upper part of Table 6. Group of perfume/alcoholic drink/soft drink’s standardized regression coefficient of unique attractiveness to ROA of the next year is 0.322, which is higher than that of Group of the other industries’ 0.160. However, test for variance of the two figures are not statistically significant. Standardized regression coefficients of perfume, alcoholic drink, and soft drink are -0.298, 0.293, and 0.481 respectively. Perfume’s coefficient is negative, contrary to assumed high positive figures.

Therefore, perfume is removed from the group, and formed a new group consisting of alcoholic drink and soft drink. This time the new group is compared with the other industries. The results are shown in the lower part of Table 6. Group of alcoholic drink/soft drink’s standardized regression coefficient is 0.460, which statistically higher than that of the other industry 0.165.

Table 6: Results of two group analysis

<table>
<thead>
<tr>
<th></th>
<th>Perfume/Alcoholic drink/Soft drink</th>
<th>Other industries</th>
<th>Test for variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non standardized regression coefficient</td>
<td>0.187</td>
<td>0.140</td>
<td></td>
</tr>
<tr>
<td>Standardized regression coefficient</td>
<td>0.322</td>
<td>0.160</td>
<td>-0.778</td>
</tr>
</tbody>
</table>
### Table 7: Basic statistics of two groups

<table>
<thead>
<tr>
<th></th>
<th>Alcoholic drink/Soft drinks</th>
<th>Other industries</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N</strong></td>
<td>70</td>
<td>2031</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>13.2%</td>
<td>9.5%</td>
</tr>
<tr>
<td><strong>Median</strong></td>
<td>11.4%</td>
<td>8.3%</td>
</tr>
<tr>
<td><strong>Minimum</strong></td>
<td>5.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td><strong>Maximum</strong></td>
<td>30.3%</td>
<td>49.7%</td>
</tr>
<tr>
<td><strong>Std. Dev.</strong></td>
<td>6.3%</td>
<td>6.6%</td>
</tr>
</tbody>
</table>

From the above analysis, hypothesis 1 is not supported, but removing perfume, Group of alcoholic drink and soft drink’s brand effects on firms’ performance are larger than those of the other industries.

#### 4.2.3. Multi Group Analysis

In order to study hypothesis 2, multi group analysis of SEM is conducted. As a result, I obtained standardized regression coefficients of the 11 industries of which samples are more than 60. Before analyzing them, basic statistics of the 11 industries are shown in Table 8.

<table>
<thead>
<tr>
<th></th>
<th>Alcoholic drink/Soft drink</th>
<th>Other industries</th>
<th>Test for variance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Non standardized regression coefficient</strong></td>
<td>0.249</td>
<td>0.143</td>
<td></td>
</tr>
<tr>
<td><strong>Standardized regression coefficient</strong></td>
<td>0.460</td>
<td>0.165</td>
<td>-1.655 *</td>
</tr>
</tbody>
</table>

*: 10%
Table 9 shows the regression coefficients of the 11 industries. From Table 9, high standardized regression coefficients are non-manufacturing such as retail, wholesale, and service.

### Table 9: Regression coefficient of ‘unique of brand’ to ROA of the next year

<table>
<thead>
<tr>
<th>code</th>
<th>industry</th>
<th>Standardized regression coefficient</th>
<th>Non standardized regression coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Retail</td>
<td>0.323</td>
<td>0.322</td>
</tr>
<tr>
<td>d</td>
<td>Wholesale</td>
<td>0.278</td>
<td>0.201</td>
</tr>
<tr>
<td>b</td>
<td>Service</td>
<td>0.266</td>
<td>0.210</td>
</tr>
<tr>
<td>e</td>
<td>Other manuf.</td>
<td>0.255</td>
<td>0.180</td>
</tr>
<tr>
<td>c</td>
<td>Medicine</td>
<td>0.173</td>
<td>0.207</td>
</tr>
<tr>
<td>f</td>
<td>Food</td>
<td>0.115</td>
<td>0.047</td>
</tr>
<tr>
<td>g</td>
<td>Automobile</td>
<td>0.072</td>
<td>0.032</td>
</tr>
<tr>
<td>i</td>
<td>Communication</td>
<td>0.021</td>
<td>0.011</td>
</tr>
<tr>
<td>h</td>
<td>Precision machine</td>
<td>0.016</td>
<td>0.015</td>
</tr>
<tr>
<td>k</td>
<td>Chemical</td>
<td>0.000</td>
<td>-0.059</td>
</tr>
<tr>
<td>j</td>
<td>Electric appliance</td>
<td>-0.100</td>
<td>0.000</td>
</tr>
</tbody>
</table>

I check if variance of these standardized regression coefficient is statistically significant. In the case of multi group analysis of SEM, a different method of variance test than two group analysis should be conducted, that is, test using equality of two models (Toyoda 2007). To explain more in detail, for example, I set ‘a’ for the path of retail industry from unique attractiveness to ROA next year. In the same way, I set ‘b’ for path of service industry, and I compare a model
with equality of $a=b$ with a model without $a=b$. Lower AIC (Akaike’s Information Criterion) shows a better model. This comparison continues from $a=b$ to $k=j$ covering all the 11 industries. The summarized results are shown in Table 10. Models with lower AIC are grey. In the case model without equality is better than with equality, it means that there is variance between the two industries.

Table 10: Summary of models with and without equality

<table>
<thead>
<tr>
<th>equality</th>
<th>w/o equality</th>
<th>with equality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>835.91</td>
<td>834.09</td>
</tr>
<tr>
<td>a=b</td>
<td>835.91</td>
<td>834.09</td>
</tr>
<tr>
<td>a=e</td>
<td>835.91</td>
<td>834.09</td>
</tr>
<tr>
<td>a=c</td>
<td>835.91</td>
<td>834.09</td>
</tr>
<tr>
<td>a=f</td>
<td>835.91</td>
<td>834.09</td>
</tr>
<tr>
<td>a=g</td>
<td>835.91</td>
<td>834.09</td>
</tr>
<tr>
<td>a=i</td>
<td>835.91</td>
<td>834.09</td>
</tr>
<tr>
<td>a=h</td>
<td>835.91</td>
<td>834.09</td>
</tr>
<tr>
<td>a=k</td>
<td>835.91</td>
<td>834.09</td>
</tr>
</tbody>
</table>

These results are summarized in the form of industry to industry in Table 11. Statistically between the following industries, there is variance in standardized regression coefficient and brand effects on firms’ performance.

1) Retail industry has higher brand effects on firms’ performance than service, other manufacturing, food, automobile, communication, precision machine, chemical, and electric appliance.

2) Wholesale and service have higher brand effects than food, automobile, communication, precision machine, chemical, electric appliance.

3) Medicine industry has higher brand effects than communication and electric appliance.

4) Industries of food, automobile, and communication have higher brand effects than electric appliance industry.
Therefore, hypothesis 2 is partially supported. Out of 11 industries, the above 1) 2) 3) are the industries which have variance in brand effects (unique attractiveness) on firms performance (ROA next year).

Table 11: Variance of standardized regression coefficient of ‘unique attractiveness’ to ROA of the next year in each industry

<table>
<thead>
<tr>
<th>code</th>
<th>industry</th>
<th>Standardized regression coefficient</th>
<th>Non-standardized regression coefficient</th>
<th>Retail</th>
<th>W.sale</th>
<th>Service</th>
<th>Other Manuf</th>
<th>Medicine</th>
<th>Food</th>
<th>A.mobile</th>
<th>Comm</th>
<th>Precision machinery</th>
<th>Chemical</th>
<th>Electric appliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Retail</td>
<td>0.323</td>
<td>0.322</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>d</td>
<td>Wholesale</td>
<td>0.278</td>
<td>0.201</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>b</td>
<td>Service</td>
<td>0.266</td>
<td>0.210</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>e</td>
<td>Other manuf.</td>
<td>0.255</td>
<td>0.180</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>c</td>
<td>Medicine</td>
<td>0.173</td>
<td>0.207</td>
<td>no</td>
<td>yes</td>
<td>no</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>f</td>
<td>Food</td>
<td>0.115</td>
<td>0.047</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>g</td>
<td>Automobile</td>
<td>0.072</td>
<td>0.032</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>i</td>
<td>Communications</td>
<td>0.021</td>
<td>0.011</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>h</td>
<td>Precision m.</td>
<td>0.016</td>
<td>0.015</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>k</td>
<td>Chemical</td>
<td>0.000</td>
<td>0.000</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>j</td>
<td>Electric appl.</td>
<td>-0.100</td>
<td>-0.059</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
</tbody>
</table>

yes: there is variance. no: there is not variance.

5. Discussion

5.1. Hypothesis 1

Hypothesis 1 is based on the assumption that industries, whose RBI are large, will have large effects of brand on firms’ performance. As large RBI industries, perfume, alcoholic drink, and soft drink are chosen from Interbrand data of RBI in Japan and the US. However, the large RBI group’s standardized regression coefficient is not statistically larger than that of the other industries, because perfume’s standardized regression coefficient is negative. Looking at scatter gram of perfume, Shiseido, a top perfume company in Japan, has high unique attractiveness ratio, but has low ROA next year for several years. This makes the standardized regression coefficient negative. Perfume has large RBI at purchase, but its performance measured by ROA is not necessarily good. RBI only does not make firm performance.

5.2. Hypothesis 2

5.2.1. Standardized regression coefficient of non-manufacturing is larger than that of manufacturing.

What are reasons for non-manufacturing industries such as retail, wholesale, and service to have high standardized regression coefficient of unique
attractiveness to ROA next year? Keller (2008) suggests that because brand creates interest, patronage, and loyalty of consumers for store, higher margin, and increase in profit are generated. Brand makes an important role for retailers and distributors.

How about importance of brand to service industry? Kotler et al. (2002) raises intangibility and variability as characteristics of service. Service is less tangible than products, meaning that service is not possible to see, to taste, nor to touch. Service quality varies according to persons who provide service. Keller (2008) suggests that in order to address intangibility and variability, brand is particularly important to service because brand helps make abstract nature of services more concrete and provides meaning to different service.

5.2.2. Why is standardized regression coefficient of electric appliance industry negative?

Why is standardized regression coefficient of electric appliance -0.10, lowest among the 11 industries? Looking at scatter gram of electric appliance, its shape is downwards to left. Sony’ unique attractiveness has higher than other firms, but low ROA next year for several years. On the contrary, Brother Industries Ltd\(^1\), and Elecom co. Ltd\(^2\) have low unique attractiveness, but have high ROA next year for several years. It makes the standardized regression coefficient of electric appliance negative. It suggests that brand does not necessarily bring about good performance and other factors affect more to firms’ performance in electric appliance industry in Japan.

6. Conclusion

This study is to develop the past study on brand effects on firms’ performance and to make it clear that there is variance in brand effects on firms’ performance among the industries. Strength of brand is measured by brand awareness %, favorability %, and unique attractiveness % from “Brand Japan”, which represent brand awareness, favorable brand association, and unique brand association based on the Keller’s theory of customer based brand equity (Keller 1998, 2008). Firms’ performance is measured by ROA and ROS of the same year and the next year. After the study of the total industry, unique attractiveness %

\(^1\) Brother Industries Ltd. is a manufacturer of printers etc.
\(^2\) Elecom co. Ltd. is a manufacturer of PC peripherals
to ROA next year is chosen for industry by industry study because it has the largest standardized regression coefficient among four financial figures.

Two hypotheses were set to study if there is variance among the industries:
H1: Brand in perfume, alcoholic drinks, and soft drinks, compared with the other industries, give larger effects on firms’ performance.
H2: There is variance in brand effects on firms’ performance among industries.

The results of analysis are as follows.
Regarding H1, it was not statistically proved that there is variance between the group of perfume, alcoholic drink, and soft drink and the other industries, because perfume’s standardized regression coefficient was negative. After removing perfume industry, the group of alcoholic drink and soft drink and the other industries was compared. There is statistically variance between the two groups, meaning that the group of alcoholic drink and soft drink has higher brand effects on firms’ performance.

Regarding H2, 11 industries, whose samples are over 60, were selected. In order to test if there is variance in standardized regression coefficient among the industries, a model with equality of the coefficient and a model without equality of the coefficient were compared, and better models was judged based on AIC. The results are as below;
1) Retail industry has higher brand effects on firms’ performance than service, other manufacturing, food, automobile, communication, precision machine, chemical, and electric appliance.
2) Wholesale and service have higher brand effects than food, automobile, communication, precision machine, chemical, electric appliance.
3) Medicine industry has higher brand effects than communication and electric appliance.
4) Industries of food, automobile, and communication have higher than electric appliance.

These results show that non-manufacturing industry such as retail, wholesale, and service has higher standardized regression coefficient than the other industries. This suggests that in the industries of retail, wholesale, and service, brand measured by unique association has larger effects on firms’ performance. Implication is that firms of these industries should invest their resources in brand building, particularly in unique brand association.

I would like to touch upon the limitations and further research. This study is based on one survey, “Brand Japan”, though it consists of a lot of samples over
30,000 and questions are constant through years. Time span is during 2005 to 2011.

This study suggests that non-manufacturing industry such as retail, wholesale, and service has higher brand effects on firms’ performance. Keller suggested that brand is especially important to retail industry and service industry, however, further research is necessary to explore the reasons.
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AN EXPERIMENTAL INVESTIGATION OF THE EFFECT ON THE INFLUENCE OF CLIENT EXPLANATIONS OF HAVING A FORMER AUDIT PARTNER AS CLIENT SENIOR FINANCIAL OFFICER

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ABSTRACT

A major concern of regulators is the potential impairment of independence of the external auditors. This has resulted in a number of regulations regarding the relationships of auditors and their clients. It is considered by some that these restrictions may have created a conflict between independence and expertise. Of particular concern in this paper are the restrictions on the employment of previous audit partners in a senior management capacity by a continuing audit client. This paper reports the results of a study that experimentally examined whether auditors are more likely to have their judgments influenced by/to accept client explanations when the client representative providing those explanations is a former audit partner of the auditor’s firm.

The participants were presented with a scenario in which they, as the current audit engagement partner, were asked to discuss with the client’s senior financial officer (CFO), the potential impairment of goodwill on the client’s financial statements. There was information pro and con the recognition of impairment, requiring the participant to exercise professional judgment. The identity of the client’s senior financial officer was manipulated to be either a former audit partner of the firm (FAP), a former audit partner of another firm, or an individual whose previous experience was not explicitly specified. The results of the experiment showed that when arguments for considering goodwill to be not impaired were provided by a FAP, the current audit engagement partner was more likely to accept them. The level of judgment confidence expressed by the participants was similar whether the explanation was provided by former audit partner of the same firm or a different firm, and both were higher than in the condition where the explanation was provided by a CFO who had no affiliation with the auditors or another audit firm.

The implications of these results for the issue of independence versus expertise are discussed.
INTRODUCTION
Auditor independence is implicitly considered to be the sine qua non of the financial statement user’s perception of the value of auditing. Over 40 years ago, Mautz and Sharaf argued that in the absence of the highest level of independence, an auditor’s opinion is thought to be worthless (Mautz and Sharaf, 1961). Independence is often considered to be a necessary condition for professional skepticism. Regulators argue that lack of independence, with its resultant lack of professional skepticism, is the main cause of audit deficiencies (Franzel 2013). Both academic research (Hurt et al. 2013; Nelson 2009) and auditing standards (CPA Canada 2010; PCAOB 2003) stress the fundamental importance of professional skepticism in the performance of auditors.

However, some authors have adopted a contrary position, arguing that regulators have a one-dimensional view of audit quality, essentially equating audit quality with independence and ignoring other potential determinants of audit quality. Humphrey, Moizer and Turley (2006), Young (2006), and Jamal and Sunder (2011), suggest that the trade-off of independence for expertise should not be accepted without question. Kinney (2005) argues that regulation in the name of public interest is overprescribed.

This study is intended to speak to issues of independence and expertise. It experimentally examines the practice of audit clients employing a former partner of their current auditor as chief financial officer (CFO) following the PCAOB mandated cooling-off period (PCAOB 2002). It compares the influence of the CFO’s arguments in favor of goodwill not being impaired in the above situation with the situations where the CFO is a former partner of another BIG 4 firm, and where the CFO is not affiliated with a public accounting firm. The dependent measures are the likelihood of the current audit partner’s accepting the CFO’s arguments in favor of goodwill not being impaired, which can be interpreted as indicating the influence of independence, and the current audit partner’s confidence in that judgment, which is intended to capture the perceived expertise of the CFO.

The results of this study indicate that auditors are more likely to make a judgment that agrees with the client’s position when the CFO is a former engagement partner from their firm, and are more confident in their judgment when the CFO is a former Big 4 partner, whether from their own firm or another firm, than when the CFO has no affiliation with the auditors or another Big 4 firm.

BACKGROUND AND HYPOTHESES
Audit clients often employ a former partner of their current auditor as a senior financial executive officer. This “revolving door” practice has been examined by prior studies that largely focused on how financial reporting quality is affected by the recruitment of former partners as executive officers (Dowdell and Krishnan 2004; Menon and Williams 2004; Geiger et al. 2005; Lennox 2005; Geiger and North 2006). The evidence from those studies are mixed. For example, Geiger et al. (2005) and Geiger and North (2006) do not report greater abnormal accruals surrounding the period immediately prior to or following the hiring of senior financial executive officers (CFOs, VP-finance, controller) from their previous audit firm. However, Lennox (2005) finds that such ties are negatively associated with the issuance of going concern opinions.
Nevertheless, the greater concern about this practice is that it may present a potential threat to auditor independence. Audit failures in the early 2000’s caused regulators to be troubled by the practice of companies hiring individuals that worked on their audits or worked for their auditors. For example, Enron had hired both Richard Causey, the former engagement partner on the Enron account, as its executive vice president and chief accounting officer, and Jeffrey McMahon, the company's chief financial officer, from its auditor, Arthur Andersen (Herrick and Barrionuevo 2002). Global Crossings, which filed for bankruptcy amid allegations of improper accounting, had hired Joseph Perrone, the partner in charge of overseeing Global Crossing's audit, as its executive vice president for finance (Berman 2002).

Concerned that auditors are more willing to accommodate less conservative accounting policies in clients employing a former partner of their firm because of diminished skepticism, regulators started to impose a restriction on the employment with audit clients of former employees of their accounting firm. In the U.S., Section 206 of the Sarbanes-Oxley Act (2002), specifies that an accounting firm cannot perform an audit for a registrant if a chief executive officer, controller, chief financial officer, chief accounting officer, or any person serving in an equivalent position for the issuer, was employed by that registered independent public accounting firm and participated in any capacity in the audit of that issuer during the 1-year period preceding the date of the initiation of the current audit. Thus, because the employment in a financial reporting oversight role at an audit client of former audit engagement team members of an accounting firm within one year prior to the commencement of procedures for the current audit engagement would cause the accounting firm not to be independent with respect to that client, the Act required a "cooling off" period of one year before a member of the audit engagement team could begin working for the client in certain key positions.

Soon after, regulators in other countries followed suit. In Canada, independence standards (CPA Canada 2013) states that a firm shall not perform an audit engagement for a listed entity if a person who participated in an audit capacity in an audit of the financial statements of the entity performed by the firm is an officer of the entity or is in a financial reporting oversight role unless a period of one year has elapsed from the date that the financial statements were filed with the relevant securities regulator. In Europe, article 22A of directive 2014/56 (EC 2014) require member states to ensure that a period of at least two years must have elapsed before an audit engagement partner leaving the audit firm can take up any position at the audit client which involves the responsibility for fundamental management decisions and provides influence on the accounting policies and the preparation of the financial statements (e.g., CEO or CFO). The Australian two year ‘cooling-off’ period applies to a former partner who was a member of the audit team, regardless as to when the partner participated as a member of the audit team.

Beasley et al. (2000) cites several real-life examples of fraudulent companies where the current CFO had previous experience with the company's audit firm immediately prior to joining the company. However, aside from the anecdotal evidence, there is little evidence on actual damages to the financial reporting integrity process that have occurred following such a move. Research on the consequences of firms employing former employees of their auditor is limited. Parlin and Bartlett (1994) reports that, although not significant at the traditional level of .05 using the entire sample, auditors who knew that the controller was a former
manager with their CPA firm had a larger preliminary estimate of materiality than auditors who had no such knowledge. Lennox (2005) finds that companies receive clean audit opinions significantly more often when executives used to be employed by their companies’ audit firms and suggest that executive-auditor affiliations can impair audit quality.

Hurtt et al. (2013) could not identify studies that examine the impact of audit firm alumni serving as senior members of client management on an auditor’s skeptical judgment. Theoretically, this has been proposed as a possible source of influence on auditors’ ability to use professional skepticism in making judgments.

The basis for the argument that auditors’ independence is compromised when a former partner of the audit firm is employed as CFO of the audit client hinges on a behavioral motivation. In general, psychological research has found that decision-makers are more likely to accept the position of an expert advisor than a novice advisor (Harvey and Fischer 1997; Yaniv and Kleinberger 2000) and knowing the advisor from previous interactions is an important factor in accepting the position of the advisor (van Swol and Sniezek 2005; Feng and MacGeorge 2006). Kadous et al. (2013) find that auditors rely on a trust heuristic in assessing and weighting advice from advisors with whom they have a strong social bond. Indeed, they appear to substitute trust in a stronger social bond advisor for an objective assessment of the justifiability of the advice received. In turn, they weigh the advice relatively heavily when it comes from a stronger social bond advisor, even when it is not well justified. Hence, auditors could be more likely to trust former partners of their firm because of their perceived expertise and previous affiliation. Furthermore, as stated by Beasley et al. (2000), the remaining members of the audit team may be reluctant to question former audit firm colleagues who are now part of the client management team, particularly when the former auditor previously supervised the current audit team now responsible for the audit engagement. In this case, the current audit team members might over-rely on their trust and confidence in the reliability of the former engagement partner, overlook problems indicated by the audit evidence and fail to exercise the typical level of professional skepticism towards the judgments and decisions now being made by the former partner, who is now the client’s CFO.

This study examines auditors’ assessment of impaired goodwill at a client in three different scenarios: (1) the current CFO is the former engagement partner, (2) the current CFO has no affiliation with the auditors but is a former partner of a Big 4 firm, and (3) the CFO has no affiliation with the auditors or with any Big 4 firm. If auditors display less skepticism, it is expected that they will be less likely to question management’s arguments and therefore more likely to conclude that goodwill has not been impaired. Hence, in the first situation, auditors will place the greatest amount of trust in the former engagement partner because of the social bond with and level of competence of the information provider. Thus, they might be least skeptical about management’s assertion that goodwill has not been impaired. In the second situation, while there is no social bond between auditors and a former partner of another Big 4 firm, auditors might still place a substantial level of trust in the competence of the information provider and thus still conclude, though to a lesser extent, that goodwill has not been impaired. In the third situation, since the auditor has no social bond with, and less trust in the competence of the CFO, they might exercise the highest level of skepticism and thus be least likely to conclude that goodwill has not been impaired.
Hence, the following hypotheses, in alternate form:

**H1a:** Auditors of a client where the CFO is the former engagement partner will be more likely to conclude that goodwill may not been impaired than auditors of a client where the CFO is a former Big 4 partner who has no affiliation with the auditors.

**H1b:** Auditors of a client where the CFO is a former big 4 partner who has no affiliation with the auditors will be more likely to conclude that goodwill may not been impaired than auditors of a client where the CFO has no affiliation with the auditors or with any Big 4 firm.

Sniezek and van Swol (2001) conducted a study that examined trust between decision-makers and advisors, where decision-makers rely on information and opinions provided by the advisors. They report that, once the decision-makers develop trust in the advisors, they are more likely to follow the recommendations of the advisors and be confident in their final decisions. Thus, trust in information providers seems to increase decision-makers’ confidence in the judgment they make based on the provided information. Hence, when the CFO is the former engagement partner, more trust is established in the information provider and thus it is expected that auditors in this situation will be most confident in their judgment. When the CFO is a former big 4 partner who has no affiliation with the auditors, because of reduction in their level of trust, auditors should be less confident in their judgment than when the CFO is the former engagement partner. Finally, when the CFO has no affiliation with the auditors or with any Big 4 firm, because of their minimum level of trust, auditors should be the least confident in their judgment.

Hence, the following hypotheses, in alternate form:

**H2a:** When concluding that goodwill may not been impaired, auditors of a client where the CFO is the former engagement partner will be more confident in their judgment than auditors of a client where the CFO is a former Big 4 partner who has no affiliation with the auditors.

**H2b:** When concluding that goodwill may not been impaired, auditors of a client where the CFO is a former big 4 partner who has no affiliation with the auditors will be more confident in their judgment than auditors of a client where the CFO has no affiliation with the auditors or with any Big 4 firm.

**RESEARCH METHOD**

**Participants**

A total of 140 managers from Big 4 firms in offices throughout Canada and the United States participated in this study. Potential participants were identified by a senior partner in each office, who personally contacted managers to secure their participation. The research

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1 Because participants were all recruited within each firm, the rate of participation was 100%.
instrument was administered to managers over the Internet. Managers had on average 7.2 years (standard deviation 2.4) of audit experience. Table 1 provides experience characteristics about the participants.

Insert Table 1 about here

____________________

Materials and Procedures

This study used the case materials of Favere-Marchesi and Emby (2005), modified appropriately to test this study’s hypotheses. The first section of the case materials consists of background information about the engagement, the client and the client’s industry, as well as a draft of the current year audited financial statements. The information is common to all participants, except for some of the background information about the engagement, which reflects the three experimental conditions. In the first version, managers are told that the CFO, a former partner of their firm, used to be the engagement partner until two years ago and that they worked with the partner on this and other audit engagements. In the second version, managers are told that the CFO was a former audit partner from another Big 4 firm. In the third version, there is no indication that the CFO had been a partner of their firm or other Big 4 firm.

In the second section, subjects act as continuing audit managers who were in complete agreement with financial statements in the prior year, including the valuation of goodwill. This second section contains information that bears specifically on the goodwill valuation. This information is intended to be sufficiently negative to suggest that impairment of goodwill is a definite possibility, but not so overwhelmingly negative that subjects automatically recommend impairment. Hence, the case offers a sufficiently rich context to provide some tension and the need for judgment in evaluating goodwill impairment. Subjects also receive the prior year’s audit partner summary memo discussing the purchased goodwill and completed concurring partner questionnaire. The materials then ask the participants whether they believe that purchased goodwill may be impaired, based on the background information and the additional information provided to them. Participants are also asked for their level of confidence in the decision they just made regarding goodwill impairment.

Subjects then complete a distracter task, which consisted of nine questions related to their learning style. Following this task, participants answer 30 questions related to their level of professional skepticism. These questions were drawn from a scale developed by Hurtt (2010) and designed to measure an individual’s level of professional skepticism, based on characteristics derived from audit standards, psychology, philosophy, and consumer behavior.

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2 The firms and the participants involved in the study were assured of the confidentiality of the individual results and guaranteed that no identification of offices or participants would be disclosed.
3 The biotech industry was selected because it is often associated with issues of purchased goodwill.
4 Most audit firms require concurring partners to fill out a checklist questionnaire following their review to ensure that all important aspects of the audit have been performed and/or documented in accordance with generally accepted auditing standards (e.g., whether financial statements were prepared in accordance with GAAP, whether review of subsequent events have been documented).
research. This measurement was purposefully set after the experimental task so that it did not act as a trigger to artificially elevate the normal level of professional skepticism exhibited by the participants. However, it was necessary to determine whether there was any difference in the normal level of professional skepticism between the three experimental groups. If there is no significant difference in skepticism but yet different assessment of the impairment of goodwill between the three groups, it is possible that the experimental conditions affected the level of skepticism exhibited by subjects in the specific task. Finally, participants answered a debriefing questionnaire that included demographic data and manipulation checks.

Research Design

The experiment used a 3x1 factorial between-subjects design in which the affiliation of the CFO was manipulated at three levels (former partner of the current audit firm, former partner of another Big 4 firm, and no affiliation with the current audit firm or other Big 4 firm). Participants were assigned randomly ex-ante to one of the three treatment combinations by means of unique IDs that provided them access to the correct version of the instrument.

The dependent variables consisted of the existence of goodwill impairment and the level of confidence that some value of purchased goodwill needed to be written down. The existence of goodwill impairment was obtained by soliciting a response to the following question, on a dichotomous scale (yes or no):

> Based on the background information, the audit summary memo and the concurring partner review questionnaire for the 2012 audit, and the information you gathered, do you believe that purchased goodwill may be impaired?

The level of confidence in subject’s decision was measured by asking subjects to answer the following question, on a scale of 0% to 100%:

> Please express (in percentage where 100% means absolute certainty) your level of confidence in the decision you just made regarding goodwill impairment.

RESULTS

Manipulation Checks

A manipulation check was performed to ensure that responding participants internalized their role as audit manager on the current year’s audit and on last year’s audit. The results of this manipulation check indicate that all the participants correctly assumed their role. A second manipulation check asked questions about the CFO to determine whether participants correctly identified their experimental condition. The results of this manipulation check show that all participants correctly encoded their experimental condition.

A manipulation check was performed to obtain evidence whether the experimental manipulation was effective. Using the scale developed described above (Hurtt 2010), the mean “base” level of professional skepticism for each of the experimental groups was determined. The ANOVA results in panel B of Table 2 show that there was no significant difference in the normal level of professional skepticism between the three experimental groups. Thus, with no significant difference in the base level of skepticism yet different
assessments of the impairment of goodwill between the three groups, it appears that the experimental conditions did affect the judgments exhibited by subjects in the specific task.

Insert Table 2 about here

**Experience Measures**

Prior to testing the hypotheses, we examined whether there were any significant differences in experience between the three experimental groups (see demographic information in Table 1). The results (not tabled) of one-way ANOVAs show that there is no difference between the three experimental groups in terms of audit experience ($F = 0.014, p = .986$), industry experience ($F = 0.157, p = .855$), and experience with clients in whom goodwill was impaired ($F = 0.141, p = .868$) and written down ($F = 0.272, p = .762$).

**Self-reported Ability Measure**

Subjects were asked to self-assess (on a scale of 1 to 5) their ability to assess the impairment of goodwill. The results (not tabled) of a one-way ANOVA show that there is no difference in the participants’ self-reported ability between the three experimental groups ($F = 0.011, p = .989$).

**Impairment of Goodwill: Hypotheses 1a and 1b**

Hypothesis 1a states that auditors of a client where the CFO is a former engagement partner will be more likely to believe that purchased goodwill is not impaired than auditors of a client where the CFO is a former Big 4 partner who has no affiliation with the auditors. Hypothesis 1b states that auditors of a client where the CFO is a former big 4 partner who has no affiliation with the auditors will be more likely to believe that purchased goodwill is not impaired than auditors of a client where the CFO has no affiliation with the auditors or with any Big 4 firm. Table 3 shows the relevant data.

Insert Table 3 about here

When the CFO is a former engagement partner, 76% of the managers believed that goodwill is not impaired; when the CFO was a partner of another Big 4 firm, 48% of the managers believed that goodwill is not impaired; and when the CFO had no affiliation with the auditors or another Big 4 firm, 39% of the managers believed that goodwill is not impaired. A test of proportions, using Pearson Chi-square, indicates that we can reject the null hypothesis and conclude that the experimental conditions are different with respect to the proportions of subjects who felt that goodwill is not impaired ($\chi^2 = 13.852, p = .001$). To determine which of the proportions differ, the Marascuilo procedure is used to make comparisons between all pairs of groups. First, the observed absolute differences $|p_j - p_j'|$ (where $j \neq j'$) among all 3 pairs are calculated. Second, the critical range for each pairwise comparison of proportions is computed using the following equation:
Critical range = \sqrt{\chi^2} \sqrt{\frac{p_j(1-p_j)}{n_j}} + \frac{p_{j'}(1-p_{j'})}{n_{j'}}

If the absolute difference is greater than its critical range, we can then conclude that the proportions are significantly different. Table 4 shows the detailed computations using the Marascuilo procedure.

The results of the Marascuilo procedure (Marascuilo 1966) shows there is support for H1a but not H1b. Auditors of a client where the CFO is the former engagement partner are more likely to conclude that goodwill may not been impaired than (1) auditors of a client where the CFO is a former Big 4 partner who has no affiliation with the auditors and (2) auditors of a client where the CFO has no affiliation with the auditors or with any Big 4 firm. However, auditors of a client where the CFO is a former big 4 partner who has no affiliation with the auditors are as likely to conclude that goodwill has not been impaired than auditors of a client where the CFO has no affiliation with the auditors or with any Big 4 firm. These results suggest that there is an “alumni effect” and support the social bond explanation. However, it can also be argued that participants perceived the expertise of the FAP to be greater because of prior knowledge of, and experience with the client.

Confidence in judgment: Hypotheses 2a and 2b

Hypothesis 2a states that, when concluding that goodwill is not impaired, auditors of a client where the CFO is a former audit partner with their firm will be more confident in their judgment than auditors of a client where the CFO is a former big 4 partner from another firm. Hypothesis 2b states that, when concluding that goodwill is not impaired, auditors of a client where the CFO is a former big 4 partner from another firm, will be more confident in their judgment than auditors of a client where the CFO has no affiliation with the auditors or with any Big 4 firm.

Data pertinent to these hypotheses are presented in panel A of Table 5. To test these hypotheses, the confidence levels of auditors who concluded that goodwill is not impaired were examined using an analysis of variance.\(^5\)

\(^5\) The Levene statistic (1.367, p = .261) revealed that variances are homogeneous among the three experimental conditions.
The results of the analysis, as shown in panel B of Table 5, indicate there are significant differences in the mean confidence levels between groups ($F = 23.762, p = .000$). The post hoc tests in Panel C of Table 4 provided support for H2b, but not for H2a. When concluding that goodwill is not impaired, auditors of a client where the CFO is the former engagement partner are as confident in their judgment as auditors of a client where the CFO is a former Big 4 partner who has no affiliation with the auditors. Further, when concluding that goodwill is not impaired, auditors of a client where the CFO is the former engagement partner and auditors of a client where the CFO is a former Big 4 partner who has no affiliation with the auditors are more confident in their judgment than auditors of a client where the CFO has no affiliation with the auditors or with any Big 4 firm. These results suggest that it is the perceived CFO’s expertise that is influencing the judgments of the participants.

**DISCUSSION AND CONCLUSION**

Regulators are concerned that a lack of independence, resulting in a lack of professional skepticism, is the main cause of audit deficiencies, in spite of the auditing standards that stress the fundamental importance of such independence and skepticism on audit quality and the integrity of the audit process.

Very few studies have examined the link between independence and professional skepticism. The review by Hurtt et al. (2013) identified mixed results from studies that examined the impact of audit firm alumni serving as senior members of management at the client on an auditor’s skeptical judgment. This study thus examined the “revolving door” practice of audit clients employing a former partner of their present auditor as a chief financial officer. Specifically, it aimed at determining whether such situations impact auditor’s judgments in spite of a two-year “cooling-off” period.

The results of this study indicate that auditors are more likely to conclude that goodwill is not impaired (and thus agree with the client’s position) when the CFO is a former engagement partner than when the CFO is the former partner of another Big 4 or when the CFO has no affiliation with the auditors or another Big 4 firm. Hence, the alumni threat to auditors’ skepticism seems a real possibility due to the social bond established between the auditors and a CFO who used to be “one of their own”. The results also indicate that auditors were more confident in their judgment when the CFO is a former Big 4 partner, whether from their own firm or another firm, than when the CFO has no affiliation with the auditors or another Big 4 firm. Hence, it seems that perceived expertise played a significant role in the auditors’ confidence in their judgment.

The results of this study can be interpreted as speaking indirectly to the trade-off between independence and expertise. The fact that the current auditor is more likely to concur with the client’s arguments when the client is a former audit partner of the current auditor’s firm, can be interpreted as indicating reduced skepticism because of a lack of independence, but it could also be that it is a recognition of the superior expertise of the CFO because of his greater knowledge of the client, accumulated over the years as audit engagement partner. The ranking of the measures of the participants’ judgment confidence is consistent with that possible alternative explanation. The fact that the participants were more confident in their
judgments to concur with the client’s arguments when the CFO was an audit partner from another firm, than they were to concur with the client’s arguments when the CFO did not have any audit firm affiliation suggests that the current audit partner could have been influenced by the perceived expertise of the CFO.

A limitation of this study is that, because the case was fictitious, there is no way to measure whether the participants’ judgments were influenced “in the wrong direction” by the arguments of the CFO. There is no objective truth as to whether goodwill was impaired or not. A future research project could be to construct an experiment around an actual case where the SEC required financial statements to be restated as a consequence of mandated write-down of goodwill.

Future research could also examine other audit judgment tasks to determine whether the alumni effect is a pervasive threat to other parts of the audit process. Also, further studies could determine whether the alumni threat is also present when the CFO is a former employee of the audit firm, but not necessarily a former engagement partner (e.g., former engagement manager, other partners of the same firm). Finally, the length of the cooling-off period could be extended (e.g., 5 years) to see whether it reduces the differences in judgment observed in this study.
REFERENCES


### TABLE 1
**Demographic Information***

<table>
<thead>
<tr>
<th>Experience Factors</th>
<th>Mean</th>
<th>Range</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audit Experience (years)</td>
<td>7.2</td>
<td>3.8-15</td>
<td>2.4</td>
</tr>
<tr>
<td>Biotech Experience (percentage of time devoted to clients which were biotech companies)</td>
<td>4.3</td>
<td>0-48</td>
<td>8.5</td>
</tr>
<tr>
<td>Percentage of Audit Engagements with Impaired Goodwill</td>
<td>11.0</td>
<td>0-75</td>
<td>14.1</td>
</tr>
</tbody>
</table>

* Participants consist of 140 audit managers from Big 4 firms.

**Note:**
This table describes the demographic information of the study participants in terms of audit experience, industry experience, and task-specific experience.
**TABLE 2**
**Measurement of Auditors’ Professional Skepticism**

**Panel A:** Mean professional skepticism scores (and standard deviation)

<table>
<thead>
<tr>
<th>Experimental conditions</th>
<th>n</th>
<th>Mean professional skepticism score</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFO is a former engagement partner</td>
<td>46</td>
<td>78.20 (8.709)</td>
</tr>
<tr>
<td>CFO is a former partner of another Big 4 firm</td>
<td>48</td>
<td>77.52 (8.861)</td>
</tr>
<tr>
<td>CFO has no affiliation with auditors or a Big 4 firm</td>
<td>46</td>
<td>77.17 (8.733)</td>
</tr>
</tbody>
</table>

**Panel B:** ANOVA for mean confidence levels

<table>
<thead>
<tr>
<th></th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean square</th>
<th>F-value</th>
<th>P*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>25.087</td>
<td>2</td>
<td>12.544</td>
<td>.163</td>
<td>.850</td>
</tr>
<tr>
<td>Within groups</td>
<td>10535.166</td>
<td>137</td>
<td>76.899</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>10560.254</td>
<td>139</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:**
This table contains descriptive statistics and ANOVA for 140 audit managers’ skepticism scores, using the Hurtt (2010) scale.

* p-values are two-tailed.
TABLE 3
Number (and Percentage) of Managers Who Believed that Purchased Goodwill is not Impaired

<table>
<thead>
<tr>
<th>CFO is a former engagement partner (n = 46)</th>
<th>CFO is a former partner of another Big 4 firm (n = 48)</th>
<th>CFO has no affiliation with auditors or a Big 4 firm (n = 46)</th>
</tr>
</thead>
<tbody>
<tr>
<td>35/46 (76%)*</td>
<td>23/48 (48%)*</td>
<td>18/46 (39%)*</td>
</tr>
</tbody>
</table>

* A Chi-square test for proportions indicates that the difference in proportions is significant at p = .001.
TABLE 4
Tests of Multiple Comparisons using the Marascuilo Procedure on the Percentage of Managers Who Believed that Purchased Goodwill May Not Be Impaired

<table>
<thead>
<tr>
<th>Experimental conditions</th>
<th>Proportions</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFO is a former engagement partner</td>
<td>$p_1 = 0.761$</td>
</tr>
<tr>
<td>CFO is a former partner of another Big 4 firm</td>
<td>$p_2 = 0.479$</td>
</tr>
<tr>
<td>CFO has no affiliation with auditors or a Big 4 firm</td>
<td>$p_3 = 0.391$</td>
</tr>
</tbody>
</table>

|                | Absolute differences $|p_j - p_j'|$ | Critical ranges* | Results |
|----------------|----------------------|------------------|---------|
| $p_1 - p_2$    | 0.282                | 0.234            | $p_1 > p_2$ |
| $p_1 - p_3$    | 0.370                | 0.234            | $p_1 > p_3$ |
| $p_2 - p_3$    | 0.088                | 0.249            | $P_2 \approx p_3$ |

Note:
This table reports the results of tests of multiple comparisons on the proportions in Table 2, using the Marascuilo procedure.

* Using an overall level of significance of 0.05, the upper-tail critical value of the $\chi^2$ test statistic for a chi-square distribution having 2 degrees of freedom is 5.991. Hence, $\sqrt{5.991} = 2.448$ is used in computing the critical ranges.
TABLE 5
Effects of CFO Affiliation on Auditor’s Judgment Confidence Levels

**Panel A:** Mean confidence levels (and standard deviation)

<table>
<thead>
<tr>
<th>Experimental conditions</th>
<th>n</th>
<th>Mean confidence levels (and standard deviation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFO is a former engagement partner</td>
<td>35</td>
<td>73.03 (13.734)</td>
</tr>
<tr>
<td>CFO is a former partner of another Big 4 firm</td>
<td>23</td>
<td>65.96 (18.351)</td>
</tr>
<tr>
<td>CFO has no affiliation with auditors or a Big 4 firm</td>
<td>18</td>
<td>41.83 (15.816)</td>
</tr>
</tbody>
</table>

**Panel B:** ANOVA for mean confidence levels

<table>
<thead>
<tr>
<th>source</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean square</th>
<th>F-value</th>
<th>P*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between groups</td>
<td>11766.572</td>
<td>2</td>
<td>5883.286</td>
<td>23.762</td>
<td>0.000</td>
</tr>
<tr>
<td>Within groups</td>
<td>18074.428</td>
<td>73</td>
<td>247.595</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>29841.000</td>
<td>75</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Panel C:** Post Hoc tests - Bonferroni

<table>
<thead>
<tr>
<th></th>
<th>Version</th>
<th>Mean Difference</th>
<th>Std. Error</th>
<th>Sig. †</th>
</tr>
</thead>
<tbody>
<tr>
<td>CFO is a former engagement partner</td>
<td>CFO is a former partner of another Big 4 firm</td>
<td>7.072</td>
<td>4.224</td>
<td>.098</td>
</tr>
<tr>
<td>CFO is a former engagement partner</td>
<td>CFO has no affiliation with auditors or a Big 4 firm</td>
<td>31.195‡</td>
<td>4.564</td>
<td>.000</td>
</tr>
<tr>
<td>CFO is a former partner of another Big 4 firm</td>
<td>CFO has no affiliation with auditors or a Big 4 firm</td>
<td>24.123</td>
<td>4.952</td>
<td>.000</td>
</tr>
</tbody>
</table>

**Note:**
This table contains descriptive statistics, ANOVA, and post hoc tests for 76 audit managers’ confidence levels in their judgment about impaired goodwill, made on a scale from 0 to 100 (where 100% means absolute certainty).

* p-values are two-tailed.
† The mean difference is significant at the 0.05 level.
THE VALUE RELEVANCE OF LOAN LOSS PROVISIONS

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ABSTRACT

This study examines the value relevance of loan loss provisions (LLP). Prior studies find that banks' discretionary LLP (DLLP) are perceived positively by the market and attribute this to greater LLP signaling to investors the soundness of the bank. However, these studies are based on data from the pre-Basel era when LLP increased Tier 1 capital and thus had positive implications. I focus on the post-Basel period in which LLP does not affect Tier 1 capital and apply a better specified model to test for the value relevance of loan loss provisions. I find that DLLP is not value relevant in the post-Basel period. This result is consistent throughout the recent financial crisis, which is contrary to Ryan’s (2011) conjecture that DLLP may be valued positively during economic downturn. In addition, LLP and non-discretionary LLP (NLLP) are perceived negatively by the market. I also show that findings in the long-window value relevance test still hold in the short-window market reaction test. Overall, in the post-Basel period, DLLP provides no value relevant information whereas NLLP conveys value relevant information incremental to earnings.

Key Words: Loan loss provisions; Signaling; Value relevance
1. Introduction

Bank opacity is mainly attributable to the opacity of their assets (Beatty and Liao 2013; Morgan 2002). And among bank assets, loans account for the largest proportion. Accordingly, loan loss provisions (LLP), which is an expense item that is reserved to cover future credit losses, is the largest accrual item in banks’ accounts and contributes to bank opacity (Beatty and Liao 2013; Gallemore 2013). Thus, it is critical for bank outsiders to understand loan loss provisions when valuing banks. Being an expense item, LLP is bad news in terms of its effect in reducing net loans, assets, and net income. However, academic studies have found LLP to have positive valuation. In particular, discretionary LLP has been considered good news to investors, signaling financial soundness of the bank to outsiders (Beaver 1989; Wahlen 1994; Beaver and Engel 1996). However this signaling hypothesis on the market valuation of LLP was challenged by a later study showing that discretionary LLP is not associated with higher stock returns or higher future earnings (Ahmed et al. 1999). Still, some recent studies find evidence supporting the signaling role of DLLP (Kanagaretnam et al. 2009; Kilic et al. 2013). Thus, the evidence from prior studies is mixed. It is also noteworthy that most prior studies are based on data from the early 1990s. Since then, a major banking regulation, BASEL, has changed the accounting treatment of LLP, which may affect the market valuation of LLP. However, no study has investigated whether discretionary LLP is positively perceived by the market based on post-BASEL data. Given the importance of LLP in valuing banks, it is an interesting empirical question whether and how the market prices discretionary LLP. This study re-examines whether discretionary LLP is positively priced. More broadly, this study investigates the value relevance of LLP and its components: non-discretionary LLP (NLLP) and discretionary LLP (DLLP).

In this study, we deal with four limitations in prior studies: two issues regarding the sample period and two issues related to model specification. First, as mentioned above, the sample periods of the prior studies do not fully reflect regulatory change. Specifically, in 1992, the Basel Committee on Bank Supervision (BCBS) changed the accounting treatment of LLP. In the pre-BASEL period, loan loss provisions (LLP) increased Tier 1 capital but decreased Tier 1 capital in the post-BASEL period. Prior studies that find positive market valuation of DLLP are likely due to including the pre-Basel period when LLP increased capital. Second, prior studies do not include both economic booms and busts in their sample period. Ryan (2011) points out that DLLP may have positive market valuation only in economic downturn when managers have more incentive to convey the soundness of their banks. Incidentally, prior studies supporting the signaling hypothesis for DLLP study a period of economic bust (Beaver et al. 1989; Wahlen 1994; Beaver and Engel 1996) while a study rejecting the signaling hypothesis for DLLP examines an economic boom period (Ahmed et al. 1999).

Third, the value relevance regression model used in prior studies is likely mis-specified. Most prior studies only include the level of LLP in their model. However, the accounting literature has shown that the level and change variables convey distinct information to the market (Ali and Zarowin 1992; Easton and Harris 1991). Fourth, determinants of LLP used in prior studies do not include recently found determinants to the model estimating normal levels of...
LLP. Since Beaver and Engel (1996), the most relevant paper to our study, studies have documented that new variables, such as GDP growth, change in the unemployment, and bank asset size, determine non-discretionary LLP (Laeven 2003; Beatty and Liao 2011; Bushman and Williams 2012).

We address the aforementioned four drawbacks in prior studies in the following ways. First, we use post-Basel period data, after 1994.\(^3\) Second, we examine whether the signaling hypothesis is valid during economic downturn by examining the value relevance of LLP during the recent financial crisis. Third, in the value relevance model, we include the change in LLP in addition to the level of LLP. Fourth, in the estimation of normal LLP, we include GDP growth, change in the unemployment, and bank asset size.

To test for the value relevance of LLP, we use four different regression specifications. First, we include only the level of LLP in the model to capture the effect of the transitory LLP shock on the market (“level specification”). Second, we include only the change in LLP in the model to capture the effect of the permanent LLP shock on the market (“change specification”). Third, we include both the level of and change in LLP to capture both transitory and permanent effect on the market (“level-change specification”). Fourth, we re-express the level-change specification in terms of only a level and lag variable of LLP to facilitate interpretation of estimation results (“level-lag specification”). To examine whether the signaling hypothesis is valid during the recent financial crisis, we conduct two tests. First, we run the value relevance model each year to see how the market pricing of LLP and its components changes across time. Second, we examine whether the pricing of LLP is different during 2007-2010 compared to other years. For robustness test, we conduct the market reaction test to loan loss disclosures around earnings announcement dates.

Our findings are summarized as follows. First, we find that \(LLP\) is negatively associated with contemporaneous stock returns. Second, after decomposing \(LLP\) into non-discretionary \(LLP\) (\(NLLP\)) and discretionary accruals (\(DLLP\)), we find that only non-discretionary \(LLP\) (\(NLLP\)) is perceived negatively by the market and no effect of \(DLLP\). Third, we show that \(DLLP\) is not value relevant even during the financial crisis when it is most likely to serve a signaling role. Lastly, we show that the value-relevance test results still hold in the market reaction test. Our study contributes to the literature on capital market pricing of LLP in two ways. First, it is the first to exclusively use post-Basel data in the literature on the capital market pricing of LLP. Our finding suggests that findings in prior studies about the signaling role of DLLP are likely confined to the pre-BASEL period. Second, our study is the first to show that DLLP does not serve a signaling role even in economic downturn, contrary to the conjecture by Ryan (2011). Our study also contributes to the literature on accounting accruals. Prior studies find that the investors price discretionary accruals positively, which is interpreted as managers communicating information about equity value to the market (Chaney et al. 1998; Subramanyam 1996).\(^4\) In contrast, our study shows that the market does not price discretionary loan loss provisions positively. Focusing on a single accrual item, which is less subject to measurement issues in modeling its discretionary component (McNichols and Wilson 1988), our study (i) provides evidence that not all accruals are used to communicate with outsiders; (ii) raises a possibility that the accrual component is not value relevant; and

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\(^3\) We cannot compare pre- and post-BASEL periods because Compustat bank does not contain data on non-performing assets (NPA) prior to 1993 which is required to estimate discretionary loan loss provisions.

\(^4\) Both Chaney et al. (1998) and Subramanyam (1996) use the modified Jones model to measure abnormal accruals.
(iii) positive pricing of accruals could be driven by investors’ earnings fixation (Dechow et al. 2010).

The remainder of the paper is organized as follows. Section II includes the literature review and hypotheses development. Section III presents the sample selection and research design. Section IV reports the empirical results. Section V concludes.

II. Literature review and hypothesis developments

Our study is in a line of studies on the capital market pricing of loan loss provisions. LLP has two conflicting implications to bank valuation. LLP may have positive implications if bank managers use LLP discretionally to signal to investors that they have the capability of enduring losses. In contrast, LLP may have negative implications because LLP represents the default risk in loans and, as an expense, also decreases reported earnings. Earlier studies find that increase in LLP is priced positively, supporting the signaling hypothesis. These papers examine both the short-window market reaction, which captures information content, and long-window association, which captures value relevance. Most short-window event studies examine bank announcements of increase in LLP for less-developed-country (LDC) debt during March to May 1987 (Grammatikos and Saunders 1990; Musumeci and Sinkey 1990; Elliott et al. 1991; Griffin and Wallach 1991). Large US banks had extended loans to LDCs in the beginning of the 1980s, in which a significant portion of loans became troubled loans. These studies document a positive market reaction to 1987 announcements of an increase in LLP for LDC debt and interpret it as banks signaling their ability to manage bad debt.

Beaver et al. (1989) is the first study to use long-window associations in their 1979–1983 sample period and show a positive relation between market-to-book ratio and loan loss reserves. They interpret this result as managers conveying to investors their ability to withstand a hit to earnings. Using a sample from 1984–1989, Wahlen (1994) finds that the increase in unexpected LLP is related to higher future earnings changes and, more importantly, positively associated with contemporaneous stock returns, supporting the signaling hypothesis. Relatively, Beaver and Engel (1996), which is the most closely related to our study, examine a 1977–1991 sample. By decomposing LLP into NLLP and DLLP, they find that NLLP is negatively priced and DLLP is positively priced, which supports the signaling hypothesis. Studying a quarterly sample the 1984–1991 period, Liu et al. (1997) document a positive association between LLP and contemporaneous stock returns only for banks with low regulatory capital ratios in the fourth quarter.

Evidence of negative market implications of LLP emerge from studies using the mid 1990s data. For instance, in a sample from 1987–1995, Ahmed et al. (1999) find that increase in unexpected LLP is not related to higher future earnings changes or higher contemporaneous stock returns. Furthermore, they show that while NLLP is negatively priced, DLLP is not positively priced. Thus, their findings do not support the signaling hypothesis in Wahlen.

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5 Wahlen (1994) does not decompose LLP into a non-discretionary component and a discretionary component. He only uses unexpected LLP, which is similarly interpreted as a discretionary LLP.

6 Wahlen (1994) is the only study to employ both the short window and long window analysis. His short window analysis reports that there is a positive reaction to increase in unexpected LLP around earnings announcement date. However, removing outliers of loan loss variable leads to insignificant reaction to the increase in unexpected LLP, which is interpreted that the positive market reaction is attributed to banks with unusually large unexpected LLP.
Ahmed et al. (1999) attribute this to the difference in sample periods. While they do not specify why the valuation of LLP changes with time, one main difference with the former two studies is that Ahmed et al. (1999) include post 1992 data.

In 1992, the accounting treatment of LLP and its impact on bank capital changed with the BASEL capital regulation. This change is likely to have affected the valuation of LLP. In the pre-BASEL period prior to 1992, LLP increased Tier 1 capital and loan loss allowances were included in Tier 1 capital. In contrary, in the post-BASEL period, LLP decreases Tier 1 capital by reducing earnings and loan loss allowances are not included in Tier 1 capital. Thus, increase in LLP has some direct positive implications to investors in the pre-BASEL period but not in the post-BASEL period. Incidentally, most prior studies on capital market pricing of LLP use data from the pre-Basel era. The signaling hypothesis of DLLP supported in studies based on the pre-BASEL period may be due to the accounting treatment for LLP. Ahmed et al. (1999), while finding no evidence to support the signaling role of DLLP, do not relate it to changes in regulation. It is still worthwhile to re-examine the value relevance of LLP, in particular DLLP, because half of the sample period in Ahmed et al. (1999) includes pre-BASEL era and it could somewhat affect the valuation of DLLP.

Based on the above arguments, it is likely that DLLP does not play a signaling role of conveying private information to investors in the post-BASEL period. Thus, the stock market is not likely to price DLLP positively. This hypothesis is presented in null form.

**H1: The equity market does not price discretionary loan loss provision (DLLP).**

Ryan (2011) conjectures that the signaling role of DLLP may vary with the change in economic conditions. Specifically, bank managers have more incentive to signal expected improvements during bad economic times, while they have little incentive to do so in good economic times. Incidentally, prior studies supporting the signaling hypothesis for DLLP investigates only a period of economic bust (Beaver et al. 1989; Wahlen 1994; Beaver and Engel 1996) while a study rejecting the signaling hypothesis for DLLP examines an economic boom period (Ahmed et al. 1999). Thus, Ryan (2011) attributes the disappearance of positive pricing of LLP in the recent study to including an economic boom period in the sample. He conceives that the recent financial crisis provides interesting research settings to test for capital market pricing of LLP and raises possibilities that positive capital market pricing implications of LLP may revive in the recent financial crisis.

On the other hand, there are reasons that the market may perceive DLLP as bad news during the financial crisis. First, since LLP reflects estimated losses in banks’ loan portfolios, the market could recognize high DLLP as more loan losses to be realized in the near future, especially during the financial crisis. A recent study, Jin et al. (2011) find a significant positive relation between the increase in loan loss reserves and the probability of bank failure during the recent financial crisis (2007–2010). Second, because LLP is not included as core

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7 Beatty and Liao (2013) are the first to conjecture, but do not test for, a regulation-based explanations on the disappearing positive valuation implications of DLLP.

8 Ryan (2011) states that there is no study examining the short-window market reaction to loan loss provisions during the recent financial crisis. We conduct the long-window value-relevance test as well as the short-window test in order to test for the second hypothesis.
capital under the current BASEL regulation, investors may negatively view high levels of (D)LLP whether it is discretionary or not.\footnote{Recent studies, using post-BASEL data, also show mixed evidence of the signaling hypothesis of DLLP. For example, Kilic et al. (2013) show that DLLP is priced although less so after SFAS 133. Kanagaratnam et al. (2009) document a positive relation between DLLP and stock returns only for clients of Big 4 auditors.}

Based on the above arguments, it is an empirical question whether positive capital market pricing implications of LLP may revive in the recent financial crisis. The second hypothesis is presented in null form.

\[ H2: \text{The equity market does not price discretionary loan loss provision (DLLP) during the recent financial crisis.} \]

### III. Sample selection and research design

#### Sample

The sample period spans from 1994 to 2010. We use post-BASEL data, while most prior studies use pre-BASEL data. Accounting data are taken from Compustat Bank. We limit the type of banks to commercial banks (SIC code: 6020) to maintain consistency of the business environment. Stock return data are from CRSP. Non-performing assets (NPA) are available since 1993 in Compustat Bank. Analysts forecast data are obtained from IBES. Macroeconomic data, such as GDP growth rate ($\Delta GDP$) and unemployment rate ($UNEMP$), are from the Federal Reserve Bank of St. Louis (http://research.stlouisfed.org/). We impose a minimal requirement on data to reduce any survivorship bias. We delete bank-year observations missing any variable. Except for one-year ahead stock returns and macroeconomic data, we winsorize all variables at the top and bottom 1 percent each year to mitigate the influence of extreme observations. These sample selection criteria lead to 5,441 bank-year observations.\footnote{To use change variables such as $\Delta LLP$, one year data (year 1994) is lost. In addition, one-year ahead forecast error ($FE$) is constructed using the sample of observations for which analyst forecast data are available.} All variables are deflated by lagged total assets except for one-year ahead stock returns and macroeconomic data. Table 1 provides descriptive statistics for the main variables. $LLP$ has mean and median values of 0.004 and 0.003, respectively, which suggests that the distribution of $LLP$ is symmetric. $NLLP$ has mean and median values similar to those of $LLP$, which suggests that the distribution of $NLLP$ is similar to that of $LLP$. $DLLP$ has mean zero, by construction. The change variables, such as $\Delta LLP$ and $\Delta NLLP$, have different distribution characteristics from level variables. Specifically, $\Delta LLP$ has mean and median of 0.001 and 0.000, respectively, which are different from that of $LLP$. Similarly, the level of earnings ($EBTP$) has different distribution characteristics from the change in earnings ($\Delta EBTP$).

#### Research Design

To test our hypotheses, we use two types of research design. First, use a model to decompose $LLP$ into non-discretionary $LLP$ ($NLLP$) and discretionary $LLP$ ($DLLP$). Second, we use value relevance models to test whether equity investors positively price $DLLP$ (Hypothesis).

**Estimation of non-discretionary and discretionary LLP**

Following prior studies, we estimate the following pooled time-series and cross-sectional regression model (1) and we denote the predicted values as non-discretionary $LLP$ ($NLLP$),
and the residuals as discretionary \( LLP (DLLP) \).\(^{11}\) This is analogous to the decomposition of accruals into non-discretionary and discretionary accruals (Jones 1991; Dechow and Dichev 2002).

\[
LLP_t = \alpha_0 + \alpha_1 \Delta NPA_{t+1} + \alpha_2 \Delta NPA_t + \alpha_3 \Delta LOAN_t + \alpha_4 NCO_t + \alpha_5 \Delta GDP_t + \alpha_6 \Delta UNEMP_t + u_t
\]

(1)

where

- \( LLP_t \): Loan loss provision (COMPUSTAT “pll”) scaled by lagged total assets (COMPUSTAT “at”)
- \( \Delta NPA_{t+1} \): Change in non-performing assets (COMPUSTAT “npa”) scaled by lagged total assets (COMPUSTAT “at”)
- \( \Delta LOAN_t \): Change in total loans (COMPUSTAT “intal”) scaled by lagged total assets (COMPUSTAT “at”)
- \( NCO_t \): Net charge off (COMPUSTAT “nco”) scaled by lagged total assets (COMPUSTAT “at”)
- \( Size \): The natural log of total assets (COMPUSTAT “at”)
- \( \Delta GDP_t \): Change in \( GDP \) over the year
- \( \Delta UNEMP_t \): Change in unemployment rates over the year

Following Beaver and Engel (1996), we include the next (current) period change in the non-performing assets (\( NPA \)), current period loan growth (\( \Delta Loan_t \)), and net charge-off (\( NCO \)) as determinants of \( NLLP \). Since Beaver and Engel (1996), subsequent studies have added other determinants to the model. Following these studies, we include lagged total assets (\( Size_{t-1} \)), because banks tend to be regulated based on bank size (Beck and Narayanmoorth, 2013; Bushman and Williams, 2012). We also include the change in \( GDP \) over the year (\( \Delta GDP_t \)) and the change in unemployment rates over the year (\( \Delta UNEMP_t \)) to control for macroeconomic effects on \( LLP \) (Beatty and Liao, 2011; Bushman and Williams, 2012).

\textbf{Value-relevance test}

For the value relevance test, we use four different regression specifications with stock return as a dependent variable.\(^{12}\) First, we include only level variables of earnings and LLP in the regression model, denoted as the level specification (model 1). Second, we use only change variables of earnings and LLP in the model, denoted as the changes specification (model 2). Third, we include both variables of earnings and LLP in the model, denoted as the level-changes specification (model 3). Fourth, we use level variables of earnings and LLP and their lags in the model, denoted as the level-lag specification (model 4). Because model 3 contains two variables (a level variable and change variable) for earnings and each LLP variable, we re-express model (3) in terms of one level variable to facilitate interpretations. Thus, model (4) is equivalent to model (3). To assess the value relevance of components of LLP, we also use

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\(^{11}\) Most LLP studies (Beatty and Liao 2013) use this pooled time-series and cross-sectional regression model. Following studies on accruals, we also run cross-sectional regressions by year and find qualitatively similar results.

\(^{12}\) Beaver and Engel (1996) use a market value of equity as a dependent variable. However, the use of this variable as a dependent variable in the regression is known to be subject to omitted correlated variables bias (Kothari and Zimmerman 1995). Accordingly, Walden (1994) and Ahmed et al. (1999) use a return as a dependent variable. Thus, we also use a return as a dependent variable.
a level and change of $NLLP$ and $DLLP$ in place of $LLP$ in each specification. The subscript $t$ indicates year and the subscript $i$ does a specific bank in the below equations.

**Model (1)**

$$R_t = \alpha_0 + \alpha_1 EBTP_t + \alpha_2 LLP_t (\alpha_{21} NLLP_t + \alpha_{22} DLLP_t) + \alpha_5 \Delta NPA_t + \epsilon_{i,t}$$

**Model (2)**

$$R_t = \beta_0 + \beta_1 \Delta EBTP_t + \beta_2 \Delta LLP_t (\beta_{21} \Delta NLLP_t + \beta_{22} \Delta DLLP_t) + \beta_5 \Delta NPA_t + \epsilon_{i,t}$$

**Model (3)**

$$R_t = \gamma_0 + \gamma_1 EBTP_t + \gamma_2 \Delta EBTP_t + \gamma_3 LLP_t (\gamma_{31} \Delta NLLP_t + \gamma_{32} \Delta DLLP_t) + \gamma_4 \Delta LLP_t (\gamma_{41} \Delta NLLP_t + \gamma_{42} \Delta DLLP_t) + \gamma_5 \Delta NPA_t + \epsilon_{i,t}$$

**Model (4)**

$$R_t = \delta_0 + \delta_1 EBTP_t + \delta_2 EBTP_{t-1} + \delta_3 LLP_t (\delta_{31} \Delta NLLP_t + \delta_{32} \Delta DLLP_t) + \delta_4 LLP_{t-1} (\delta_{41} \Delta NLLP_{t-1} + \delta_{42} \Delta DLLP_{t-1}) + \delta_5 \Delta NPA_t + \delta_6 \Delta NPA_{t-1} + \epsilon_{i,t}$$

where

- $R_t$ is the 12-month buy-and-hold stock return from the end of the 3rd month of the current fiscal year to the end of the 3rd month of the following year less the contemporaneous buy-and-hold stock returns on the CRSP value-weighted market index.
- $EBTP_t$ is income before taxes and provisions scaled by lagged total assets.
- $LLP_t$ is loan loss provision scaled by lagged total assets.
- $NLLP_t$ is fitted value from a regression model (1).
- $DLLP_t$ is residual value from a regression model (1).
- $\Delta EBTP_t$ is Change in $EBTP$ over the year scaled by lagged total assets.
- $\Delta LLP_t$ is Change in $LLP$ over the year scaled by lagged total assets.
- $\Delta NLLP_t$ is Change in non-discretionary $LLP$ over the year scaled by lagged total assets.
- $\Delta DLLP_t$ is Change in discretionary $LLP$ scaled by lagged total assets.
- $\Delta NPA_t$ is change in non-performing asset over the year scaled by lagged total assets.

The dependent variable ($R_t$) is the 12-month stock return minus the CRSP value-weighted market index. The independent variables of interest are a level variable ($LLP_t$) and a change variable ($\Delta LLP_t$). The reason for using both level and change variables is that a level and change of accounting information have different implications for the equity market. Specifically, using the level of earnings implies that shocks to earnings are entirely transitory while using the change in earnings implies that shocks to earnings are permanent (Ali and Zarowin 1992; Easton and Harris 1991). Similar to this argument, we assume that the level of $LLP$ captures transitory shocks to $LLP$ and the change in $LLP$ captures permanent shocks to $LLP$. The level of and change in NLLP and DLLP are interpreted in a similar vein.

As control variables, earnings ($EBTP$) are included because our interest is whether $LLP$ provides incremental information over earnings in the equity market. Thus, we include level and change variables of earnings in each specification. Following Beaver and Engel (1996), we also include change in the non-performing asset ($NPA$) in the model to control for the possibility that banks do not properly use the non-performing asset ($NPA$) information in

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13 Soliman (2008) also uses a level-change specification to examine the value relevance of asset turn-over and profit margin. His specification is similar to our model (3)
setting LLP. Since we use return as a dependent variable and the non-performing asset (NPA) is a variable from the balance sheet, we use a change variable of \( \Delta NPA \) (Beaver and Engel 1996). Except for stock returns (\( AR_t \)), macroeconomic data such as GDP growth rate (\( \Delta GDP_t \)) and unemployment rate (\( \Delta UNEMP_t \)) and bank size, all continuous variables are scaled by beginning total assets.

We estimate all the regressions using two approaches. The first approach we use is pooled regression with time fixed effects where standard errors are clustered by bank (Petersen 2009). The second approach is a Fama-MacBeth regression (1973). Both approaches address cross-sectional dependence in the residuals. Many recent value-relevance studies use either approach. We focus on the first approach because our sample comprises only 17 (16) years and the small number of years can lead to insufficient test power in Fama-MacBeth regressions.

Table 2 presents the estimation result of equation (1), which is used to decompose LLP into discretionary and non-discretionary components. The results are similar to those of prior studies. Specifically, net charge-off (\( NCO \)) has a strongly negative association with LLP, which is consistent with Beaver and Engel (1996). The coefficient on current period change in non-performing assets (\( \Delta NPA_t \)) (0.12) is much greater than that on subsequent change in non-performing assets (\( \Delta NPA_{t+1} \)) (0.02). GDP growth during the period (\( \Delta GDP_t \)) is negatively related to LLP, indicating that loan loss provisioning is pro-cyclical (Laeven and Majnoni 2003). Adjusted \( R^2 \) is 0.870 assuring that our model explains much of the variation in LLP.

\[
\text{Table 2 about here}
\]

\textit{Value relevance regression}

Table 3 presents results on a level specification. Panel A provides estimation results based on the pooled regression. Columns (1) and (2) report the regression of stock returns on the level of earnings and LLP. Columns (3) and (4) report the regression of stock returns on the level of earnings and the two LLP components, NLLP and DLLP. Columns (2) and (4) add NPA to columns (1) and (3) thereby controlling for default risk. Columns (1) and (2) show that the earning level is positively associated with stock returns, confirming the positive value-relevance of earnings documented by prior studies. Moreover, the level of LLP is negatively associated with stock returns, indicating that the equity market views LLP negatively as an expense. Columns (3) and (4) show that the level of NLLP is negatively associated with stock returns. It implies that the negative value relevance of LLP is driven by NLLP. More importantly, the level of DLLP is not significantly associated or weakly negatively associated with stock returns, contrary to the signaling hypothesis. Control for NPA does not change the results although the magnitude of the coefficients on LLP and NLLP decreases relative to those in models without NPA. In addition, adjusted \( R^2 \) are above 45% which implies that the level model has large explanatory power.

\[
\text{Table 3 about here}
\]

Panel B presents the Fama-MacBeth regression results. The result in Panel B is consistent with one in Panel A although explanatory power in Panel B is much lower than that in Panel A. Specifically, LLP and NLLP are negatively associated with stock returns and DLLP is not positively related to stock returns with or without controlling for NPA. Again, the signaling hypothesis is not supported. Overall, the level specification in Panels A and B confirm that
LLP and NLLP reduce value and DLLP is value-irrelevant. As mentioned above, the level model only captures transitory shocks, but not permanent shocks, to earnings and LLP.

Table 4 reports results using the changes specification, which captures the permanent shocks. Similar to Table 3, Panel A provides estimation results based on the pooled regression model. Columns (1) and (2) report the association between stock returns and LLP. Columns (3) and (4) report the association between stock returns and LLP components, NLLP and DLLP. Columns (2) and (4) add ΔNPA to columns (1) and (3). In each column, the coefficients on change in earnings are positive and significant. Columns (1) and (2) show that the coefficients on change in LLP are negative and significant. Columns (3) and (4) report that the coefficients on changes in both NLLP and DLLP are negative and significant. Different from the result of a level specification in Table 3, in which increase in DLLP is not significantly associated or is weakly negatively associated with stock returns, increase in DLLP conveys negative news to the equity market. Adjusted R² are as high as the pooled level specifications in Table 3, Panel A.

[TABLE 4 ABOUT HERE]

Panel B reports Fama-MacBeth regression estimation results. The result in Panel B is similar to that in Panel A. In columns (1) and (2), LLP are negatively associated with stock returns. In columns (3) and (4), NLLP are negatively associated with stock returns. Unlike Panel A in which DLLP is negative and significant, DLLP in Panel B is negative but insignificant. However, note that the statistical inference on the coefficients in Table 4 is based on 16 annual regressions coefficients. Thus, we place more weight on the result in Panel A than Panel B. Taken together, the increases in LLP, NLLP, and DLLP relative to the previous year have negative implications to value and the effect of the change in DLLP on the market is smaller than that of NLLP. Thus, the change in DLLP does not play a signaling role to the market.

In Table 3 and Table 4, we separately examine the effect of temporary shocks (level specification) and permanent shocks (change specification) to LLP and earnings on the market. Now, we include both change and level variables of LLP as well as earnings in one regression model to capture both transitory and permanent shocks to LLP and earnings at the same time. Table 5 presents results on a level-change specification. Panel A provides estimation results based on the pooled regression model. Similar to Table 3 and 4, columns (1) and (2) are results on the association between stock return and LLP, and columns (3) and (4) are results on the relation between stock returns and LLP components, NLLP and DLLP. Column (1) shows that both level and change of LLP are significantly negative. And the coefficient of a level of LLP (-8.14) is of greater (absolute) magnitude compared to that of a change in LLP (-5.84). However, in column (2), after controlling for ΔNPA, while a level of LLP is still significantly negative, the change in LLP becomes insignificant, which implies that transitory shocks to LLP have greater valuation implications compared to permanent shocks to LLP.

In column (3), both the level of and change in NLLP are significantly negative and the coefficient on the level of NLLP has greater absolute value than that on the change in NLLP, which is similar to the result for LLP. Note that the level of DLLP is positive and significant at the 5% level. It seems that the market perceives the increase in the level of DLLP as weakly positive conditional on the change in DLLP. Another noticeable feature is that the change in DLLP is significantly negative and it has greater absolute value than the level of
LLP and the level of and change in NLLP. This implies that the greater change in DLLP is negative news to the market, in contrast to the level of DLLP. In column (4), once controlling for ΔNPA, the coefficients on the change in NLLP and the level of DLLP disappear, contrary to the signaling hypothesis. However, the level of NLLP and change in DLLP are still negatively significant and the coefficient on the change in DLLP is of greater (absolute) magnitude than that on the level of DLLP and NLLP. Thus, while temporary shocks to NLLP are larger than permanent shocks to NLLP, permanent shocks to DLLP are larger than its temporary shocks to DLLP. In addition, both the level and change in earnings (EBTP) have positive implications to value, consistent with prior studies.

Panel B reports Fama-MacBeth regression results for the level-changes specification. Column (1) shows that both the level of and change in LLP are significantly negative but the coefficient of the change of LLP has greater (absolute) magnitude than that on the level of LLP, which is opposite to column (1) in Panel A. Column (2) documents that the negative significance of the level of LLP disappears but the negative significance of the change in LLP is still present. In column (3), the level of NLLP and the change in DLLP are negatively significant. However, the change in NLLP is not negatively significant and the level of DLLP is positive but insignificant. Column (4) shows that after control for ΔNPA, only the level of NLLP is negatively significant. Note that the Fama-MacBeth regression result provides supplemental information to the pooled regression result. Overall, temporary and permanent shocks to LLP and their components have different impacts on stock returns. Thus, the inclusion of both level and change variables of LLP in the same regression model is necessary for the value relevance study of LLP. More importantly, neither temporary nor permanent shocks to DLLP seem to provide positive news to the equity market, contrary to the signaling hypothesis. Additionally, coefficients on both the level of and change in earnings are significantly positive across columns, consistent with Panel A.

In Table 5, we examine both temporary and permanent shocks to LLP and their components altogether and interpret each shock, respectively. To facilitate the interpretation of the value relevance of LLP and their components (NLLP, DLLP) information, we use the level-lag specification. As mentioned in section 3, this specification is equivalent to the level-changes specification. Table 6 reports results on the level-lag specification. Panel A provides estimation results based on the pooled regression model. Columns (1) and (2) show that the net effect of LLP information (both LLPt and ∆LLPt) on stock returns is significantly negative. Columns (3) and (4) document that the net effect of NLLP information (both NLLPt and ∆NLLPt) is significantly negative. Furthermore, the net effects of DLLP information (both DLLPt and ∆DLLPt) are negative but insignificant. Considering Panel A of Table 5, it seems that the (weakly) positive effect of transitory shocks to DLLP is cancelled out by (strongly) negative effect of permanent shocks to DLLP. Thus, DLLP information is value-irrelevant. In addition, earnings information (both EBTPt and ∆EBTPt) is positive and significant.

We use the term LLP information to describe both the level of LLP and change in LLP. This also applies to the terms NLLP information and DLLP information.
Panel B provides estimation results based on the Fama-MacBeth regression. Consistent with Panel A, both coefficients on LLPt and NLLPt are negative and significant and the coefficient on DLLPt is positive but insignificant. In sum, LLP and NLLP information have negative implications to value, while DLLP information is value-irrelevant. Therefore, we find no compelling evidence that the market positively perceives DLLP information.

The effect of the recent financial crisis on pricing DLLP
In this section, we examine whether the recent financial crisis had an impact on the pricing of DLLP. Ryan (2011) conjectures that the signaling role of DLLP may vary with the change in economic conditions. He points out that, incidentally, while prior studies supporting the signaling hypothesis of DLLP are based on samples concentrated around bad economic conditions, a study rejecting the signaling hypothesis is based on an economic boom period. He conjectures that a signaling role of DLLP may revive in the recent financial crisis. Our sample period includes bad economic conditions. The period from 2007 to 2010 is viewed as the recent financial crisis and includes a weak recovery period (Ryan 2011). We investigate whether the signaling role of DLLP is valid during this period.

To see how the value relevance of LLP and their components changes with time, we use the level-lag specification and regress contemporaneous stock returns on LLP and its components by year. Table 7 shows the estimation result of annual regressions. Panel A (Panel B) is the regression of stock returns on LLP information (NLLP and DLLP information). Figure 1 summarizes both Panel A and B. The coefficients on the levels of LLP and NLLP are mostly negative, which implies that LLP and NLLP have negative implications to value. On the other hand, DLLP has more positive coefficients than LLP and NLLP. However, there are twice as many negative coefficients on DLLP, compared to positive coefficients on DLLP. Especially, the coefficients on DLLP during 2007–2010 are all negative, which indicates that DLLP has negative valuation implications in the financial crisis. This finding supports the second hypothesis and provides evidence against the conjecture that a positive valuation of DLLP may occur in economic busts.

By using pooled regressions, we examine the effect of the recent financial crisis on value relevance of LLP and its components. To do so, we construct a dummy variable (Crisis) equal to 1 during 2007-2010 and 0 otherwise. We run pooled regressions of stock returns on the interaction term of the crisis dummy and LLP and its components in Table 8. Panel A provides estimation results based on the pooled regression of stock returns on current and lagged values of the level of LLP and the interaction term with Crisis. Column (1) shows that the coefficient on the interaction term (EBTPt*Crisis) is not significant, indicating that the crisis does not have an impact on investors’ valuation of earnings. Column (2) reports that the coefficient on interaction term (LLPt*Crisis) is negatively significant. It indicates that the crisis has negative impacts of valuing LLP. Column (3) includes the two interaction terms (EBTPt*Crisis and LLPt*Crisis) in the same regression, which yield similar results.

The pooled regression does not include year dummy variables because the use of Crisis dummy with year dummy variables leads to multi-collinearity.
Panel B provides estimation results based on the pooled regression of stock returns on current and lagged values of the level of NLLP and DLLP, and the interaction term with \textit{Crisis}. Similar to Panel A, column (1) shows that the level of earnings is not valued differently during the financial crisis. Column (2) documents that NLLP has incremental negative valuation implications during the financial crisis, but DLLP is not valued differently during the financial crisis. Thus, the negative valuation implication of LLP during the financial crisis is driven by NLLP, not DLLP. Again, the pooled regression does not support the idea that the market positively perceives DLLP during economic busts.

\textit{Market reaction tests}

In this section, we examine market reaction of stock prices to disclosures of loan loss provisions. The market reaction test allows us to tell how equity investors react to loan loss provision when it is released to the public, whereas the value relevance test enables us to investigate whether the information in LLP is associated with stock prices over a certain period, a year in this study. Both tests complement each other in confirming how useful LLP is to equity investors in different time horizons. We choose quarterly earnings announcement date as an event date for loan loss disclosures because on quarterly earnings announcement date, banks release not only earnings but also other important information, including loan loss provisions (LLP) and non-performing loans (NLP) (Wahlen 1994).

To test market reaction, we use a below model (5), a modified version of model (4). This model enables us to test whether loan loss provisions information is incremental to earnings information when banks release loan loss disclosures. Moreover, if the market positively reacts to discretionary loan loss provision (DLLP), the coefficient on DLLP, \(\delta_{32}\), is expected to be positive.

\[
\text{CAR}(-1,1) = \delta_0 + \delta_1 \text{EBTP}_t + \delta_2 \text{EBTP}_{t-1} + \delta_3 \text{LLP}_t + \delta_31 \text{NLLP}_t + \delta_32 \text{DLLP}_t + \delta_4 \text{LLP}_{t-1} + \delta_41 \text{NLLP}_{t-1} + \delta_42 \text{DLLP}_{t-1} + \delta_5 \text{NPA}_t + \delta_6 \text{NPA}_{t-1} + \epsilon_{t,t}
\]

where stock returns are CRSP value-weighted market-adjusted stock returns over three days centered on the quarterly earnings announcement date.

\textbf{[TABLE 9 ABOUT HERE]}

Table 9 presents the result of market reaction tests. Panel A provides estimation results based on the pooled regression model. Similar to the value relevance test, column (1) and (2) show that the market strongly negatively reacts to LLP around earnings announcements. Column (3) and (4) report the market negatively reacts to NLLP. More importantly, the coefficient on DLLP, \(\delta_{32}\), is significantly negative, which indicates that the market views DLLP as bad news rather than good news. It is noted that the negative relation between returns and DLLP is more pronounced for the market reaction test than the value relevance test. It implies that DLLP is impounded into stock prices in a timely manner. Note that the coefficient on earnings coefficients is significantly positive across all columns, which suggests that the market positively react to earnings information and is consistent with prior studies. Panel B is estimation results based on Fama Macbeth regression. We find that Panel B has similar results to Panel A.

\textbf{[Figure 2 ABOUT HERE]}
We also examine the market reaction to LLP, NLLP, and DLLP during the recent financial crisis as in Table 7. To do so, we regress stock returns around earnings announcement on LLP and its components by quarter. Figure 2 shows that most market reaction to DLLP is negative during 2007:3 through 2010:4, which rejects Ryan (2011)’s conjecture that the role of signaling for DLLP could revive during economic downturns. We also examine the effect of the recent financial crisis on market reaction to LLP and its components. Similar to Table 8, we construct a dummy variable (Crisis), which equal to 1 during 2007:3-2010:4 and 0 otherwise and include interaction terms of crisis with LLP, NLLP, and DLLP in the model (5), respectively. Untabulated results show that the effect of the recent financial crisis on the market reaction to LLP, NLLP, and DLLP are all negative although the coefficient of DLLP is not significant and those of LLP and NLLP are significant. Thus, the market does not positively DLLP during the recent financial crisis. Overall, the market reaction test as well as the value relevance test support that equity investors do not price DLLP regardless of economic conditions.

V. Conclusion
This study examines the value relevance of loan loss provisions (LLP). Using only the post-Basel period data and better specified-models, we find that the equity market negatively prices LLP and NLLP. Also, there is no evidence of positive valuation of DLLP, contrary to the signaling hypothesis. In addition, we find that the market valuation of DLLP is consistently negative during the financial crisis, when DLLP is most likely to serve a signaling role. Our findings in the value relevance test still hold in the short-window market reaction test.

Our finding provides some implications for standard setters. Currently, FASB and IASB have been revising the loan loss model toward a new loan loss model, which allows for more discretion. Our result shows that the market does not assess high DLLP as good news anymore, contrary to earlier studies on capital market pricing of LLP. Considering these results, standard setters should devise a new loan loss model which restricts discretion.

Our study has the following limitations. First, we use only post-BASEL period data because Compustat Bank does not have non-performing data in pre-BASEL period. Thus, we cannot uncover that the positive market pricing of DLLP in pre-BASEL period was directly attributable to the regulation change. However, by using 16 years of post-BASEL data, we show that the market does not positively price DLLP anymore. Second, the discretionary loan loss provision model we use may be subject to the mis-specification. Unlike discretionary accrual models for non-financials, there is no commonly accepted loan loss provision model. Thus, measurement error in discretionary loan loss provision model is inevitable. However, our discretionary loan loss provision model includes as many recently documented LLP determinants as possible in order to avoid measurement error. Lastly, our findings that the equity market negatively prices LLP and NLLP and does not price DLLP do not necessarily indicate that the market completely incorporates loan-related risk information in LLP into stock prices. Based on prior studies, there are possibilities that the market participants do not fully understand the information in LLP (Bradshaw et al. 2001; Sloan 1996; Soliman 2008). We leave this to future studies.

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16 To the best of our knowledge, this paper is the first to examine the short-window market reaction to loan loss disclosures during the recent financial crisis.
REFERENCE


Table 1
Descriptive statistics

<table>
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<th>Variables</th>
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<th>Q1</th>
<th>Median</th>
<th>Q3</th>
<th>Max</th>
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<td>0.019</td>
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<td>0.035</td>
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<td>-0.004</td>
<td>-0.002</td>
<td>0.007</td>
<td>0.035</td>
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Table 1 reports basic descriptive statistics for our key variables. Our sample period starts from 1995-2010. Each year, all variables are winsorized at 1% and 99%, except \( Ret, \Delta GDP, \Delta UNEMP \).

\( RET \) is the 12-month buy-and-hold stock return from the end of the third month of the current fiscal year to the end of the third month of the following year less the contemporaneous buy-and-hold stock returns on the CRSP value-weighted market index.

\( EBTP \) is income before taxes and provisions over the period \( t \) scaled by lagged total assets.

\( \Delta EBTP \) is the change in income before taxes and provisions over the period \( t \) scaled by lagged total assets.

\( \Delta Loan \) is the change in total loans outstanding over the period \( t \) scaled by lagged total assets.

\( \Delta NPA \) is the change in non-performing loans over the period \( t+1 \) scaled by lagged total assets.

\( LLP \) is loan loss provision in period \( t \) scaled by lagged total assets.

\( NLLP \) is non-discretionary loan loss provision in period \( t \) scaled by lagged total assets.

\( DLLP \) is discretionary loan loss provision in period \( t \) scaled by lagged total assets.

\( \Delta LLP \) is the change in loan loss provision over the period \( t \) scaled by lagged total assets.

\( \Delta NLLP \) is the change in non-discretionary loan loss provision over the period \( t \) scaled by lagged total assets.

\( \Delta DLLP \) is the change in discretionary loan loss provision over the period \( t \) scaled by lagged total assets.

\( NCO \) is net charge-off scaled by lagged total assets.

\( SIZE \) is natural logarithm of lagged total assets.

\( \Delta GDP \) is the change in GDP over the period \( t \).

\( \Delta UNEMP \) is the change in unemployment rates over the period \( t \).
### Table 2

Estimation for the discretionary loan loss provision model

<table>
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<th>VARIABLES</th>
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<td>$NCO_t$</td>
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<td>(7.94)</td>
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<td></td>
<td>(7.26)</td>
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</table>

Observations 5,443
Adjusted R-squared 0.870

This table presents the estimation result for the discretionary loan loss provision model. Our sample period starts from 1994-2010. We conduct the following to estimate discretionary LLP.

$$ LLP_t = \alpha_0 + \alpha_1 \Delta NPA_{t+1} + \alpha_2 \Delta NPA_t + \alpha_3 \Delta Loan_t + \alpha_4 NCO_t + \alpha_5 SIZE_t + \alpha_6 \Delta GDP_t + \alpha_7 \Delta UNEMP_t + u_t $$

See table 1 for detailed variable definitions. Non-discretionary LLP ($NLLP$) is a fitted value from the regression above. Discretionary LLP ($DLLP$) is a residual value from the regression above.
Table 3

Regressions of contemporaneous stock returns on level of earnings and various loan loss provisions (level specification)

Panel A: Pooled Regression

<table>
<thead>
<tr>
<th>VARIABLES</th>
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<th>(3)</th>
<th>(4)</th>
</tr>
</thead>
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<td>(4.81)</td>
<td>(4.79)</td>
<td>(4.72)</td>
</tr>
<tr>
<td>$EBTP_t$</td>
<td>6.18***</td>
<td>6.19***</td>
<td>6.20***</td>
<td>6.21***</td>
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<td></td>
<td>(4.88)</td>
<td>(4.81)</td>
<td>(4.79)</td>
<td>(4.72)</td>
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<tr>
<td>$LLP_t$</td>
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<td>-13.09***</td>
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<td>-13.09***</td>
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<td>(-6.88)</td>
<td>(-3.03)</td>
</tr>
<tr>
<td>$DLLP_t$</td>
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<td>-5.01*</td>
<td>-5.01*</td>
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<td>(-1.28)</td>
<td>(-1.81)</td>
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<td>$\Delta NPA_t$</td>
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<td>-6.23***</td>
<td>-6.14***</td>
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<td>(-4.04)</td>
<td>(-3.85)</td>
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<td>-0.10**</td>
<td>-0.08**</td>
<td>-0.10**</td>
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<tr>
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<td>(-2.71)</td>
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<tr>
<td>Observations</td>
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<td>4,709</td>
<td>4,709</td>
<td>4,709</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.476</td>
<td>0.494</td>
<td>0.477</td>
<td>0.493</td>
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</tbody>
</table>

This table reports the result of pooled regressions of contemporaneous stock returns on level of earnings and various loan loss provisions. The regression includes year fixed dummies. All results are based on standard errors clustered by bank. The sample consists of bank-year observations from 1995 to 2010. All p-values are based on two-tailed t-tests.
Table 3
Regressions of contemporaneous stock returns on level of earnings and various loan loss provisions (level specification)

Panel B: Fama Macbeth Regression

<table>
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<th>VARIABLES</th>
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<th>(2) RET&lt;sub&gt;t&lt;/sub&gt;</th>
<th>(3) RET&lt;sub&gt;t&lt;/sub&gt;</th>
<th>(4) RET&lt;sub&gt;t&lt;/sub&gt;</th>
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</thead>
<tbody>
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<td>5.47*** (5.26)</td>
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<td>2.37 (0.57)</td>
<td>1.21 (0.28)</td>
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<tr>
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Observations 4,709 4,709 4,709 4,709
R-squared 0.113 0.130 0.112 0.129
Number of groups 16 16 16 16

This table reports the result of the Fama-MacBeth regressions of contemporaneous stock returns on level of earnings and various loan loss provisions. The regression includes year fixed dummies. All results are based on standard errors clustered by bank. The sample consists of bank-year observations from 1995 to 2010. All p-values are based on two-tailed Fama and MacBeth t-statistics.
Table 4
Regressions of contemporaneous stock returns on change in earnings and various loan loss provisions (change specification)

Panel A: Pooled Regression

<table>
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<tr>
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This table reports the result of pooled regressions of contemporaneous stock returns on changes in earnings and various loan loss provisions. The regression includes year fixed dummies. All results are based on standard errors clustered by bank. The sample consists of bank-year observations from 1995 to 2010. All p-values are based on two-tailed t-tests.
### Table 4

Regressions of contemporaneous stock returns on level of earnings and various loan loss provisions (change specification)

**Panel B: Fama Macbeth Regression**

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This table reports the result of Fama-MacBeth regressions of contemporaneous stock returns on changes in earnings and various loan loss provisions. The regression includes year fixed dummies. All results are based on standard errors clustered by bank. The sample consists of bank-year observations from 1995 to 2010. All p-values are based on two-tailed Fama and MacBeth t-statistics.
### Table 5

Regressions of contemporaneous stock returns on level of earnings and various loan loss provisions and their changes (level-change specification)

#### Panel A: Pooled Regression

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This table reports the result of pooled regressions of contemporaneous stock returns on level of earnings and various loan loss provisions and their changes. The regression includes year fixed dummies. All results are based on standard errors clustered by bank. The sample consists of bank-year observations from 1995 to 2010. All p-values are based on two-tailed t-tests.
Table 5
Regressions of contemporaneous stock returns on level of earnings and various loan loss provisions and their changes (level-change specification)

Panel B: Fama Macbeth Regression

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This table reports the result of Fama-MacBeth regressions of contemporaneous stock returns on level of earnings and various loan loss provisions and their changes. The regression includes year fixed dummies. All results are based on standard errors clustered by bank. The sample consists of bank-year observations from 1995 to 2010. All p-values are based on two-tailed Fama and MacBeth t-statistics.
Table 6

Regressions of contemporaneous stock returns on level of earnings and various loan loss provisions and their lagged value (level-lag specification)

Panel A: Pooled Regression

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<td>0.504</td>
<td>0.500</td>
<td>0.506</td>
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This table reports the result of pooled regressions of contemporaneous stock returns on level of earnings and various loan loss provisions and their lagged variables. The regression includes year fixed dummies. All results are based on standard errors clustered by bank. The sample consists of bank-year observations from 1995 to 2010. All p-values are based on two-tailed t-tests.
Table 6
Regressions of contemporaneous stock returns on level of earnings and various loan loss
provisions and their lagged value (level-lag specification)

Panel B: Fama Macbeth Regression

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| $NLLP_t$  | -19.29*** | -16.23*** |
|           | (-5.91)  | (-4.56)   |
| $NLLP_{t-1}$ | 8.01     | 5.11      |
|           | (1.44)   | (0.70)    |
| $DLLP_t$  | 2.79      | 2.58      |
|           | (0.45)   | (0.45)    |
| $DLLP_{t-1}$ | 12.74**  | 8.56      |
|           | (2.57)   | (1.66)    |
| $NPA_t$   | -2.34     | -1.16     |
|           | (-1.49)  | (-0.77)   |
| $NPA_{t-1}$ | 2.06*    | 1.19      |
|           | (1.99)   | (1.03)    |
| Constant  | -0.04     | -0.02     |
|           | (-0.56)  | (-0.41)   |

Observations 4,709 4,709 4,709 4,709
R-squared 0.119 0.129 0.127 0.131
Number of groups 16 16 16 16

This table reports the result of the Fama-MacBeth regressions of contemporaneous stock returns on
level of earnings and various loan loss provisions and their lagged variables. The regression includes
year fixed dummies. All results are based on standard errors clustered by bank. The sample consists of
bank-year observations from 1995 to 2010. All p-values are based on two-tailed Fama and MacBeth t-
statistics.
Table 7
Regressions of contemporaneous stock returns on level of earnings and various loan loss provisions and their lagged value by year

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This table reports the result of the annual regressions of contemporaneous stock returns on level of earnings, various loan loss provisions and their lagged variables. We conduct the following regression by year. The regression uses a level-lag specification.

\[
R_t = \beta_0 + \beta_1 EBTP_t + \beta_2 EBTP_{t-1} + \beta_3 LLP_t + \beta_4 LLP_{t-1} + \beta_5 NPA_t + \beta_6 NPA_{t-1} + \varepsilon_t
\]

The first row represents the variable names. Adj R2 represents the adjusted R squares. N is the number of banks in each year. See table 1 for detailed definitions of remaining variables. The upper number in each cell indicates the estimate of each variable in the first row. The lower number in each cell indicates the t value associated with the estimate of each variable, which is in the upper number of each cell.
Table 7
Regressions of contemporaneous stock returns on level of earnings and various loan loss provisions and their lagged value by year

Panel B: NLLP and DLLP information

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This table reports the result of the annual regressions of contemporaneous stock returns on level of earnings, various loan loss provisions and their lagged variables. We conduct the following regression by year. We conduct the following regression by year. The regression uses a level-lag specification.

\[
R_i = \beta_0 + \beta_1 EBTP + \beta_2 EBTP_{t-1} + \beta_3 NLLP + \beta_4 DLLP + \beta_5 NLLP_{t-1} + \beta_6 DLLP_{t-1} + \beta_7 NPA + \beta_8 NPA_{t-1} + \epsilon_i
\]

The first row represents the variable names. Adj R\_2 represents the adjusted R squares. N is the number of banks in each year. See table 1 for detailed definitions of remaining variables. The upper number in each cell indicates the estimate of each variable in the first row. The lower number in each cell indicates the t value associated with the estimate of each variable, which is in the upper number of each cell.
Table 8
The effect of the recent financial crisis on valuing LLP and its components during 2007-2010 (level-lag specification)

Panel A: LLP information

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Observations 4,709  4,709  4,709
Adjusted R-squared 0.153  0.155  0.155

This table reports the result of the pooled regressions of contemporaneous stock returns on level of earnings and various loan loss provisions and interaction of them with a Crisis dummy. Crisis takes 1 if the fiscal year lies between year 2007 and year 2010. EBTP_t * Crisis and LLP_t * Crisis are interaction terms of EBTP_t and LLP_t with Crisis, respectively. The regression uses a level-lag specification. All results are based on standard errors clustered by bank. The sample consists of bank-year observations from 1995 to 2010. All p-values are based on two-tailed t-tests.
### Table 8

The effect of the recent financial crisis on valuing LLP and its components during 2007-2010 (level-lag specification)

#### Panel B: NLLP and DLLP information

<table>
<thead>
<tr>
<th>VARIABLES</th>
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<th>(2)</th>
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<tr>
<td></td>
<td>$RET_{t}$</td>
<td>$RET_{t}$</td>
<td>$RET_{t}$</td>
</tr>
<tr>
<td>Crisis</td>
<td>-0.11***</td>
<td>-0.07***</td>
<td>-0.07***</td>
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<tr>
<td></td>
<td>(-4.30)</td>
<td>(-5.63)</td>
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<tr>
<td>$EBTP_{t}$</td>
<td>9.12***</td>
<td>8.79***</td>
<td>8.71***</td>
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<tr>
<td></td>
<td>(7.56)</td>
<td>(8.11)</td>
<td>(7.14)</td>
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<tr>
<td>$EBTP_{t} \times Crisis$</td>
<td>0.01</td>
<td>0.14</td>
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<tr>
<td></td>
<td>(0.01)</td>
<td>(0.10)</td>
<td></td>
</tr>
<tr>
<td>$EBTP_{t-1}$</td>
<td>-6.33***</td>
<td>-6.50***</td>
<td>-6.48***</td>
</tr>
<tr>
<td></td>
<td>(-6.26)</td>
<td>(-6.48)</td>
<td>(-6.46)</td>
</tr>
<tr>
<td>$NLLP_{t}$</td>
<td>-7.75***</td>
<td>2.21</td>
<td>2.23</td>
</tr>
<tr>
<td></td>
<td>(-3.65)</td>
<td>(0.82)</td>
<td>(0.82)</td>
</tr>
<tr>
<td>$NLLP_{t} \times Crisis$</td>
<td>-11.68***</td>
<td>-11.68***</td>
<td></td>
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<tr>
<td></td>
<td>(-3.78)</td>
<td>(-3.78)</td>
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</tr>
<tr>
<td>$NLLP_{t-1}$</td>
<td>4.21**</td>
<td>3.42</td>
<td>3.42</td>
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<tr>
<td></td>
<td>(1.98)</td>
<td>(1.57)</td>
<td>(1.57)</td>
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<td>$DLLP_{t}$</td>
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<td>4.04</td>
<td>4.09</td>
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<td></td>
<td>(-0.78)</td>
<td>(0.77)</td>
<td>(0.77)</td>
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<tr>
<td></td>
<td>(-1.11)</td>
<td>(-1.11)</td>
<td></td>
</tr>
<tr>
<td>$DLLP_{t-1}$</td>
<td>9.28**</td>
<td>9.39**</td>
<td>9.38**</td>
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<td></td>
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<td>(2.28)</td>
<td>(2.29)</td>
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<td>$NPA_{t}$</td>
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<td>$NPA_{t-1}$</td>
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<td>0.14</td>
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<td>(0.02)</td>
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<tr>
<td>Constant</td>
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<td>0.02</td>
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<tr>
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<td>Observations</td>
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<tr>
<td>Adjusted R-squared</td>
<td>0.152</td>
<td>0.156</td>
<td>0.156</td>
</tr>
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</table>

This table reports the result of the pooled regressions of contemporaneous stock returns on level of earnings and various loan loss provisions and interaction of them with a Crisis dummy. Crisis takes 1 if the fiscal year lies between year 2007 and year 2010. $EBTP_{t} \times Crisis$, $NLLP_{t} \times Crisis$, and $DLLP_{t} \times Crisis$ are interaction terms of $EBTP_{t}$, $NLLP_{t}$, and $DLLP_{t}$ with Crisis, respectively. The regression uses a level-lag specification. All results are based on standard errors clustered by bank. The sample consists of bank-year observations from 1995 to 2010. All p-values are based on two-tailed t-tests.
### Table 9

Regressions of stock returns around earnings announcement on level of earnings and various loan loss provisions and their lagged value (level-lag specification)

Panel A: Pooled Regression

<table>
<thead>
<tr>
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<th>(4)</th>
<th>(5)</th>
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<td>CAR(-1,1)</td>
<td>CAR(-1,1)</td>
<td>CAR(-1,1)</td>
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<td>2.05***</td>
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<td>(5.23)</td>
<td>(5.10)</td>
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<td>-6.57***</td>
<td>-6.34***</td>
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<td></td>
<td>(-9.37)</td>
<td>(-8.04)</td>
<td></td>
<td></td>
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<tr>
<td>LLP&lt;sub&gt;t-1&lt;/sub&gt;</td>
<td>1.46***</td>
<td>1.44***</td>
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<tr>
<td></td>
<td>(2.01)</td>
<td>(2.25)</td>
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<td></td>
</tr>
<tr>
<td>NLLP&lt;sub&gt;t&lt;/sub&gt;</td>
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<td>-8.65***</td>
<td>-8.49***</td>
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<tr>
<td></td>
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<td>(-9.57)</td>
<td>(-7.50)</td>
<td></td>
</tr>
<tr>
<td>NLLP&lt;sub&gt;t-1&lt;/sub&gt;</td>
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<td>1.67**</td>
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<tr>
<td></td>
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<td>(2.02)</td>
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<tr>
<td>DLLP&lt;sub&gt;t&lt;/sub&gt;</td>
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<td>-4.07***</td>
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<tr>
<td></td>
<td>(-4.00)</td>
<td>(-4.03)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DLLP&lt;sub&gt;t-1&lt;/sub&gt;</td>
<td>1.84</td>
<td>2.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1.42)</td>
<td>(1.47)</td>
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<td></td>
</tr>
<tr>
<td>NPA&lt;sub&gt;t&lt;/sub&gt;</td>
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<td></td>
<td>-0.44***</td>
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</tr>
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<tr>
<td>Observations</td>
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<td>21,376</td>
<td>20,679</td>
<td>20,679</td>
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<tr>
<td>Adjusted R-squared</td>
<td>0.066</td>
<td>0.069</td>
<td>0.068</td>
<td>0.071</td>
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This table reports the result of pooled regressions of stock returns during three days centered on earnings announcement dates on level of earnings and various loan loss provisions and their lagged variables. The dependent variable, \( CAR(-1,1) \), is the CRSP value-weighted market-adjusted stock returns over the three days centered on the earnings announcement date. The regression includes year-quarter fixed dummies. All results are based on standard errors clustered by bank. The sample consists of bank-quarter observations from 1995 to 2010. All p-values are based on two-tailed t-tests.
Table 9

Regressions of stock returns around earnings announcement on level of earnings and various loan loss provisions and their lagged value (level-lag specification)

Panel B: Fama Macbeth Regression

<table>
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<td>(7.52)</td>
<td>(7.34)</td>
<td>(6.84)</td>
<td>(6.70)</td>
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<td>$EBTP_{t-1}$</td>
<td>-2.24***</td>
<td>-2.33***</td>
<td>-2.16***</td>
<td>-2.27***</td>
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<td>(3.63)</td>
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<td>$NLLP_t$</td>
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<td>-6.09***</td>
<td>2.85***</td>
<td>2.30**</td>
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<td></td>
<td>(-7.31)</td>
<td>(-6.24)</td>
<td>(3.29)</td>
<td>(2.43)</td>
</tr>
<tr>
<td>$NLLP_{t-1}$</td>
<td>2.85***</td>
<td>2.30**</td>
<td>(-1.93)</td>
<td>(-2.43)</td>
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<tr>
<td></td>
<td>(3.29)</td>
<td>(2.43)</td>
<td>(3.72)</td>
<td>(3.63)</td>
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<td>$DLLP_t$</td>
<td>-1.87*</td>
<td>-2.30**</td>
<td>4.31***</td>
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<td>(3.56)</td>
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<tr>
<td>$DLLP_{t-1}$</td>
<td>4.31***</td>
<td>4.38***</td>
<td>(3.48)</td>
<td>(3.56)</td>
</tr>
<tr>
<td>$NPA_t$</td>
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<td>0.00</td>
<td>0.65***</td>
<td>0.73***</td>
</tr>
<tr>
<td></td>
<td>(0.60)</td>
<td>(0.58)</td>
<td>(3.91)</td>
<td>(3.98)</td>
</tr>
<tr>
<td>$NPA_{t-1}$</td>
<td>0.65***</td>
<td>0.73***</td>
<td>(3.91)</td>
<td>(3.98)</td>
</tr>
<tr>
<td>Constant</td>
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<td>0.00</td>
<td>0.00*</td>
<td>0.00</td>
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<tr>
<td></td>
<td>(0.60)</td>
<td>(0.58)</td>
<td>(1.70)</td>
<td>(1.40)</td>
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</table>

Observations 21,376 21,376 20,679 20,679  
R-squared 0.033 0.037 0.035 0.038  
Number of groups 68 68 68 68

This table reports the result of the Fama and MacBeth regressions of stock returns during three days centered on earnings announcement dates on level of earnings and various loan loss provisions and their lagged variables. The dependent variable, $CAR(-1,1)$, is the CRSP value-weighted market-adjusted stock returns over the three days centered on the earnings announcement date. The regression includes year-quarter fixed dummies. All results are based on standard errors clustered by bank. The sample consists of bank-quarter observations from 1995 to 2010. All p-values are based on two-tailed t-tests.
This figure illustrates the annual regression coefficients on LLP, NLLP and DLLP during 1995-2010. We conduct the following regression by year.

\[ R_t = \beta_0 + \beta_1 \text{EBTP}_t + \beta_2 \text{EBTP}_{t-1} + \beta_3 \text{LLP}_t (\beta_{31} \text{NLLP}_t + \beta_{32} \text{DLLP}_t) + \beta_4 \text{LLP}_{t-1} (\beta_{41} \text{NLLP}_{t-1} + \beta_{42} \text{DLLP}_{t-1}) + \beta_5 \text{NPA}_t + \beta_6 \text{NPA}_{t-1} + \epsilon_{i,t} \]

Fiscal year is on x-axis and the regression coefficients on \( \text{LLP}_t \) (the blue line), \( \text{NLLP}_t \) (the red line), and \( \text{DLLP}_t \) (the green line) are on y-axis. See Table 1 for detailed variable definitions.
Figure 2
Short-window market reaction to LLP, NLLP, and DLLP during the recent financial crisis (2007:3-2010:4)

This figure illustrates the quarterly regression coefficients on LLP, NLLP and DLLP during 2007:3-2010:4. We conduct the following regression by quarter.

\[
\text{CAR(-1,1)} = \beta_0 + \beta_1 \text{EBTP}_t + \beta_2 \text{EBTP}_{t-1} + \beta_3 \text{LLP}_t (\beta_{31} \text{NLLP}_t + \beta_{32} \text{DLLP}_t) + \beta_4 \text{LLP}_{t-1} (\beta_{41} \text{NLLP}_{t-1} + \beta_{42} \text{DLLP}_{t-1}) + \beta_5 \text{NPA}_t + \beta_6 \text{NPA}_{t-1} + \epsilon_{t,t}
\]

\text{CAR(-1,1)} denotes the CRSP value-weighted market-adjusted stock returns over the three days centered on the earnings announcement date. Fiscal year-quarter is on x-axis and the regression coefficients on \text{LLP}_t (the blue solid line), \text{NLLP}_t (the red solid line), and \text{DLLP}_t (the green solid line) are on y-axis. See table 1 for detailed variable definitions.
MEASURING BOILERPLATE MD&A DISCLOSURE LEVELS OF JAPANESE FIRMS

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Japan
Itakeki@center.konan-u.ac.jp

ABSTRACT

In Japan, management discussion and analysis (MD&A) has been a required disclosure for annual reports since 2004. The MD&A represents narrative information on a firm’s profile, performance, strategy, financial state, and other information related to business activities. After 10 years, the Ministry of Economy, Trade and Industry (METI) (2014) has noted that MD&A information in Japan has become boilerplate disclosure. In the US, the Securities and Exchange Commission (SEC) has concerns with boilerplate disclosures in the MD&A (Pozen[2008]). Then, is the boilerplate disclosure bad?

This paper examines whether management discussion and analysis information of Japanese firms becomes boilerplate disclosure using the modification score generated from Term Frequency - Inverse Document Frequency. During the years 2008 to 2009, I find increasing MD&A length and decreasing MD&A scores. This finding indicates that with the exception of the years 2008 and 2009, MD&A information in Japan does not become boilerplate disclosure. Financial crisis occurred during the 2008 to 2009 may affect the firm’s disclosure activity. Information about financial crisis may be written as the form of template.

This study also analyzed the determinants of boilerplate disclosure for MD&A. An analysis of the determinants of boilerplate disclosure in MD&A shows that firms with aggressive forecasts may utilize the MD&A information. Firms with long MD&A information do not engage in aggressive modification. Additionally, firms that have adopted the SEC standard show aggressive modification. It is not the number of segments that determine the MD&A information in some cases but the positive aggressiveness of firm disclosure, indicated by management forecast innovation. So, in Japan, MD&A may be functioned as the proxy of aggressiveness of firm disclosure.
Background

MD&A regulation in Japan

In Japan, management discussion and analysis (MD&A) has been a required disclosure for annual reports since 2004. The MD&A represents narrative information on a firm’s profile, performance, strategy, financial state, and other information related to business activities. After 10 years, the Ministry of Economy, Trade and Industry (METI) (2014) has noted that MD&A information in Japan has become boilerplate disclosure. In the US, the Securities and Exchange Commission (SEC) has concerns with boilerplate disclosures in the MD&A (Pozen[2008]). Then, is the boilerplate disclosure bad? “Boilerplate” means “a standard form of words that can be used as a model for writing parts of a business document, legal agreement, etc”. MD&A is mandatory disclosure, so it is important to engage in template. But, in fact, while all public companies provide MD&A, there is some latitude in the extent to which they meet the letter of its disclosure requirements and, for example, while some firms may provide what is mainly “boilerplate” and/or a rehash of information already available from the financial statements, others may go beyond the minimum requirements by releasing more extensive information(Scott[2014]). The purpose of this paper is to catch the reality of boilerplate disclosure of Japanese firms and to investigate the effect of the boilerplate disclosure.

There are many studies concerning MD&A, but few studies have been conducted in Japan for two reasons. First, the structure of the Japanese language is different. MD&A is qualitative information. Therefore, to analyze MD&A information, the qualitative information must be treated differently, particularly when using text mining analysis. For example, the English language consists only of letters from the alphabet, but the Japanese language consists of three characters, hiragana, katakana, and kanji. Analyzing Japanese documents is difficult compared to the analysis of documents in other languages such as English; however, technology is rendering the analysis of Japanese documents less complex.

The second reason is the availability of qualitative data. In the US, EDGAR provides XBRL data on SEC filings. In Japan, EDINET provides XBRL data, which includes text data from annual reports since 2014. This recent text data in the annual report can be used, but past data is unavailable because EDINET only stores data for five years. As mentioned, the disclosure of qualitative information in annual reports has been required in Japan since 2004. Therefore, manual correction is required to analyze past data from annual report text.

In the US, MD&A regulation has changed many times as a result of research and discussions. In Japan, however, few studies examine MD&A information, and in-depth investigation of MD&A regulation would be valuable. This study analyzes MD&A information trends and measures the level of boilerplate disclosure of Japanese firms.

This study finds that MD&A information in Japan does not become boilerplate disclosure with the exception of the years 2008 and 2009. Additionally, firms with aggressive forecasts

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1The Oxford Advanced Learner’s Dictionary.
2For example, Bryan [1997], Botosan [2007], and Li [2008].
3Electronic Disclosure for Investors’ NETwork, which is under the control of the Financial Services Agency.
may have utilized the MD&A information. Firms with long MD&A information do not perform aggressive modification. Firms that adopt the SEC standard engage in aggressive modification. It is not the number of segments that become the determinants of the MD&A information in some cases but the positive aggressiveness of the firm disclosure, indicated by management forecast innovation (MFI).

This study contributes to the literature in two ways. First, this study is the first paper to examine the level of boilerplate disclosure in Japanese firms. Second, this study is the first paper to examine the relationship between qualitative information and management forecasts. There are many studies about management forecasts in Japan, but there is no study about the qualitative information and management forecasts.

The paper proceeds as follows. Section 2 describes past literature concerning MD&A. Section 3 describes the methodology and data. Section 4 describes the results of MD&A score trends. Section 5 describes the determinants of the boilerplate disclosure in MD&A and additional test, and Section 6 concludes.

Past Literature

Many studies address MD&A in the US. Botosan [1997] analyzes the relationship between voluntary disclosure and cost of capital. Botosan [1997] uses firms’ own scores based on the annual report as a proxy variable for voluntary disclosure. MD&A is included in part of the score, and the implied cost of capital as a proxy of shareholders’ equity cost is calculated based on the residual income model. As a result, when firms have a smaller analyst following, a significant negative relationship is found between the disclosure level and shareholders’ equity cost. Bryan [1997] classifies the MD&A information for each item and analyzes the relationship of each item and the stock market. The author finds that a positive relationship exists between information and stock returns for capital expenditure. Li [2008] uses the Fog Index and the number of characters for analysis. The readability of long 10-K filings is low, and analysis shows a decrease in profits. This result shows that management can enhance the complexity of the document and hide the future benefit from investors. Feldman et al. [2010] analyzed the market reaction to the tone of the MD&A information. The authors found a significant relationship between the tone and stock returns of MD&A information. Brown and Tucker [2011] found that the market reacts positively to firms that made modifications to MD&A information from the previous year.

This study focuses on the modifications to MD&A information. A low level of MD&A information modification implies boilerplate disclosure. This study employs the MD&A modified score of Brown and Tucker [2011] and measures the level of boilerplate disclosure in Japanese firms.
Methodology and Data

Methodology
To measure the level of boilerplate disclosure, this study uses the method of Brown and Tucker [2011]. Brown and Tucker [2011] focus on MD&A information modification, and the scores are generated from Term Frequency - Inverse Document Frequency (TF-IDF).

\[
IDF = \log \frac{N}{df}
\]

This formula shows the IDF. \(N\) represents the number of documents. \(df\) represents the number of documents where the term \(t\) appears. TF-IDF is calculated by multiplying TF and IDF and by each word in the MD&A. The TF-IDF value increases in proportion to the number of times a word appears in the document. In this study, I calculate the difference between the TF-IDF of a firm’s current year MD&A and that of the previous year and compare the TF-IDF of MD&A information between a firm’s current year MD&A and that of the previous year. Because the average of the TF-IDF in MD&A1 company/year is a decreasing function, I calculate the difference score (raw score) of TF-IDF between a firm’s current year score and that of the previous year. Moreover, I calculate the expected score using word length for the preceding five years. The score used is the raw score minus the expected score given the document length. This method is from Brown and Tucker [2011].

\[
\text{RawScore}(t) = \text{TF-IDF}(t) - \text{TF-IDF}(t-1)
\]

\[
\text{Score}(t) = \text{RawScore}(t) - \text{ExpectedScore}(t)
\]

Brown and Tucker [2011] state that “the combined trends of increasing MD&A length and decreasing MD&A modification scores suggest that, over time, managers increasingly use boilerplate disclosure (i.e., standard disclosure that uses many words with little firm-specific or fiscal period-specific content).” Therefore, I first analyze the trends in MD&A score and word length.

Data
The sample period starts from the fiscal year beginning March 2004 when MD&A regulation was mandated in Japan. The sample period extends to fiscal year 2014. The sample is from the first selection of the Tokyo Stock Exchange, and the total sample is 14,652. Table 1 shows the descriptive statistics.

Table 1. Descriptive Statistics on MD&A Scores

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>mean</th>
<th>sd</th>
<th>median</th>
<th>min</th>
<th>max</th>
<th>se</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score</td>
<td>14,652</td>
<td>-0.00008</td>
<td>0.00443</td>
<td>0.00195</td>
<td>-0.18522</td>
<td>0.13698</td>
<td>0.00004</td>
</tr>
<tr>
<td>Raw score</td>
<td>14,652</td>
<td>0.00022</td>
<td>0.00432</td>
<td>0.00217</td>
<td>-0.05791</td>
<td>0.13879</td>
<td>0.00004</td>
</tr>
<tr>
<td>Tf-idf</td>
<td>14,652</td>
<td>0.02850</td>
<td>0.01088</td>
<td>0.00855</td>
<td>0.00453</td>
<td>0.17043</td>
<td>0.00009</td>
</tr>
</tbody>
</table>

\(^5\)The detail about expected score, see the Appendix.
Results of MD&A Trends

Figure 1. Distributions of scores and document length. A higher score indicates a larger difference. Score uses the left y-axis and length uses the right y-axis.

Figure 1 shows the trends in score and length for the years 2006 to 2014. The score is highest at 2006 and, after that, the score decreases. The peak length occurred in 2010. It is important to identify the combined trends of increasing MD&A length and decreasing MD&A scores. Between the years 2008 to 2009, there is an increase in MD&A length and a decrease in MD&A scores. This tendency is also slightly confirmed during the period 2013 to 2014. There is a possibility that the 2008 financial crisis affected the disclosure activity of many firms.

Table 2 shows the proportion of firm losses. The number of firms showing a loss is over 50% during the period 2008 to 2009. Therefore, I suggest that a loss becomes boilerplate disclosure. With the exception of 2008 and 2009, MD&A information in Japan does not become boilerplate disclosure for this measurement.

Figure 2 shows the average score by industry. Other financial business shows the highest score, and air transportation shows the lowest score.

<table>
<thead>
<tr>
<th>Year</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score</td>
<td>0.34</td>
<td>0.37</td>
<td>0.54</td>
<td>0.76</td>
<td>0.32</td>
<td>0.36</td>
<td>0.42</td>
<td>0.33</td>
<td>0.26</td>
</tr>
</tbody>
</table>

※Net income is employed, and the sample is from the first selection of the Tokyo Stock Exchange. The total sample is 14,366.
The Determinants of Boilerplate Disclosure in MD&A

Hypothesis and descriptive statistics

Substantial empirical study addresses MD&A information in the US; however, only a few studies exist in Japan. Therefore, the determinants of the level of boilerplate disclosure in MD&A in Japan are unclear. I analyze the relation of firm characteristics to MD&A score. The next section presents my hypothesis concerning firm characteristics.

1. Management forecasts

First, I focus on management forecasts. In Japan, public firms are required to disclose the next forecast value. Firms are expected to describe the forecast in detail because investors focus on management forecasts. Therefore, sections with qualitative information, such as MD&A, are the optimal sections for providing details. I use two measurements for management forecasts. Management forecast error (MFE) and management forecast innovation (MFI).

\[
\text{MFE}_t = \text{Actual Value}_t - \text{Expected Value}_t
\]
\[
\text{MFI}_t = \text{Expected Value}_t - \text{Actual Value}_{t-1}
\]

MFE represents the accuracy of the management forecast. A high MFE implies high forecast error. MFI represents the aggressiveness of the management forecast. A high
MFI implies an aggressive forecast. When a firm forecasts aggressively, a more detailed explanation is required for stakeholders. Suzuki[2014] found that firms that operate under strong market pressure tend to issue aggressive forecasts. So, firms which issue aggressive forecasts have an incentive to explain more to their investors.

2. Differences in accounting standards
   An audit of MD&A information is not required in Japan, but it is required in the US. Therefore, it is possible to reduce litigation risk concerning MD&A information in the US through auditor guarantees, but this is not possible in Japan. It has to create the annual report on the basis of the SEC standard many of the companies that have adopted the SEC standard because I publicly traded in the US stock market, the securities report based on was developed by SEC standards in Japan it is believed that if you are creating a book is large. It is believed to be prepared in consideration of the fact that there is no guarantee of auditor if you reschedule to Japan based on the MD&A that was created by SEC standards. Therefore, firms that adopt SEC standards are likely to be cautious because of the litigation risk.

3. Document length
   The processing cost of longer documents is presumed to be higher. Other conditions assumed equal, the longer a document, the more difficult it is to read Li ([2008]). Therefore, firms with a longer MD&A may modify aggressively.

4. Diversification
   The more a firm diversifies its business, the greater the possibility that accurate information is not transmitted to the investor if the status of the firm must be explained. It is possible to improve the usefulness of information to investors by describing divisional financial information in sections of the MD&A. This information would otherwise be incommunicable to investors.

5. Loss
   As mentioned in Section 3, firm performance may affect the MD&A information. Particularly, firms showing a loss have an incentive to explain their performance.

I conduct OLS regression using the following model. Score is the same measurement as the measurement used in Section 3. MFE and MFI represent the management’s forecast measurements. Length represents the document length of the MD&A. SEC is a dummy variable. If a firm employs SEC standards, SEC equals 1 and 0 otherwise. Segment_D is also a dummy variable. If a firm has over five business segments, Segment_D equals 1 and 0 otherwise. Loss_D is a dummy variable based on net income. If a firm shows a loss, Loss_D equals 1 and 0 otherwise. I use the book-to-market ratio (BtM) and market capitalization (Size) as control variables.

The sample period starts in March for fiscal year 2004, when MD&A regulation was mandated in Japan. The sample period extends to fiscal year 2014. The sample is from the first selection of the Tokyo Stock Exchange. The total sample is 14,366⁶. Table 3 shows the descriptive statistics.

---

⁶In section4, the total sample is 14,532. Due to the availability of variables, the total sample is declined.
\[ \text{Score}_t = \alpha + \beta_1 \text{MFE}_t + \beta_2 \text{Length}_t + \beta_3 \text{SEC}_t + \beta_4 \text{Segment}_D + \beta_5 \text{Loss}_D + \beta_6 \text{BtM}_t + \beta_7 \text{Size}_t + \epsilon_t \]

※ includes year dummy and industrial dummy.

Table 3. Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>mean</th>
<th>sd</th>
<th>median</th>
<th>min</th>
<th>max</th>
<th>se</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score</td>
<td>14,366</td>
<td>-0.00008</td>
<td>0.00445</td>
<td>-0.00019</td>
<td>-0.18522</td>
<td>0.13698</td>
<td>0.00004</td>
</tr>
<tr>
<td>MFE</td>
<td>14,366</td>
<td>0.02045</td>
<td>0.23690</td>
<td>0.00018</td>
<td>0.00000</td>
<td>14.23214</td>
<td>0.00198</td>
</tr>
<tr>
<td>MFI</td>
<td>14,366</td>
<td>0.00775</td>
<td>0.23268</td>
<td>0.00015</td>
<td>-6.92210</td>
<td>11.99984</td>
<td>0.00194</td>
</tr>
<tr>
<td>Length</td>
<td>14,366</td>
<td>7.72705</td>
<td>0.61866</td>
<td>7.71356</td>
<td>5.47227</td>
<td>11.18751</td>
<td>0.00516</td>
</tr>
<tr>
<td>SEC</td>
<td>14,366</td>
<td>0.01900</td>
<td>0.13654</td>
<td>0.00000</td>
<td>0.00000</td>
<td>1.00000</td>
<td>0.00114</td>
</tr>
<tr>
<td>Segment_D</td>
<td>14,366</td>
<td>0.65669</td>
<td>0.47483</td>
<td>1.00000</td>
<td>0.00000</td>
<td>1.00000</td>
<td>0.00396</td>
</tr>
<tr>
<td>Loss_D</td>
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<td>0.41445</td>
<td>0.49264</td>
<td>0.00000</td>
<td>0.00000</td>
<td>1.00000</td>
<td>0.00411</td>
</tr>
<tr>
<td>BtM</td>
<td>14,366</td>
<td>1.14421</td>
<td>0.79087</td>
<td>0.99389</td>
<td>0.00787</td>
<td>13.60544</td>
<td>0.00660</td>
</tr>
<tr>
<td>Size</td>
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<td>24.58009</td>
<td>1.59281</td>
<td>24.37335</td>
<td>20.00812</td>
<td>30.93628</td>
<td>0.01329</td>
</tr>
</tbody>
</table>

※MFE and MFI are deflated by total asset  
※Length and Size are the log-transformed values.

Table 4. Pearson Correlations

<table>
<thead>
<tr>
<th>Variable</th>
<th>Score</th>
<th>MFE</th>
<th>MFI</th>
<th>Length</th>
<th>SEC</th>
<th>Segment_D</th>
<th>Loss D</th>
<th>BtM</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Score</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MFE</td>
<td>0.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MFI</td>
<td>0.01</td>
<td>0.19</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length</td>
<td>-0.08</td>
<td>0.08</td>
<td>0.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEC</td>
<td>0.02</td>
<td>-0.01</td>
<td>-0.01</td>
<td>0.37</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Segment_D</td>
<td>0.00</td>
<td>-0.04</td>
<td>0.00</td>
<td>0.02</td>
<td>0.08</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loss D</td>
<td>-0.01</td>
<td>0.02</td>
<td>-0.04</td>
<td>0.01</td>
<td>0.00</td>
<td>0.00</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BtM</td>
<td>-0.01</td>
<td>0.01</td>
<td>0.00</td>
<td>-0.06</td>
<td>-0.06</td>
<td>-0.03</td>
<td>0.22</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>0.02</td>
<td>0.02</td>
<td>-0.05</td>
<td>0.29</td>
<td>0.30</td>
<td>0.11</td>
<td>-0.08</td>
<td>-0.38</td>
<td>1.00</td>
</tr>
</tbody>
</table>

The Results of OLS Regressions

Table 5 shows the results of OLS regressions. MFE is not a significant value; however, MFI is a significant positive value (\( t = 1.939 \)). Therefore, firms with aggressive forecasts may have utilized MD&A information. Length is significantly negative (\( t = -11.680 \)). Firms with long MD&A information did not engage in aggressive modification. Additionally, SEC is significantly positive value (\( t = 6.127 \)). Firms that adopted the SEC standard engaged in aggressive modification. However, Segment_D and Loss_D are not significant values.
These results indicate that the determinants of boilerplate disclosure of MD&A are attitudes toward disclosure in some cases, not factors such as firm size and the number of business segments.

**Additional Test**

I conduct the additional test about MFI. Positive MFI and negative MFI may differ. The larger MFI means the aggressiveness of management forecast. But, positive MFI means aggressive attitude and negative MFI means conservative attitude. So in the additional analysis, I divide the samples into positive MFI and negative MFI.

Table 6 shows the additional results. 9,717 Firms have positive MFI and 4,649 firms have negative MFI. In case of MFI > 0, that is positive forecast, MFI is significantly positive value ($t = 2.184$). But in case of MFI < 0, that is negative forecast, MFI is not significant value.

This result indicates that firms with positive forecast engaged in aggressive modification. So firms may use MD&A section to appeal their positive attitude about their forecast, not to excuse the negative attitude about their negative forecast.
Table 5. Regression Analysis

<table>
<thead>
<tr>
<th></th>
<th>(1)</th>
<th>(2)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent variable:</strong></td>
<td>Score</td>
<td></td>
</tr>
<tr>
<td>MFE</td>
<td>0.0002</td>
<td>0.003*</td>
</tr>
<tr>
<td></td>
<td>(0.0002)</td>
<td>(0.0002)</td>
</tr>
<tr>
<td></td>
<td>t=1.560</td>
<td>t=1.939</td>
</tr>
<tr>
<td></td>
<td>p=0.119</td>
<td>p=0.053</td>
</tr>
<tr>
<td>MFI</td>
<td>0.0003*</td>
<td>0.002***</td>
</tr>
<tr>
<td></td>
<td>(0.0002)</td>
<td>(0.0003)</td>
</tr>
<tr>
<td></td>
<td>t=1.939</td>
<td>t=6.127</td>
</tr>
<tr>
<td></td>
<td>p=0.000</td>
<td>p=0.000</td>
</tr>
<tr>
<td>Length</td>
<td>−0.001***</td>
<td>−0.001***</td>
</tr>
<tr>
<td></td>
<td>(0.0001)</td>
<td>(0.0003)</td>
</tr>
<tr>
<td></td>
<td>t=−11.680</td>
<td>t=−11.663</td>
</tr>
<tr>
<td></td>
<td>p=0.000</td>
<td>p=0.000</td>
</tr>
<tr>
<td>SEC</td>
<td>0.002***</td>
<td>0.002***</td>
</tr>
<tr>
<td></td>
<td>(0.0003)</td>
<td>(0.0003)</td>
</tr>
<tr>
<td></td>
<td>t=6.127</td>
<td>t=6.132</td>
</tr>
<tr>
<td></td>
<td>p=0.000</td>
<td>p=0.000</td>
</tr>
<tr>
<td>Segment D</td>
<td>−0.0001</td>
<td>−0.0001</td>
</tr>
<tr>
<td></td>
<td>(0.0001)</td>
<td>(0.0001)</td>
</tr>
<tr>
<td></td>
<td>t=−0.868</td>
<td>t=−0.919</td>
</tr>
<tr>
<td></td>
<td>p=0.386</td>
<td>p=0.359</td>
</tr>
<tr>
<td>Loss D</td>
<td>0.0001</td>
<td>0.0001</td>
</tr>
<tr>
<td></td>
<td>(0.0001)</td>
<td>(0.0001)</td>
</tr>
<tr>
<td></td>
<td>t=0.636</td>
<td>t=0.701</td>
</tr>
<tr>
<td></td>
<td>p=0.525</td>
<td>p=0.484</td>
</tr>
<tr>
<td>BtM</td>
<td>−0.0001</td>
<td>−0.0001</td>
</tr>
<tr>
<td></td>
<td>(0.0001)</td>
<td>(0.0001)</td>
</tr>
<tr>
<td></td>
<td>t=−0.868</td>
<td>t=−0.912</td>
</tr>
<tr>
<td></td>
<td>p=0.386</td>
<td>p=0.362</td>
</tr>
<tr>
<td>Size</td>
<td>0.0001***</td>
<td>0.0001***</td>
</tr>
<tr>
<td></td>
<td>(0.00003)</td>
<td>(0.00003)</td>
</tr>
<tr>
<td></td>
<td>t=2.912</td>
<td>t=2.867</td>
</tr>
<tr>
<td></td>
<td>p=0.004</td>
<td>p=0.005</td>
</tr>
<tr>
<td>Constant</td>
<td>0.004***</td>
<td>0.004***</td>
</tr>
<tr>
<td></td>
<td>(0.001)</td>
<td>(0.001)</td>
</tr>
<tr>
<td></td>
<td>t=4.255</td>
<td>t=4.310</td>
</tr>
<tr>
<td></td>
<td>p=0.00003</td>
<td>p=0.00002</td>
</tr>
</tbody>
</table>

Observations: 14,366
R\(^2\): 0.015
Adjusted R\(^2\): 0.012
Residual Std. Error (df = 14338): 0.004
F Statistic (df = 47; 14318): 4.748*** (p = 0.000) 4.776*** (p = 0.000)

Note: *p<0.1; **p<0.05; ***p<0.01
### Table 6. The Results of Additional Test

<table>
<thead>
<tr>
<th></th>
<th>(1) MFI &gt; 0</th>
<th>(2) MFI &lt; 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>MFI</td>
<td>0.0004***</td>
<td>0.0002</td>
</tr>
<tr>
<td></td>
<td>(0.0002)</td>
<td>(0.0003)</td>
</tr>
<tr>
<td></td>
<td>$t = 2.184$</td>
<td>$t = 0.613$</td>
</tr>
<tr>
<td></td>
<td>$p = 0.029$</td>
<td>$p = 0.540$</td>
</tr>
<tr>
<td>Length</td>
<td>$-0.001^{***}$</td>
<td>$-0.001^{***}$</td>
</tr>
<tr>
<td></td>
<td>(0.0001)</td>
<td>(0.0001)</td>
</tr>
<tr>
<td></td>
<td>$t = -9.239$</td>
<td>$t = -7.110$</td>
</tr>
<tr>
<td></td>
<td>$p = 0.000$</td>
<td>$p = 0.000$</td>
</tr>
<tr>
<td>SEC</td>
<td>0.002***</td>
<td>0.002***</td>
</tr>
<tr>
<td></td>
<td>(0.0004)</td>
<td>(0.0001)</td>
</tr>
<tr>
<td></td>
<td>$t = 4.547$</td>
<td>$t = 4.161$</td>
</tr>
<tr>
<td></td>
<td>$p = 0.00001$</td>
<td>$p = 0.00004$</td>
</tr>
<tr>
<td>Segment D</td>
<td>$-0.0001$</td>
<td>$-0.00004$</td>
</tr>
<tr>
<td></td>
<td>(0.0001)</td>
<td>(0.0001)</td>
</tr>
<tr>
<td></td>
<td>$t = -0.830$</td>
<td>$t = -0.306$</td>
</tr>
<tr>
<td></td>
<td>$p = 0.407$</td>
<td>$p = 0.760$</td>
</tr>
<tr>
<td>Loss D</td>
<td>0.0001</td>
<td>$-0.0001$</td>
</tr>
<tr>
<td></td>
<td>(0.0001)</td>
<td>(0.0001)</td>
</tr>
<tr>
<td></td>
<td>$t = 0.828$</td>
<td>$t = -0.529$</td>
</tr>
<tr>
<td></td>
<td>$p = 0.408$</td>
<td>$p = 0.597$</td>
</tr>
<tr>
<td>BtM</td>
<td>$-0.0002$</td>
<td>$-0.0001$</td>
</tr>
<tr>
<td></td>
<td>(0.0001)</td>
<td>(0.0001)</td>
</tr>
<tr>
<td></td>
<td>$t = -0.202$</td>
<td>$t = -1.335$</td>
</tr>
<tr>
<td></td>
<td>$p = 0.840$</td>
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</tr>
<tr>
<td>Size</td>
<td>0.0001***</td>
<td>0.00000</td>
</tr>
<tr>
<td></td>
<td>(0.00004)</td>
<td>(0.00005)</td>
</tr>
<tr>
<td></td>
<td>$t = 3.374$</td>
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</tr>
<tr>
<td></td>
<td>$p = 0.001$</td>
<td>$p = 0.973$</td>
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<td>Constant</td>
<td>0.003***</td>
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<td>(0.001)</td>
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<tr>
<td></td>
<td>$t = 2.592$</td>
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</tr>
<tr>
<td></td>
<td>$p = 0.010$</td>
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</tr>
<tr>
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<td>9,717</td>
<td>4,649</td>
</tr>
<tr>
<td>$R^2$</td>
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<td>0.022</td>
</tr>
<tr>
<td>Adjusted $R^2$</td>
<td>0.011</td>
<td>0.012</td>
</tr>
<tr>
<td>Residual Std. Error</td>
<td>0.005 (df = 9669)</td>
<td>0.004 (df = 4601)</td>
</tr>
<tr>
<td>F Statistic</td>
<td>$3.335^{***}$ (df = 47; 9669) ($p = 0.000$)</td>
<td>$2.191^{***}$ (df = 47; 4601) ($p = 0.00001$)</td>
</tr>
</tbody>
</table>

*Note:*

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$
Conclusion and Further Analysis

This study analyzed the level of boilerplate disclosure and the determinants of MD&A information for Japanese firms. The results show increasing MD&A length and decreasing MD&A scores only during the period 2008 to 2009. With the exception of 2008 and 2009, MD&A information in Japan does not become boilerplate disclosure for this measurement. Financial crisis occurred during the 2008 to 2009 may affect the firm’s disclosure activity. Information about financial crisis may be written as the form of template.

This study also analyzed the determinants of boilerplate disclosure for MD&A. The findings show that firms engaging in positive aggressive forecasts may utilize the MD&A information. Firms with long MD&A information do not engage in aggressive modification. So, long MD&A information may indicate the boilerplate disclosure. Additionally, firms that adopt the SEC standard engage in aggressive modification.

In conclusion, the aggressiveness of firm disclosure, indicated by MFI, may become the determinants of MD&A information, not the number of segments. In other words, the determinants of MD&A information is not the diversification, but the aggressiveness of disclosure.

Now, the regulation of MD&A of Japan is not restricting than that of the US. In the US, the strict rule functions better. But in Japan, loose rule functions. In the US, many rules about MD&A added after Enron and financial crisis. But in Japan, there is no need to modify the present rule. In this study, we focused on the MD&A. But there is a possibility to research other disclosure components using this method.
Appendix

For the score measurement, I calculated the expected score using word length for the preceding five years. To keep the sample size, at least 3 years data is needed.

<table>
<thead>
<tr>
<th>Dependent variable:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rawscore</td>
</tr>
</tbody>
</table>

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>−0.00000***</td>
</tr>
<tr>
<td></td>
<td>(0.00000)</td>
</tr>
<tr>
<td></td>
<td>t = −4.874</td>
</tr>
<tr>
<td></td>
<td>p = 0.00001</td>
</tr>
<tr>
<td>Length2</td>
<td>−0.00000***</td>
</tr>
<tr>
<td></td>
<td>(0.00000)</td>
</tr>
<tr>
<td></td>
<td>t = −16.629</td>
</tr>
<tr>
<td></td>
<td>p = 0.000</td>
</tr>
<tr>
<td>Length3</td>
<td>0.00000***</td>
</tr>
<tr>
<td></td>
<td>(0.00000)</td>
</tr>
<tr>
<td></td>
<td>t = 27.041</td>
</tr>
<tr>
<td></td>
<td>p = 0.000</td>
</tr>
<tr>
<td>Length4</td>
<td>−0.00000**</td>
</tr>
<tr>
<td></td>
<td>(0.00000)</td>
</tr>
<tr>
<td></td>
<td>t = −2.427</td>
</tr>
<tr>
<td></td>
<td>p = 0.016</td>
</tr>
<tr>
<td>Length5</td>
<td>0.00000**</td>
</tr>
<tr>
<td></td>
<td>(0.00000)</td>
</tr>
<tr>
<td></td>
<td>t = 1.980</td>
</tr>
<tr>
<td></td>
<td>p = 0.048</td>
</tr>
<tr>
<td>Constant</td>
<td>0.00003***</td>
</tr>
<tr>
<td></td>
<td>(0.0001)</td>
</tr>
<tr>
<td></td>
<td>t = 5.396</td>
</tr>
<tr>
<td></td>
<td>p = 0.00000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Observations</th>
<th>11,187</th>
</tr>
</thead>
<tbody>
<tr>
<td>R²</td>
<td>0.079</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.079</td>
</tr>
<tr>
<td>Residual Std. Error</td>
<td>0.004 (df = 11181)</td>
</tr>
<tr>
<td>F Statistic</td>
<td>192.627*** (df = 5; 11181) (p = 0.000)</td>
</tr>
</tbody>
</table>

*Note:* *p<0.1; **p<0.05; ***p<0.01
REFERENCES


CSR DISCLOSURE OF THE INDIAN COMPANIES: A STUDY

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ABSTRACT

Good ethics ensure good business. A growing sense of awareness about the importance of social responsibility has struck the entire world and it is seen that India is no longer lagging behind. All the companies are responsible to contribute to the social needs of its economy. Social needs refer to the liability that a company owes to its employees, shareholders, consumers, economy, environment and other groups. The corporate sector must retain a long term relationship of value with the customers, economy and environment is required in order to ensure sustainability and at the same time focus on attaining the ‘triple bottom line’ – people, planet and profit. In this regard, The Ministry of Corporate Affairs had released Voluntary Guidelines on CSR in 2009 that encompasses social, environmental and economical responsibilities of the business. Nevertheless, the Government of India has implemented the concept of Corporate Social Responsibility in the new Companies Act, 2013 in order to encourage the corporate sector to contribute to the development of the society by notifying the rules for CSR spending u/s 135 of the new Companies Act 2013 along with Companies (Corporate Social Responsibility Policy) Rules, 2014 w.e.f. 1st April, 2014. Based on these two events the current study aims to find out the disclosure of the issues on Corporate Social Responsibility of the various Indian companies. To analyze this, the study is divided into three parts viz. the disclosures made by the companies before the Voluntary Guidelines on CSR in 2009 by the Ministry of Corporate Affairs, the disclosures made by the companies after the release of the Voluntary Guidelines but before the guidelines issued by the Companies Act, 2013 and, the disclosure made by the companies after the issue of the guidelines of the Companies Act, 2013.

Keywords: Corporate Social Responsibility; National Voluntary Guidelines on Social, Environmental and Economical Responsibilities of Business; Companies Act 2013
Introduction:

Good ethics ensure good business. A growing sense of awareness about the importance of social responsibility has struck the entire world and it is seen that India is no longer lagging behind. All the companies are responsible to contribute to the social needs of its economy. Social needs refer to the liability that a company owes to its employees, shareholders, consumers, economy, environment and other groups. The corporate sector must retain a long term relationship of value with the customers, economy and environment is required in order to ensure sustainability and at the same time focus on attaining the ‘triple bottom line’ – people, planet and profit. In this regard, The Ministry of Corporate Affairs had released Voluntary Guidelines on CSR in 2009 that encompasses social, environmental and economical responsibilities of the business. Nevertheless, the Government of India has implemented the concept of Corporate Social Responsibility in the new Companies Act, 2013 in order to encourage the corporate sector to contribute to the development of the society by notifying the rules for CSR spending u/s 135 of the new Companies Act 2013 along with Companies (Corporate Social Responsibility Policy) Rules, 2014 w.e.f. 1st April, 2014. Based on these two events the current study aims to find out the disclosure of the issues on Corporate Social Responsibility of the various Indian companies. The present study tries to analyze the implementation of the National Voluntary Guidelines relating to the CSR disclosure of the companies from 2009-10 to 2013-14 and their involvement in the CSR activities as per the provisions of The Companies Act, 2013 for the year 2013-14.

Review of Literature:

The work of Carroll & Shabana, (2010) focuses on what tangible benefits do the companies derive in engaging themselves in CSR activities. The primary subject for this study is the ‘business case’ for corporate social responsibility which refers to the underlying arguments supporting why businesses should accept and proceed with the CSR cause. It provides a brief discussion of the evolving understandings of CSR and some of the long-established, traditional arguments that brings in the idea of business assuming any responsibility to society beyond profit-seeking and maximizing its own financial well-being. The paper describes and summarises the business case and review the concepts, research and practice of this developing idea.

Font et al., (2012) in their study consisting of ten international hotel groups of the European leisure market found that corporate systems are not reflected on operations, environmental performance is eco-savings driven, labour policies aim to comply with local legislation, socio-economic policies are inward looking with little acceptance of impacts on the destination, and customer engagement is limited. The research talks about green-washing which is the gap between CSR disclosure and its performance as increased stake holder pressure forces the companies to disclose about their CSR practices and it essential to know the reliability of the corporate disclosure mechanisms. The study concludes that the larger hotel groups have more comprehensive policies but the gasps in implementation is wide, whereas the smaller hotel groups focuses on environmental management and deliver what they have promised.

According to Pattnaik, (2014) Corporate Social Responsibility in India has been viewed as a generous activity because of lack of infrastructure, social and economic conditions of the country. The study tries to determine the status and the activities undertaken by the different firms of India in relation to Corporate Social Responsibility with respect to the CSR policy
framing and implementation. The work reveals that the Government of India concentrates on persuading companies to address the social and developmental issues not only as a part of their Corporate Social Responsibility but also form it as a part of their business practices.

The process of liberalization led rapid economic growth turned out to be a significant feature of the BRIC countries that allowed their major companies to acquire significant weight in the global marketplace. Nevertheless, the companies are still trying to gain full legitimacy in the global coliseum. In order to fill up this legitimacy gap the BRIC firms have recently adopted a portfolio of Corporate Social Responsibility initiatives to align with the Environmental, Social and Governance global norms of doing business. Fiaschi, Giuliani & Nieri, (2014) provided a deep insight into the factors that relate to the BRIC firms adoption of different types of CSR initiatives in their study which consists of social policies, publication of CSR reports, adoption of GRI standards, adherence to and financial support for the UN Global Compact.

Objective of the research:

- The present study tries to capture the CSR disclosures made by the Companies over a span of 5 years time period from 2009-10 – 2013-14, with reference to the National Voluntary Guidelines on Social, Environmental and Economical Responsibilities of Business issued in the year 2009 and
- The CSR provisions relating to the CSR activities followed by the ten companies as per the Companies Act, 2013.

Methodology adopted:

The present study deals with a total of ten companies namely Bharat Petroleum Corporation Limited, Hindustan Petroleum Corporation Limited, Cipla, Sun Pharma, Dabur India Limited, ITC, TCS, Infosys, Jindal Steel and Tata Steel which comprises of five sectors – Refineries, Pharmaceuticals, FMCG, IT and Steel taking two companies from each sector. The annual reports of the companies are studied over a time frame of five years from 2009-10 – 2013-14 and the size of their Annual Reports (in pages), Size of the Management Report (in pages), Size of Financial Report including Auditor’s Report (in pages), and Size of the CSR included (in pages). The methods that are followed for the purpose of the study are:

- Grading of the level of CSR disclosure by using the percentage of CSR report disclosed in the Annual Reports by using SPSS software.
- Testing the impact of CSR disclosure by dividing the study period into two parts. One from 2009-10 and 2010-11 and the other period from 2011-12 to 2013-14. The impact is analysed with the help of Z test for each companies and also the overall impact is observed by taking together the data for all the companies.
- Determining the CSR activities implemented by the companies in the year 2013-14 as per the provisions of The Companies Act, 2013.

Findings and Analysis:

In the present study pertaining to the Corporate Social Responsibility disclosure, the annual reports of ten companies namely Bharat Petroleum Corporation Limited, Hindustan Petroleum Corporation Limited, Cipla, Sun Pharma, Dabur India Limited, ITC, TCS, Infosys,
Jindal Steel and Tata Steel for a period of five years ranging from 2009-10 to 2013-14 have been analysed in respect of the level of disclosure towards Management Discussion & Analysis Report, Financial Reports including the Auditor's Report and that of Corporate Social Responsibility Report as compared to the total number of pages of the Annual Report.

The level of disclosure of Management Discussion & Analysis Report (MD&AR) with respect to that of the Annual Report (AR) of the ten companies from 2009-10 to 2013-14 is tabulated as follows:

<table>
<thead>
<tr>
<th>Name of the Company</th>
<th>Size of the Management Report (in pages)</th>
<th>Mean No. of pages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2009-10</td>
<td>2010-11</td>
</tr>
<tr>
<td>BPCL (MD&amp;AR)</td>
<td>53</td>
<td>51</td>
</tr>
<tr>
<td>BPCL (AR)</td>
<td>168</td>
<td>166</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>31.55</td>
<td>30.72</td>
</tr>
<tr>
<td>HPCL (MD&amp;AR)</td>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td>HPCL (AR)</td>
<td>140</td>
<td>112</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>9.29</td>
<td>13.39</td>
</tr>
<tr>
<td>Cipla (MD&amp;AR)</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Cipla (AR)</td>
<td>94</td>
<td>98</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>8.51</td>
<td>6.12</td>
</tr>
<tr>
<td>Sun Pharma (MD&amp;AR)</td>
<td>25</td>
<td>18</td>
</tr>
<tr>
<td>Sun Pharma (AR)</td>
<td>105</td>
<td>112</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>23.81</td>
<td>16.07</td>
</tr>
<tr>
<td>Dabur India Limited (MD&amp;AR)</td>
<td>31</td>
<td>31</td>
</tr>
<tr>
<td>Dabur India Limited (AR)</td>
<td>176</td>
<td>176</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>17.61</td>
<td>17.61</td>
</tr>
<tr>
<td>ITC (MD&amp;AR)</td>
<td>40</td>
<td>42</td>
</tr>
<tr>
<td>ITC (AR)</td>
<td>168</td>
<td>176</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>23.81</td>
<td>23.86</td>
</tr>
<tr>
<td>TCS (MD&amp;AR)</td>
<td>46</td>
<td>40</td>
</tr>
<tr>
<td>TCS (AR)</td>
<td>174</td>
<td>160</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>26.44</td>
<td>25</td>
</tr>
<tr>
<td>Infosys (MD&amp;AR)</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Infosys (AR)</td>
<td>82</td>
<td>82</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>9.76</td>
<td>10.98</td>
</tr>
<tr>
<td>Jindal Steel (MD&amp;AR)</td>
<td>12</td>
<td>7</td>
</tr>
<tr>
<td>Jindal Steel (AR)</td>
<td>206</td>
<td>196</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>5.83</td>
<td>3.57</td>
</tr>
<tr>
<td>Tata Steel (MD&amp;AR)</td>
<td>22</td>
<td>22</td>
</tr>
</tbody>
</table>
From the above table it is seen that Management Discussion & Analysis Report on an average forms a maximum of 25.28% of the total Annual Report and the minimum being 5.04%, as viewed from the data of the ten companies.

The level of disclosure of Financial Report including Auditor’s Report (FR) with respect to that of the Annual Report (AR) of the ten companies from 2009-10 to 2013-14 is tabulated as follows:

<table>
<thead>
<tr>
<th>Name of the Company</th>
<th>Size of Financial Report including Auditor’s Report (in pages)</th>
<th>Mean No. of pages</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2009-10</td>
<td>2010-11</td>
</tr>
<tr>
<td>BPCL (FR)</td>
<td>78</td>
<td>78</td>
</tr>
<tr>
<td>BPCL (AR)</td>
<td>168</td>
<td>166</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>46.43</td>
<td>46.99</td>
</tr>
<tr>
<td>HPCL (FR)</td>
<td>64</td>
<td>52</td>
</tr>
<tr>
<td>HPCL (AR)</td>
<td>140</td>
<td>112</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>45.71</td>
<td>46.43</td>
</tr>
<tr>
<td>Cipla (FR)</td>
<td>67</td>
<td>71</td>
</tr>
<tr>
<td>Cipla (AR)</td>
<td>94</td>
<td>98</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>71.28</td>
<td>72.45</td>
</tr>
<tr>
<td>Sun Pharma (FR)</td>
<td>70</td>
<td>85</td>
</tr>
<tr>
<td>Sun Pharma (AR)</td>
<td>105</td>
<td>112</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>66.67</td>
<td>75.89</td>
</tr>
<tr>
<td>Dabur India Limited (FR)</td>
<td>88</td>
<td>95</td>
</tr>
<tr>
<td>Dabur India Limited (AR)</td>
<td>176</td>
<td>176</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>50</td>
<td>53.98</td>
</tr>
<tr>
<td>ITC (FR)</td>
<td>90</td>
<td>96</td>
</tr>
<tr>
<td>ITC (AR)</td>
<td>168</td>
<td>176</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>53.57</td>
<td>54.55</td>
</tr>
<tr>
<td>TCS (FR)</td>
<td>79</td>
<td>79</td>
</tr>
<tr>
<td>TCS (AR)</td>
<td>174</td>
<td>160</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>45.40</td>
<td>49.38</td>
</tr>
<tr>
<td>Infosys (FR)</td>
<td>31</td>
<td>32</td>
</tr>
<tr>
<td>Infosys (AR)</td>
<td>82</td>
<td>82</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>37.80</td>
<td>39.02</td>
</tr>
<tr>
<td>Jindal Steel (FR)</td>
<td>100</td>
<td>87</td>
</tr>
<tr>
<td>Jindal Steel (AR)</td>
<td>206</td>
<td>196</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>48.54</td>
<td>44.39</td>
</tr>
</tbody>
</table>
The above tabulated figure reveals that on an average the Financial Report including the Auditor’s Report taken together comprise of almost half of the total Annual Report of the companies. However, for Infosys only it is observed that the Financial Report including the Auditor’s Report forms 37% of the total Annual Report on an average for the stated time period which is seen to be the minimum percentage of disclosure of the financial statements out of the total Annual Report. On the other hand the maximum disclosure is seen for Cipla as its Annual Report forms 69% of the Financial Reports which includes the Auditor’s Report on an average from 2009-10 to 2013-14.

The level of disclosure of Corporate Social Responsibility (CSR) with respect to that of the Annual Report (AR) of the ten companies from 2009-10 to 2013-14 is tabulated as follows:

<table>
<thead>
<tr>
<th>Name of the Company</th>
<th>Size of Corporate Social Responsibility Report (in pages)</th>
<th>Mean No. of pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPCL (AR)</td>
<td>168, 166, 170, 196, 178</td>
<td>175.6</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>1.19, 1.20, 0.59, 8.67, 14.61</td>
<td>5.47</td>
</tr>
<tr>
<td>HPCL (CSR)</td>
<td>0, 3, 3, 3, 3</td>
<td>2.4</td>
</tr>
<tr>
<td>HPCL (AR)</td>
<td>140, 112, 136, 160, 168</td>
<td>143.2</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>0, 2.68, 2.21, 1.88, 1.79</td>
<td>1.68</td>
</tr>
<tr>
<td>Cipla (CSR)</td>
<td>1, 2, 1, 2, 2</td>
<td>1.6</td>
</tr>
<tr>
<td>Cipla (AR)</td>
<td>94, 98, 98, 114, 148</td>
<td>110.4</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>1.06, 2.04, 1.02, 1.75, 1.35</td>
<td>1.45</td>
</tr>
<tr>
<td>Sun Pharma (CSR)</td>
<td>1, 1, 1, 1</td>
<td>1</td>
</tr>
<tr>
<td>Sun Pharma (AR)</td>
<td>105, 112, 120, 127, 140</td>
<td>120.8</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>0.95, 0.89, 0.83, 0.79, 0.71</td>
<td>0.83</td>
</tr>
<tr>
<td>Dabur India Limited (CSR)</td>
<td>4, 4, 2, 10, 12</td>
<td>6.4</td>
</tr>
<tr>
<td>Dabur India Limited (AR)</td>
<td>176, 176, 136, 140, 152</td>
<td>156</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>2.27, 2.27, 1.47, 7.14, 7.89</td>
<td>4.10</td>
</tr>
<tr>
<td>ITC (CSR)</td>
<td>4, 4, 16, 23, 24</td>
<td>14.2</td>
</tr>
<tr>
<td>ITC (AR)</td>
<td>168, 176, 215, 238, 240</td>
<td>207.4</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>2.38, 2.27, 7.44, 9.66, 10</td>
<td>6.85</td>
</tr>
<tr>
<td>TCS (CSR)</td>
<td>3, 3, 2, 14, 15</td>
<td>7.4</td>
</tr>
<tr>
<td>TCS (AR)</td>
<td>174, 160, 152, 175, 186</td>
<td>169.4</td>
</tr>
<tr>
<td>Percentage (%)</td>
<td>1.724137, 1.88, 1.32, 8, 8.06</td>
<td>4.37</td>
</tr>
</tbody>
</table>
From Table: 3, it is seen that the Corporate Social Responsibility disclosure is very low in the Annual Report for all the companies. After evaluating the results it is seen that maximum disclosure of CSR in the Annual Report is made by Jindal Steel which is 11.29% on an average and the minimum disclosure is made by Sun Pharma which consists of 0.83% of the Annual Report on an average. In order to find out the level of disclosure made by the companies during the five year time period of 2009-10 to 2013-14 grading has been done to measure the disclosure level and at the same time determine its frequency. As there is no set standard for determining the volume of disclosure of the CSR in the Annual Reports of the companies since the present study is based on analysis of ten companies, a comparative analysis is made for the purpose of determining the level of CSR disclosure with the minimum level of disclosure being 0.83% and the maximum level of disclosure being 11.29%. For this purpose the grading has been done as follows:

0% to 5% - Minimum Disclosure
5.1% to 10% - Moderate Disclosure
10.1% to 15% - Maximum Disclosure

The output has been obtained by using the software SPSS and the result is displayed as follows:

<table>
<thead>
<tr>
<th>Disclosure Level</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>1</td>
<td>10.0</td>
<td>10.0</td>
<td>10.0</td>
</tr>
<tr>
<td>Minimum</td>
<td>5</td>
<td>50.0</td>
<td>50.0</td>
<td>60.0</td>
</tr>
<tr>
<td>Moderate</td>
<td>4</td>
<td>40.0</td>
<td>40.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table: 4

From the output table 4 we find that the maximum disclosure on CSR on an average is made by only one company out of the ten companies taken, which we identify it to be Jindal Steel. Moderate disclosure on CSR on an average is made by four companies namely, Bharat Petroleum Corporation Limited, ITC, Infosys and Tata Steel. However, we find that the remaining five companies which are Hindustan Petroleum Corporation Limited, Cipla, Sun Pharma, Dabur India Limited and TCS made minimum disclosure on CSR on an average.
Graphical Representation of the elements of the Annual Reports of the companies:

<table>
<thead>
<tr>
<th>Company</th>
<th>CSR</th>
<th>MD&amp;AR</th>
<th>FR</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPCL</td>
<td>6%</td>
<td>25%</td>
<td>44%</td>
<td></td>
</tr>
<tr>
<td>HPCL</td>
<td>2%</td>
<td>15%</td>
<td>37%</td>
<td></td>
</tr>
<tr>
<td>Cipla</td>
<td>2%</td>
<td>6%</td>
<td>69%</td>
<td></td>
</tr>
<tr>
<td>Sun Pharma</td>
<td>14%</td>
<td>1%</td>
<td>65%</td>
<td></td>
</tr>
<tr>
<td>Dabur India Ltd</td>
<td>4%</td>
<td>16%</td>
<td>35%</td>
<td></td>
</tr>
<tr>
<td>ITC</td>
<td>7%</td>
<td>21%</td>
<td>46%</td>
<td></td>
</tr>
<tr>
<td>TCS</td>
<td>6%</td>
<td>32%</td>
<td>62%</td>
<td></td>
</tr>
<tr>
<td>Infosys</td>
<td>5%</td>
<td>10%</td>
<td>48%</td>
<td></td>
</tr>
<tr>
<td>Jindal Steel</td>
<td>11%</td>
<td>5%</td>
<td>37%</td>
<td></td>
</tr>
<tr>
<td>Tata Steel</td>
<td>5%</td>
<td>10%</td>
<td>39%</td>
<td></td>
</tr>
</tbody>
</table>
Testing the impact of the National Voluntary Guidelines on the disclosure of the Corporate Social Responsibility:

The National Voluntary Guidelines were issued by the Ministry of Corporate Affairs in December 2009, but the implementation is noticed from the financial year 2011-12 as observed after analysing the Annual Reports of the ten companies taken for the purpose this present study. Therefore, for this purpose the effect of the guidelines on the implementation process adopted by the companies is considered from the financial year 2011-12, where the period prior to it i.e. 2009-10 and 2010-11 is combined to form Sample 1 and the period from 2011-12 to 2013-14 is considered to be Sample 2. The number of CSR pages and the number of pages of the Annual Report disclosed by each of the companies in both the samples are determined. The data is tested thereafter to analyze the impact of the Guidelines on the implementation process followed by each of the companies. For the analysis here Z test has been applied, where the hypotheses formulated are as under:

Null Hypothesis - \( H_0: \pi_1 = \pi_2 \)

Alternative Hypothesis - \( H_1: \pi_1 \neq \pi_2 \)

Where, \( \pi_1 \) = The disclosure level of Sample 1 and,

\( \pi_2 \) = The disclosure level of Sample 2.

The results obtained from the Z Test are tabulated as follows:

<table>
<thead>
<tr>
<th>Name of the Company</th>
<th>Z Test Value</th>
<th>Significant at 5%</th>
<th>Significant at 1%</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPCL</td>
<td>-4.36</td>
<td>Yes</td>
<td>Yes</td>
<td>Reject the Null Hypothesis both at 5% and 1% level</td>
</tr>
<tr>
<td></td>
<td>( H_{01}: \pi_{11} = \pi_{21} )</td>
<td>( H_{11}: \pi_{11} \neq \pi_{21} )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HPCL</td>
<td>-0.75</td>
<td>No</td>
<td>No</td>
<td>Accept the Null Hypothesis both at 5% and 1% level</td>
</tr>
<tr>
<td></td>
<td>( H_{02}: \pi_{12} = \pi_{22} )</td>
<td>( H_{12}: \pi_{12} \neq \pi_{22} )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cipla</td>
<td>0.16</td>
<td>No</td>
<td>No</td>
<td>Accept the Null Hypothesis both at 5% and 1% level</td>
</tr>
<tr>
<td></td>
<td>( H_{03}: \pi_{13} = \pi_{23} )</td>
<td>( H_{13}: \pi_{13} \neq \pi_{23} )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sun Pharma</td>
<td>0.19</td>
<td>No</td>
<td>No</td>
<td>Accept the Null Hypothesis both at 5% and 1% level</td>
</tr>
<tr>
<td></td>
<td>( H_{04}: \pi_{14} = \pi_{24} )</td>
<td>( H_{14}: \pi_{14} \neq \pi_{24} )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dabur India Limited</td>
<td>-2.34</td>
<td>Yes</td>
<td>No</td>
<td>Reject the Null Hypothesis at 5% level and Accept the Null Hypothesis at 1% level</td>
</tr>
<tr>
<td></td>
<td>( H_{05}: \pi_{15} = \pi_{25} )</td>
<td>( H_{15}: \pi_{15} \neq \pi_{25} )</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ITC</td>
<td>-4.06</td>
<td>Yes</td>
<td>Yes</td>
<td>Reject the Null Hypothesis at 1% level</td>
</tr>
</tbody>
</table>

For the analysis here Z test has been applied, where the hypotheses formulated are as under:
Hypothesis both at 5% and 1% level

TCS
$H_{07}: \pi = \pi_2$
$H_{17}: \pi \neq \pi_2$
-2.96  Yes  Yes
Reject the Null Hypothesis both at 5% and 1% level

Infosys
$H_{08}: \pi = \pi_2$
$H_{18}: \pi \neq \pi_2$
-2.17  Yes  No
Reject the Null Hypothesis at 5% level and Accept the Null Hypothesis at 1% level

Jindal Steel
$H_{09}: \pi = \pi_2$
$H_{19}: \pi \neq \pi_2$
-2.67  Yes  Yes
Reject the Null Hypothesis both at 5% and 1% level

Tata Steel
$H_{10}: \pi = \pi_2$
$H_{11}: \pi \neq \pi_2$
-1.61  No  No
Accept the Null Hypothesis both at 5% and 1% level

Table: 5
Overall result of Z Test taking all the companies together is as follows:

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Z Test Value</th>
<th>Significant at 5%</th>
<th>Significant at 1%</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Result</td>
<td>-7.22</td>
<td>Yes</td>
<td>Yes</td>
<td>Reject the Null Hypothesis both at 5% and 1% level</td>
</tr>
</tbody>
</table>

Table: 6

Explanation relating to the Z Test:

From the results obtained from the Z test it is observed that for companies like Bharat Petroleum Corporation Limited, ITC, TCS and Jindal Steel the disclosure levels of CSR in the periods 2009-10 & 2010-11 and 2011-12 to 2013-14 is not the same and is confirmed both at 5% and 1% level of significance. The Z Test result suggests that the disclosure level has increased during 2011-12 to 2013-14 as compared to 2009-10 and 2010-11. Whereas for companies like Hindustan Petroleum Corporation Limited, Cipla, Sun Pharma and Tata Steel the CSR disclosure in the Annual Reports during the periods 2009-10 & 2010-11 and 2011-12 to 2013-14 remains the same which is confirmed both at 5% and 1% level of significance. On the other hand it is observed that Dabur India Limited and Infosys’s CSR disclosure in both the periods is not the same at 5% level of significance and suggests that the disclosure have increased in the latter period as compared to the former period considered, but this outcome is contradicted at 1% level of significance where the result suggests that the CSR disclosure remains more or less that same during the two periods. However, the results
obtained from the overall study of the CSR disclosure as tabulated in table: 6, combing all the companies reveals that the level of CSR disclosure in 2009-10 & 2010-11 is not the same as compared to the level of CSR disclosure in 2011-12 to 2013-14. The Z Test result suggests that the CSR disclosure of all the companies taken together have increased significantly both at 5% and 1% level during the latter period.

Other explanations:

- It is essential to mention that the CSR disclosure in relation to Cipla and Sun Pharma the Z test reveals that the disclosure level remained the same in both the periods. But however, after evaluating the Annual Reports it is found that for the financial years 2012-13 and 2013-14 both the companies have published the Business Responsibility Reports separately in their website.
- For Infosys it is seen that the level of disclosure has increased in the latter period at 5% level of significance and the level of disclosure remained the same in both the periods at 1% level of disclosure. However, after studying the Annual Reports of the company it is seen that Infosys has published the Business Responsibility Report separately in their website in the years 2011-12 and 2012-13 and in the year 2013-14 the Business Responsibility Report has been published in the Annual Report itself as per the SEBI guidelines issued in its circular dated 13th August, 2012, which requires the top 100 listed companies to publish the Business Responsibility Report as a part of the Annual Report.

Alignment with the National Voluntary Guidelines on Social, Environmental and Economical Responsibilities of Business issued by the Ministry of Corporate Affairs:

The Ministry of Corporate Affairs have released the National Voluntary Guidelines on Social, Environmental and Economical Responsibilities of Business in December 2009. It is seen that before the issuance of the guidelines the companies made disclosure on CSR in their Annual Reports with the only exception being Hindustan Petroleum Corporation Limited that made no disclosure on CSR in their Annual Report of 2009-10. Gradually after the issue of the National Voluntary Guidelines in December 2009 the companies that were prompt to make CSR disclosure in alignment with the National Voluntary Guidelines are ITC, Infosys and Tata Steel. These companies started making CSR disclosure in alignment with the National Voluntary Guidelines from 2011-12. The companies that followed the alignment the year after are Bharat Petroleum Corporation Limited, Cipla, Sun Pharma, Dabur India Limited, TCS and Jindal Steel. Hindustan Petroleum Corporation Limited is the only company that did not present the CSR disclosure in alignment with the National Voluntary Guidelines in any of the years. After studying the Annual Reports, it is observed that though the Annual Reports of Infosys contains very little disclosure on CSR, it has published a separate Sustainability Report in their website for the years 2011-12 and 2012-13 by following the National Voluntary Guidelines on Social, Environmental and Economical Responsibilities of Business. However, it is seen that in the year 2013-14 has made CSR disclosure in their 2013-14 Annual Report under the head “Business Responsibility Report”. A similar situation has been observed for Cipla and Sun Pharma for the years 2012-13 and 2013-14 where these two companies have published their Business Responsibility Report in alignment with the National Voluntary Guidelines in their website.
CSR activities undertaken by the companies as per the guidelines of the Companies Act, 2013:

The new Companies Act, 2013, enacted on 29th August, 2013 contain provisions dealing exclusively with Corporate Social Responsibility u/s 135 and the list of activities that a company can undertake as a part of its CSR initiatives are mentioned in schedule VII. The Companies Act, 2013 mentioned that the companies having:

- Net worth of Rs. 5 crore or more, or
- Turnover of Rs. 1000 crore or more, or
- Net profit of Rs. 5 crore or more during any financial year shall constitute Corporate Social Responsibility Committee of the Board. The above said committee shall consist of at least three directors out of which at least one should be an independent director.

The activities the companies can undertake in their CSR policies:

- Eradicating extreme hunger and poverty
- Promotion of education
- Promoting gender quality and empowering women
- Reducing child mortality and improving maternal health
- Combating human immunodeficiency virus, acquired immune deficiency syndrome, malaria and other diseases.
- Ensuring environmental sustainability
- Employment enhancing vocational skills
- Social business projects
- Contribution to the Prime Minister’s National Relief Fund or any other fund set up by the Central Government or the State Governments for socio economic development and relief and funds for the welfare of the Scheduled Castes, Schedule Tribes, other backward classes, minorities and women, and
- Such other matter as may be prescribed.

In the present study the Annual Reports of the ten companies relating to the CSR activities undertaken by them in 2013-14 have been evaluated. The activities of the companies thereby have been tabulated and processed for a graphical representation to show which sectors the companies have mostly focused on and which sectors remained neglected.

Table showing the list of CSR activities undertaken by the ten companies in the year 2013-14:

<table>
<thead>
<tr>
<th>Name of the Company</th>
<th>Hunger &amp; Poverty</th>
<th>Promotion of Education</th>
<th>Women Empowerment</th>
<th>Reductio n of child mortality</th>
<th>Combating diseases</th>
<th>Environmental sustainabi lity</th>
<th>Enhancement of vocational skills</th>
<th>Social business projects</th>
<th>Contribution for Social cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>BPCL</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>HPCL</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Cipla</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Sun Pharma</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Dabur India</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>ITC</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>TCS</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Infosys</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Jindal</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
The above pie chart shows that most of the companies have focused on Promotion of Education as it constitute of 17% of the total CSR activities undertaken by all the companies taken together. Whereas only 4% is contributed to Enhancement of Vocational Skills. All the other activities have received moderate contribution so far as the chart reveals.

Findings and conclusions:

By studying the annual reports of the different companies from 2009-10 – 2013-14, it may be concluded that the trend of CSR disclosure has changed dramatically. The National Voluntary Guidelines on Social, Environmental and Economical Responsibilities of Business was issued in December, 2009 by the Ministry of Corporate Affairs but its implementation is noticed from the financial year 2011-12. It is seen that in case of most of the companies the impact of the NVG guidelines is significant for most of the companies like Bharat Petroleum Corporation Limited, ITC, TCS and Jindal Steel but for companies such as Hindustan Petroleum Corporation Limited, Cipla, Sun Pharma and Tata Steel the disclosure is not significant. It is observed that Hindustan Petroleum Corporation Limited does not disclose Business Responsibility Report in any of the years but brief information on CSR is provided...
in its Annual Reports. For Cipla and Sun Pharma the Business Responsibility Report is not disclosed in the Annual Reports but are disclosed in their website from the financial year 2012-13. For Infosys the Business Responsibility Report is disclosed in the website for the years 2011-12 and 2012-13 but it is disclosed in the Annual Report of 2013-14. The Companies Act, 2013 contains the provisions for the CSR activities required to be undertaken by the companies. The CSR activities undertaken by the companies in the year 2013-14 are listed and then it found that most of the companies are involved with Promotion of Education and the area for Enhancement of Vocational Skills is undertaken by few of the companies.

Limitations of the Study:

The limitations that are involved with the present study are:

- The Grading of the level of CSR disclosure that has been included in the study is done on a comparative basis for the ten companies as there is no set standard for determining the disclosure level of CSR.
- A better picture would have been revealed if more number of companies would have been included as the number of companies considered for the present study is only ten.
- The period for the study is five years taken from 2009-10 to 2013-14. An exhaustive analysis could have been done with an extensive period of study. Also the impact of CSR activities implementation as per The Companies Act, 2013 could not be properly captured since the Companies Act came into being recently.

Future Research possibilities:

The provisions u/s 135 of The Companies Act, 2013 relating to CSR can be utilised for future research. The alignment of the CSR disclosure by the companies is made following the NVG guidelines and with the recent launch of The Companies Act, 2013 the companies are yet to align their CSR disclosure with the Act. This in future can act as a basis for further research.
REFERENCES

- The Annual Reports of different years of Bharat Petroleum Corporation Limited, Hindustan Petroleum Corporation Limited, Cipla, Sun Pharma, Dabur India Limited, ITC, TCS, Infosys, Jindal Steel and Tata Steel for the Annual Reports.
DISCLOSURE INFORMATION, PRESS COVERAGE, AND THEIR INFLUENCE ON MARKET LIQUIDITY: EVIDENCE FROM JAPAN

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ABSTRACT

We explore how daily information influences measures for market liquidity in terms of information asymmetry and investor recognition by utilizing unique data sets at a daily level from corporate disclosures and media coverage in Japan. Through these analyses, we conclude that information inflows affect two conventional metrics for liquidity, bid-ask spread and depth, via differential mechanisms. Specifically, our chief finding suggests that information gleaned from both corporate disclosures and mass media outlets induce a wider spread. This finding reinforces the notion that public information flows increase information asymmetries among investors, and as a result, enlarge the adverse selection risk premium that liquidity providers require. In addition, we found a positive relationship between media coverage and depth, indicating that mass media distributes corporate information for the broad public and enhances investors’ recognition. Finally, a cross-sectional comparison shows that opaque informational environments around firms, proxied by analyst coverage and management forecasts, significantly exacerbate the spread-widening effect of disclosure information arrivals.

JEL Classification: G12 G14
Keywords: market liquidity, bid-ask spread, depth, corporate disclosure, press media coverage
1. Introduction

Within the field of finance, a large segment of literature has focused on the relationship between information flows and market liquidity. Prior research has theoretically and empirically demonstrated that information asymmetry diminishes liquidity by widening the bid-ask spread to compensate for adverse selection risk (Lee et al., 1993; Kim and Verrecchia, 1994; Krinsky and Lee, 1996; Riordan et al. 2013). The purpose of this study is to build upon extant literature by utilizing unique data sets of information arrivals in the Japanese market. Specifically, we quantify information flows from individual firms by examining daily corporate disclosure announcements and related media coverage and then exploring how they may predict concurrent variations in market liquidity measures.

On the other side, existing literature on investor attention effects on markets has primarily emphasized the quantitative aspects of trading, arguing that trading volume is constrained by investors’ capability to recognize information (see Barber and Odean, 2007; Engelberg and Parsons, 2011). Although the quantitative measure used in most extant research has provided numerous benefits to the field, other types of measures in terms of liquidity provisions we use in this study would also prove useful. We examine depth as an alternative measure for investor attention. In contrast to spread, which is effective for capturing a price gap, depth captures aspects of the volumes that liquidity providers quote. As such, assessment of depth contributes to a better understanding of the relationship between new information flows and investors’ awareness of stocks reported on news sources.

Through this analysis, we add to the literature in three principal ways. First, the datasets we use to measure information flows are unique in the literature on news-liquidity relationships. Our research exploits two sources for information: corporate disclosure and media coverage. Many previous studies have examined effects of corporate disclosure like earnings releases on liquidity (see Lee et al., 1993; Krinsky and Lee, 1996). Our information variables for disclosure and mass media are comprehensive covering various types of news in nature to gain more general empirical results for liquidity response to news, while prior studies have focused on specific events (e.g., earnings announcement releases; Affleck-Graves et al., 2002, dividend change; Graham et al., 2006). Furthermore, to our best knowledge, very little research has utilized two different sources of data in one integrated empirical model (Bushee et al, 2010). By using both corporate disclosures and media outlets as sources of data related to information flows, we are able to identify similarities or differences related to their respective influences on liquidity. Notwithstanding that finance researchers have increasingly focused on the effect of mass media on stock returns (e.g., Tetlock, 2007; Fang and Peress, 2009), its influence on liquidity has been relatively underexplored. This is notable given that mass media’s ubiquity as tool for conveying information to the public, and because information asymmetry is widely
accepted as an important predictor of bid-ask spread.

Second, we construct measures for daily liquidity covering a wide range of cross-section (approximately 1,400 companies) over a four-year period, where analyst coverage and management forecast error are used as proxies for corporate transparency. This data-structuring method differs from previous studies. From a short-term view, one group investigates impacts of news arrivals on liquidity at a daily interval or higher frequency (see, Lee et al. 1993, Graham et al. 2006, Riordan et al. 2013). Another group, from a long-term view, examines the relationship between a liquidity measure aggregated by yearly or quarterly and a proxy for informational environments like analysts activities (see Roulstone, 2003; Heflin et al., 2005, Sankaraguruswamy et al. 2013). Our approach enables us to examine the question of how the long-term cross-sectional difference in informational transparency across firms affects the short-term news impact on daily liquidity. As the daily news-liquidity relations and firm-specific transparency are joined together, we can estimate more precise linkages between information arrivals and liquidity.

Finally, by using Japan as an empirical setting, our study is particularly suited to examine the effect of daily press media on stock markets. Consider that the Japan Newspaper Publishers & Editors Association reports the daily circulation rate of newspapers in Japan as 459.1 newspapers per one hundred people. This figure exceeds the per capita daily newspaper circulation rate in the U.S. (201.5), and the U.K. (332.4). The Nikkei, which is the largest business newspaper published daily in Japan, publishes 3.01 million daily copies. Its counterparts in Western countries, The Wall Street Journal and Financial Times, respectively publish only 1.8 million and 0.4 million daily copies. Given their ubiquity, we expect to produce valid results using data derived from Japanese media. In addition, whereas prior research has largely explored the quote-driven markets of the U.S. where professional market-makers provide liquidity, the Tokyo Stock Market is a purely order-driven market, where various types of investors can provide liquidity through their orders. Hence, coupled with mass media’s utility as a tool for conveying information to broad audiences, the use of the Tokyo Stock Market is especially useful for examining the mass media effects described above.

Our analyses revealed three key findings. First, bid-ask spread widens with news arrivals disseminated by way of both corporate disclosure and mass media. This finding supports the information asymmetry perspective, which posits that news expands the information gap between liquidity providers and informed traders. Second, more media coverage by newspaper is associated with more depth. This finding is consistent with the notion that mass media

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1 One reason for high rates of newspaper circulation in Japan relates to the high rate of house-to-house delivery. Nearly 95% of homes in Japan receive a newspaper via house-to-house delivery.
enhance investors’ attention for corporate information. In contrast, more corporate disclosure is related to less depth, which suggests that liquidity providers adjust their orders in response to the adverse selection risks of new disclosure, rather than the attention promoting effect. Finally, our analyses on cross-sectional differences of firm characteristics indicate that for firms with more analyst coverage and accurate management forecasts, the liquidity deteriorating effect of disclosure news is significantly mitigated. This finding suggests that more transparent information environments tend to resolve temporal uncertainty associated with news arrivals.

The remainder of this paper is organized as follows. In Section 2, we review salient literature and develop several empirical hypotheses. Following this, we describe our dataset, the methods we used to construct our variables, and present major results and interpretations in Section 3. Finally, in Section 4, we summarize our arguments and conclude the paper.

2. Hypothesis development and related literature
2.1. Adverse selection and bid-ask spread
Previous theoretical work has proposed the adverse selection model to explain the effects of information arrivals on market liquidity. Within this literature, there exist two distinct theoretical perspectives: liquidity-deteriorating and improving effects. Fundamentally, both models share a common structure of adverse selection stemming from information asymmetry between liquidity providers and informed traders. However, they differ with respect to how they model the nature of information flows in the market.

Specifically, some research demonstrates that bid-ask spread is reduced with additional information flows (Copeland and Galai, 1983; Glosten and Milgrom, 1985). These studies show that information arrival reduces the informational gap between liquidity providers and informed traders. This, in turn, lowers the risk premium that liquidity providers demand, which narrows the bid-ask spread (i.e., the liquidity-improving effect). In contrast, Kim and Verrechia (1994) propose a model whereby informed traders exploit public information to interpret the effects of news (typically, earnings releases) on true corporate value. Their work demonstrates that as information flows into the market, the advantages enjoyed by informed traders put liquidity providers in more uncertain positions. Therefore, information asymmetry is exacerbated, and a wider bid-ask spread is required to compensate for the increased risk (i.e., the liquidity-deteriorating effect). Based on these conflicting theoretical views, we determine which effect is dominant in our empirical settings from corporate disclosure and press media news.
2.2. Disclosure information

One group of prior work on disclosure provides evidence supporting the liquidity-deteriorating effect of information arrivals in a short run such as a daily level. For example, Lee et al. (1993) and Krinsky and Lee (1996) found that bid-ask spread increases around the announcement of earnings. These findings are consistent with the notion that new earnings information gives the informed traders more advantageous status to exactly interpret the implication of news. Libby et al. (2002) find similar evidence from intraday high frequency dataset. Affleck-Graves et al. (2002) found that the disclosure of less predictable earnings produces an increase in the adverse selection component of spread. Graham et al. (2006) show that the effect of dividend announcements on liquidity is contingent upon whether those announcements are scheduled or unscheduled. Although the research cited above provides a number of useful findings, our approach differs in that we examine disclosures that include not only earnings results, but also new equity issues, mergers, and other types of events. As such, our results offer insight that transcends any one type of corporate news.

Another stream of priors from a long-term view utilize proxies to capture informational environments stable over time and provide evidence consistent with their liquidity improvement effect. Welker (1995), for example, illustrates that high-quality disclosure practices (as determined by a disclosure rating) are related to narrower bid-ask spreads. Similarly, Heflin et al. (2005) reveal a positive relationship between analyst ratings for disclosure and liquidity, and Roulstone (2003) shows that greater degrees of analyst following are related to smaller spreads. Sankaraguruswamy et al. (2013) argue that more news inflows mitigate information asymmetry and thus result in smaller spreads.

2.3. Press media coverage

Prior studies on mass media and capital markets have emphasized the effect of news on stock prices. This work has produced varied results. Several studies argue that mass media enhances the efficiency with which information is disseminated within the market. For instance, Fang and Peress (2009) demonstrate that excess returns for stocks with media coverage are smaller than those for stocks with no media coverage. Tetlock et al. (2008) show that newspaper articles containing negative content about a firm can predict future performance for that firm. Tetlock (2010) also demonstrates that news releases mitigate return reversals, thus providing evidence that mass media alleviates information asymmetry. Dyck et al. (2010) and Miller (2006) examined mass media’s role in generating useful information for market participants by focusing on corporate frauds. These studies provide evidence supporting the notion that journalism activities contribute to efficient pricing of corporate information in markets. In contrast, Chan (2003) illustrates that stocks for which news is reported earn excess returns, suggesting stock price is insufficiently reflective of corporate news. In a similar line of research,
Tetlock (2007) shows stock price is particularly sensitive to pessimistic news and the induced price changes are overreaction with investors’ sentiment. Through a focus on IPO stocks during the Internet bubble period, Bhattacharya et al. (2009) reveal a positive correlation between media coverage and returns on those stocks.

The above-mentioned prior studies mainly focus on mass media’s role in efficient pricing in terms of market returns. In this study, we shed light on the effect on market liquidity. The empirical approach we adopt herein is most closely related to that adopted by Bushee et al. (2010), who reveal a negative relationship between press coverage and spread, illustrating the media’s ability to reduce information asymmetry. Specifically, their analysis explores the respective informational roles of corporate disclosure and press media coverage in the stock market. Although our approaches may be similar, unlike Bushee et al. (2010), we do not focus exclusively only on specific announcement events. Instead, we integrate all corporate disclosures and media articles over a four-year period into our analysis. More recently, Riordan et al. (2013) find that spread increases and depth decreases with news inflows of negative tone. Our approach differs from them in that we explicitly treat multiple information sources from corporate disclosure and newspaper media.

2.4. Investors’ attention and depth

In addition to bid-ask spread, we use market depth, as determined by sell and buy quotes, to examine the influence of investors’ attentions (recognitions) on market liquidity. Because depth captures order flows from liquidity providers in terms of the quantitative measure, we assume it should gauge the degree to which investors pay attention to a stock. Consistent with this, we hypothesize that a greater number of information flows are associated with increased recognition on the part of investors, which yields greater depth, in turn.

The notion that investors’ recognition is important for inducing active trading behavior is extensively argued in the behavioral finance literature. For instance, Barber and Odean (2007), show that when individual investors buy stocks, their attention is influenced by salient stock performance measures, like extremely high news frequency. With respect to earnings announcements, work by Lee (1992) reveals that small traders react to information releases by the buy-order. To show more directly media effect, Huberman and Regev (2001) examine press coverage about the discovery of a cure-cancer medicine and fined evidence the appearances on the New York Times front page produced a large price and volume reactions.

Several studies on mass media demonstrate linkages between news and trading volume.

2 Aman (2013) uses similar multiple sources from newspapers and corporate disclosure and examines the impact on market price crashes.
Engelberg and Parsons (2011) provide evidence for a positive causal relationship from newspaper coverage to trading volume even after fully controlling for endogeneity. Bushee et al. (2010), whose empirical design is similar to our analysis, found increased media coverage to be significantly related to depth.

2.5. Effects of firm-specific characteristics: corporate transparency

One strength of our research design is our sample’s inclusion of a wide range of companies. This affords us to examine cross-sectional characteristics as potential moderators of the relationship between information arrivals and liquidity. A consideration of these cross-sectional characteristics contributes to the existing literature by combining two research streams of market liquidity analysis. One major literature relates a long-term liquidity level to cross-sectional attributes of informational environments such as analyst coverage (Roulstone, 2003; Heflin et al., 2005). Another literature focuses on more event-specific reactions of liquidity at shorter interval (e.g., earnings releases in Krinsky and Lee 1996, dividend announcements in Graham et al. 2006). We examine how liquidity measures response to information flows by a daily data and then investigate the impact of information transparency measured by analyst coverage and management forecasts accuracy on the observed news – liquidity relationship. Analyst coverage has been most widely used in prior literature to quantify public information investors can access. Management forecasts are useful to capture the reliability of disclosure information that companies release (Healy and Palepu 2001, Hirst et al. 2008). In particular, in the Japanese institutional setting, a great majority of firms routinely issue management forecasts at the earnings announcements (Kato et al. 2009). That is, we can utilize the forecasts accuracy for a wide range of firms and thus the risk of sample selection is small. Theoretically, when a firm is covered by more analysts, it should increase the quantity of public information available for investors and thus it fills the information gap between informed traders and uninformed traders stemming from new information. Similarly, when a firm issues accurate earnings forecasts, the uncertainty about earnings-related information should be small and thus it degrades informational advantages of informed traders. We hypothesize that the informational environments are more transparent, that is, more analyst coverage and more accurate management forecasts, the liquidity-decreasing effect of disclosure information is mitigated.

Several prior studies examine the effect of corporate transparency on liquidity reactions to news. Kanagaretnam et al. (2005) find that more severe information asymmetry measured by analyst activities is related to more spread increase and more depth decrease around earnings announcements. Likely, Kanagaretnam et al. (2007) report that better corporate governance is related to the improved liquidity around earnings announcements. Lang et al. (2012) find international evidence for the transparency effect on liquidity.
3. Empirical analysis
3.1. Data and variables

Data for this study were collected from the 1st section of the Tokyo Stock Exchange. Daily financial data were drawn from January 1, 2007 to December 31, 2010. Given these sampling parameters, 1,349,357 firm-daily observations were included in our analyses. Primary data related to each firm’s corporate disclosures were downloaded from the Timely Disclosure System on the Tokyo Stock Exchange (TD-net). This archive provides comprehensive records that are released daily, including periodic financial statements and the other all official announcements. Disclosure is defined as the frequency of disclosures on a given trading day. TD-net classifies disclosure frequencies with three-digit codes such as earnings releases, merger and acquisition. This coding scheme is useful as it allows for the categorization of corporate release content without the need for manual coding. As such, we utilize this code to compare the effects of different types of news.

Another key variable, media coverage, is constructed from three business-oriented newspapers, The Nikkei, Nikkei Marketing Journal, and Nikkei Business Daily. The Nikkei is the largest daily business newspaper in Japan and includes information that is broad in scope. Nikkei Marketing Journal and Nikkei Business Daily offer more specialized industry news. By combining these different types of newspapers, we are able to account for a wider audience in our analysis. To represent the amount of media coverage received by a company on a given day, we constructed the variable press (the number of newspaper articles) on the basis of these three news outlets. The Nikkei Telecom 21 database from which we downloaded this data provides a four-digit ticker code to identify which company is cited on articles. This facilitated data collection as there was no need to rely on any specific content analysis techniques to classify the data.

In addition to the two predictor variables defined above, we also computed two liquidity measures using high-frequency transaction data. The bid-ask spread, spread, was computed by first subtracting the best bid from the asking price, then deflating that value by the mid-point of the bid-ask spread, and finally calculating the daily average weighted by sustained duration. The depth measure, depth1, was defined as the value (in Japanese million Yen) of total orders on best bid and ask quote price.

To control for other factors that may influence liquidity, trading volume (trade), closing price (price), and market capitalization (mcap) are also included in our analysis. Trade is a proxy for private information inflows, which our public information variables (disclosure and press)

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3 Financial firms were excluded because their industry-specific regulatory environments may prevent us from deducing generous information-liquidity relationships.
cannot capture. Due to the tick size effect, price is expected to have a positive relationship with liquidity. Mcap is a proxy for firm size, which may affect liquidity as a function of investors’ uncertainty and/or familiarity. In addition, we incorporate time dummies to control for specific calendar effects. Four of these dummy variables are meant to represent the days of the week (Tuesday through Friday, and Monday is used as the baseline) and 11 account for month effects (February through December and January is used as the baseline).

Table 1 displays descriptive statistics for all variables. Across all firms, average daily disclosure is 0.091, which translates to 22.55 annual corporate disclosures. Press’s daily average is 0.240, indicating that press media reports on firms occur 60 times per year, on average. Table 1 also illustrates that both disclosure and press are positively skewed as a result of infrequent information releases (the median values equal zero for both disclosure and press) and a few cases in which a large number of information releases were observed. To adjust for the skewness of the data, we applied a binary transformation. Specifically, the disclosure dummy equals 1 if disclosure is greater than or equal to 1, and 0 if disclosure is equal to 0. In addition, a press dummy was constructed that adopts a value of 1 if press is greater than or equal to 1, and 0 otherwise. The average value of the disclosure dummy shows the likelihood of corporate disclosure issuance to be 6.5%. The press dummy shows a corresponding likelihood of 13.8%.

### 3.2. Univariate analysis

The correlation matrix in Table 2 shows the bivariate associations between all variables. As expected, the correlation coefficient between the disclosure and press variables is positive, though the magnitude of the correlation is moderate (0.290). The disclosure and spread are negatively correlated, though the association is weak (-0.012). The correlation between the disclosure and depth1 is similarly weak (0.012). Press’s correlation with spread (-0.102) and depth1 (0.156) are also small. Although depth1 is positively correlated with disclosure and press, they are also minimal, providing only weak evidence for an effect of investors’ awareness. As a whole, simple correlation measures provide only ambiguous effects of information flows on market liquidity, which suggest the needs to carry out multivariate analyses further.

Table 3 demonstrates the mean values of the liquidity measures sorted by disclosure and press. Panel A illustrates a negative relationship between both types of information dissemination and spread. Superficially, this means that a greater number of information flows mitigates information asymmetry. However, as evidenced by the multivariate analyses described in the following section, the inverse may actually be true after controlling for trading volume and others. In Panel B, depth1 appears to increase with more frequent information flows in both disclosure and press. This evident pattern is consistent with the notion that a greater number of information arrivals attract more investor attention to yield more quotes by liquidity providers.
3.3. Baseline regression results for spread and depth

Table 4-A presents results for a regression analysis that treats bid-ask spread as the outcome measure. These results were obtained after controlling for several potential confounding factors. The moderately high R-squared around 20% to 30%, and statistically significant F-value suggest that the model is well-fitted. The coefficients for the continuous and dummy disclosure variables are all positive and significant statistically except for model 3. This is a critical finding, as it suggests that corporate disclosure is likely to increase information asymmetry by giving informed traders advantageous status to interpret the released news and thus generate wider spread, consistent with the theory in Kim and Verrechia (1994). In turn, this rejects the notion that increased corporate disclosure reduces the information gap faced by liquidity providers (Copeland and Galai, 1983; Glosten and Milgrom, 1985).

Similarly, for press media coverage, the dummy and continuous variables are positively and significantly associated with spread, which is contrasted with earlier univariate analysis displayed. This indicates, after controlling for other control variables (i.e., trade, price, and mcap), the increased dissemination of information via mass media widens the informational asymmetry. It is unlikely that incremental inflows of news reports fill the informational gap among investors.

As for the cross-term between disclosure and press, interestingly, their interaction has a negative and statistically significant coefficient, which suggest, more concurrent information inflows from multiple sources tend to mitigate informational uncertainty and as such, reduce bid ask spread. News story provided through press media may dissolve the uncertainty inherent to disclosed information like the difficulty to estimate its future implication for fundamental value. In other words, we interpret it that, with adding journalists’ investigative analyses, newspaper articles could mitigate uncertainty involved in raw disclosure information and then reduce informational risks that liquidity providers take.

Table 4-B presents the results from a series of regressions that treat depth as the dependent measure. The F-values for each model are sufficiently high to reject all zero coefficients, but the R-squared is relatively low (around 5%), compared to the spread models. The estimated coefficients for disclosure and its dummy variable on depth are negative and achieves statistical significance except for model 2. As a result, we confirm that more disclosure is related with decreased depth. In consonance with the spread widening effect of disclosure, the result is consistent with the asymmetric information hypothesis and one interpretation is that temporarily at the timing of news arrivals, liquidity providers are reluctant to quote orders due to the uncertainty contained in official disclosure like earnings releases. By contrast, press
coverage is a clear positive predictor of depth, consistent with the investors’ enhanced recognition effect and inconsonant with information asymmetry story. These results suggest that mass media coverage increases investors’ attention towards those stocks, which attracts more orders from liquidity providers. We can conclude that media coverage affects spread and depth in substantially different ways. To adjust for adverse selection risks, liquidity providers widen spread in response to information transmitted from disclosure and mass media. As well, they are reluctant to put orders in response to disclosure information. On the other side, investors do not use order quantity as a tool to mitigate the risk for mass media information. Instead, they simply react to mass media news by increasing the size of their sell or buy orders. Further we add an interaction term that relates corporate disclosure with media coverage. The interaction term is negative and statistically significant, indicating that the depth decreasing effect of disclosure announcements might be driven by more concurrent media information. In other words, the investors’ attention attracting effect of media is more remarkable for less disclosure releases, that is, when newspapers report their original articles unrelated with corporate disclosure.

3.4 Cross-sectional variations of informational environments
To examine how cross-sectional traits of corporate transparency for investors affect the spread response to disclosure information, Table 5 reports the results of regressions that divided the sample in terms of analyst coverage and management forecast error. Panel A shows that a smaller number of analyst coverage tends to exacerbate the spread expanding effect of disclosure. Specifically, for the subsample with the minimum coverage (N <= 1), the coefficient of disclosure is the largest and solely significant statistically while their scales are smaller and non-significant for the other large coverage groups. Similarly, we find that the larger management forecast error is, the greater the scale of spread-widening effect is, although non-significant for all groups. Turning to press coverage, we find no evidence supporting such favorable effect of corporate transparency. Specifically, there is no monotonic pattern indicating better transparency is related to smaller spread. This ambiguous finding for press coverage may suggest that transparency is more important for the uncertainty of disclosure information than for media conveying information flows.

The lower stand in Table 5-A shows the results sorted by management forecast error. The result from disclosure effect on spread indicates a pattern that the spread expanding effect is stronger for subsamples with relatively large forecast errors in terms of their estimated coefficient scale, consistently with the results from analyst coverage subsample. This suggests that for firms routinely releasing less accurate information (poor transparency), investors are likely to perceive risks of information asymmetry stemming from new disclosure information inflows. For the press variable, regardless of forecast error levels, all groups show that the positive and
significant impacts on spread or more specifically slightly stronger effects for largest and smallest error firms.

Table 5-B, in which the subsample indicators are included in one regression model as cross-terms, we confirm that less analyst coverage produce more severe asymmetric information problem. That is, the coefficients of cross-term between disclosure and less analyst coverage indicator have a larger positive estimate (particularly, the interactions with $\text{analyst}(1)$ and $\text{(2)}$). As for management forecasts too, we find evidence that inaccurate forecasts is associated with spread decreasing effect of disclosure. Overall, these results are consistent with the prediction that an improvement of transparency mitigates the informational asymmetry coming from new disclosure releases.

3.5 Further analyses
3.5.1 Information type classification
As noted in Section 3.1, the database we used to obtain corporate disclosure information offers a classification code. Because earnings results are the most critical type of corporate disclosure, and because several previous studies document significant changes in liquidity around earnings announcements, we separate disclosures into two categories to estimate our models: disclosures related to earnings and all other disclosures. As shown in Table 6-(A), both types of disclosures ($\text{earnings disclosure vs. other disclosure}$) have a positive effect on spread, but only the earnings-related disclosure has a statistically significant coefficient. The magnitude of marginal effect is greater for the earnings-related disclosure (coeff. = 1.3477) as compared to other disclosure (coeff. = 0.0745), and even after adjusting for the standard deviations of two disclosure variables, the economic impact of earnings-related news is still greater. This finding suggests that although disclosure related to earnings is generally useful, it is likely to contain an uncertainty about the implication for firm valuations, and widen the spread around the announcements. Both types of information disclosure significantly reduce market depth consistent with our earlier finding that the $\text{disclosure}$ was negatively related to depth. We also find that the impact of $\text{earnings disclosure}$ on depth is somewhat weaker than that of $\text{other disclosure}$. Our baseline result on depth could be driven by the impact of other types of disclosure news. Turning to the media coverage classification, for both spread and depth, the scales of impacts of non-earnings-related articles ($\text{other press}$) are greater than those of earnings reporting articles ($\text{earnings press}$). In contrast to disclosure news type, newspapers might play an important role in transmitting more qualitative news as not manifested on accounting numbers.

3.5.2 Investor attention effect
To do more in-depth analysis on the press media attention effect, we look at the front-page of
newspapers. Klinbanoff et al. (1988) find evidence that news reported on front pages in New York Times is associated with more efficient pricing in closed end funds. Huberman and Rgev (2001) find similar evidence for news about a newly developed drug for cancer treatment. In our analysis with a broader range of newspaper articles dataset, we count the number of front-page appearing articles (front page) and the other articles (non-front page). The result is displayed in Table 6-(B). For the spread, the coefficient of front page and non-front page are positive and statistically significant as the estimate of press in the baseline result. The economic scale of front page effect (coeff. = 3.53) is much greater than that of non-front page effect (coeff. = 1.90). For depth, the scale of coefficient of front page is larger than that of non-front page. Taken together, these results suggest that media coverage with more visibility has a larger influence on the markets.

When investor attention is a limited resource, the effect of one information arrival may be mitigated by more competing information flows occurrences. In line with this argument, Hirshleifer et al. (2009) find evidence that more earnings announcements on the same day is related to less market response and the subsequent underreaction. DellaVigna and Polet (2009) find that the market response to earnings announcements on Friday is weaker than that on weekdays. In our settings, we aggregate the number of disclosure releases and media coverage from the other all firms on the same day (all disclosure and all press). For Table 6-(C) The coefficient of cross term between press and all press on depth is negative at significant level, which indicates, when more information about the other firms is conveyed by newspapers (increased all press), scarce investors’ attentions are distracted and press coverage for a firm (press) has a weaker effect on depth.

3.5.3 Robustness checks
To validate our findings, we performed several robustness checks for our findings. First, we fitted several alternative measures for spread and the component to the model: effective spread, realized spread and adverse selection cost component of spread, defined as the appendix (also for the detailed discussion for the components, see Huang and Stoll, 1996). Table 7 displays the result. As a whole, we consider our primary findings to be robust. Specifically, an increase in disclosure and press coverage widens the effective spread. Also, we find similar evidence on adverse selection cost but the opposite sign for realized spread. These observations suggest that disclosure news is likely to increase adverse selection risks, which reinforces our key conclusion regarding the informational asymmetry hypothesis. In addition, to validate our findings related to depth, we extended the number of quotes from the first best to the fifth best quote (depth5). This expansion captures a wider scope of investor behaviors. In sum, these modifications produced results similar to those described above.
Finally, to address an endogeneity issue on unobservable variables, we rerun regressions with fixed effects. Several prior studies recognize the potential that alternative transmissions of fundamental news not explicitly specified in model could cause a biased statistical estimation and attempt to minimize the risk of endogeneity bias by using unique instrumental variables such as local newspapers coverage (Engelberg and Parsons, 2011), newspaper company strikes (Peress 2014). Unfortunately as we cannot access such specific instruments on the current dataset, we control for the endogeneity by adding firm fixed effects, which is a most widely accepted resolution without any special instrument. The result is displayed in Table 8, where we find a similar and robust tendency as the outcomes from baseline models.

4 Conclusion

In this paper, we utilized corporate disclosure and press coverage data to produce empirical evidence related to the effects of information arrivals on two measures for market liquidity. We examine information asymmetry among investors as a moderator of the relationship between information arrivals and bid-ask spread. Further, we tested the effect of investors’ recognition by utilizing a measure for market depth. Through these analyses, we produced several notable results indicating relationships between two liquidity dimensions (spread and depth) and two information flows (disclosure and press media coverage) are determined in substantially different mechanisms, respectively.

First, bid-ask spread widens as a result of new information disseminated via both corporate disclosure and mass media. This finding reinforces the notion that news received from official corporate disclosures includes content related to market uncertainty. This leads to an increase in the risk premium that liquidity providers require to compensate for possible losses. Second, corporate disclosures are negatively associated with market depth. However, there is a significant positive relationship between mass media coverage and depth. Taken together, these results distinguish the effects of corporate disclosure and media reports on depth. Because corporate disclosures include content that conveys uncertainty, investors are often unwilling to post orders in response to them. In contrast, the mass media communicates information that incites awareness for firms while also containing some aspects of uncertainty. Finally, a cross-sectional comparison shows that for firms with more analyst coverage and credible management forecasts, the increase of information asymmetry around news releases is mitigated.
## APPENDIX: List of variable definitions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spread</td>
<td>Difference between best bid and best ask quote deflated by the midpoint ( (M) ) of spread. [\text{Spread} =</td>
</tr>
<tr>
<td>Effective spread</td>
<td>For firm ( i ) and the ( j )th trading, efficient bid-ask spread is defined as, [D_i (P_j - M_{ij})/M_{ij}.] ( D_i ) is an indicator variable that takes a value of +1 if the transaction is buyer-initiated and -1 if it is seller-initiated. ( P_j ) is the transaction price. ( M_{ij} ) is the midpoint between bid and ask prices. This is daily average weighted by sustained duration.</td>
</tr>
<tr>
<td>Realized spread</td>
<td>For firm ( i ) and the ( j )th trading, realized bid-ask spread is defined as, [D_i (P_j - M_{ij})/M_{ij}.] ( D_i ) is an indicator variable that takes a value of +1 if the transaction is buyer-initiated and -1 if it is seller-initiated. ( P_j ) is the transaction price. ( M_{ij} ) is the midpoint between bid and ask prices. ( M_{ij+5} ) is the midpoint between bid and ask prices five minutes after the ( j )th trading. This is daily average weighted by sustained duration.</td>
</tr>
<tr>
<td>Adv cost</td>
<td>For firm ( i ) and the ( j )th trading, adverse selection cost component of spread is defined as, [D_i (M_{ij+5} - M_{ij})/M_{ij}.] ( D_i ) is an indicator variable that takes a value of +1 if the transaction is buyer-initiated and -1 if it is seller-initiated. ( P_j ) is the transaction price. ( M_{ij} ) is the midpoint between bid and ask prices. ( M_{ij+5} ) is the midpoint between bid and ask prices five minutes after the ( j )th trading. This is daily average weighted by sustained duration.</td>
</tr>
<tr>
<td>Depth1</td>
<td>Total Yen value of best bid and ask quotes: million Yen.</td>
</tr>
<tr>
<td>Depth5</td>
<td>Total Yen value of bid and ask quotes from the best to the fifth: million Yen:</td>
</tr>
<tr>
<td>Disclosure</td>
<td>The daily number of corporate disclosures released on the Tokyo Stock Exchange.</td>
</tr>
<tr>
<td>Press</td>
<td>The daily number of articles on the Nikkei, Nikkei Marketing Journal and Nikkei Industrial Daily.</td>
</tr>
<tr>
<td>Earnings disclosure</td>
<td>The daily count of earnings-related disclosure news.</td>
</tr>
<tr>
<td>Other disclosure</td>
<td>The daily count of non-earnings-related disclosure news.</td>
</tr>
<tr>
<td>Earnings press</td>
<td>The daily count of press articles including the key wards on the headlines; accounting settlement (kessan), performance (gyoseki), ordinary profits (keijou-eki), operational profits (eigyou-eki), record high profits (saikou-eki), dividend (haitou), profits (rieki), increase in profits (zou-eki), decrease in profits (gen-eki), income (syueki), increase in income (zou-syu), decrease in income (gen-syu).</td>
</tr>
<tr>
<td>Other press</td>
<td>The daily count of press articles minus earnings-related press coverage defined as above.</td>
</tr>
<tr>
<td>Front page</td>
<td>The daily number of press articles on front page.</td>
</tr>
<tr>
<td>Non-front page</td>
<td>The daily number of press articles on non-front page</td>
</tr>
<tr>
<td>All disclosure</td>
<td>Total count of disclosure releases from the other companies at the same date except for the</td>
</tr>
</tbody>
</table>
announcing company.

**All press**
Total count of press articles about the other companies at the same date except for the announcing company.

**Trade**
Total trading volume (millions of Yen).

**Price**
Closing price.

**Mcap**
Market capitalization (millions of Yen), defined as the closing price multiplied by the outstanding number of shares.

**Analyst coverage**
The number of medium value of analyst coverage measured monthly.

**Management forecast error**
\[ \frac{\text{realized annual earnings} - \text{initial management forecast of earnings}}{\text{total assets}}.\]
REFERENCE


### Table 1. Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th>No. of Obs.</th>
<th>Mean</th>
<th>S.D.</th>
<th>Min.</th>
<th>2nd quartile</th>
<th>Median</th>
<th>3rd quartile</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Spread</strong></td>
<td>1,349,357</td>
<td>28.212</td>
<td>31.366</td>
<td>1.757</td>
<td>11.046</td>
<td>18.598</td>
<td>34.179</td>
<td>977.164</td>
</tr>
<tr>
<td><strong>Efficient spread</strong></td>
<td>1,349,356</td>
<td>22.671</td>
<td>25.106</td>
<td>1.810</td>
<td>9.431</td>
<td>15.041</td>
<td>27.062</td>
<td>990.811</td>
</tr>
<tr>
<td><strong>Realized spread</strong></td>
<td>1,349,273</td>
<td>2.477</td>
<td>21.460</td>
<td>-836.447</td>
<td>-3.661</td>
<td>0.061</td>
<td>5.416</td>
<td>981.595</td>
</tr>
<tr>
<td><strong>Disclosure</strong></td>
<td>1,349,357</td>
<td>0.091</td>
<td>0.409</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>21</td>
</tr>
<tr>
<td><strong>Press</strong></td>
<td>1,349,357</td>
<td>0.240</td>
<td>0.769</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>35</td>
</tr>
<tr>
<td><strong>Disclosure dummy</strong></td>
<td>1,349,357</td>
<td>0.065</td>
<td>0.246</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Press dummy</strong></td>
<td>1,349,357</td>
<td>0.138</td>
<td>0.344</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Earnings disclosure</strong></td>
<td>1,349,357</td>
<td>0.019</td>
<td>0.165</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>18</td>
</tr>
<tr>
<td><strong>Other disclosure</strong></td>
<td>1,349,357</td>
<td>0.072</td>
<td>0.337</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>12</td>
</tr>
<tr>
<td><strong>Earnings press</strong></td>
<td>1,349,357</td>
<td>0.041</td>
<td>0.259</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td><strong>Other press</strong></td>
<td>1,349,357</td>
<td>0.199</td>
<td>0.686</td>
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## Table 2. Correlation Matrix

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<td>[5] Log(price)</td>
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<td>0.194</td>
<td>0.886</td>
<td>0.412</td>
<td>1.000</td>
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*Disclosure:* Daily count of corporate disclosures released on the Tokyo Stock Exchange. *Disclosure* dummy: If *disclosure* ≥ 1, then this variable = 1. If *disclosure* = 0, then this variable = 0. *Press:* Daily count of articles on the Nikkei, Nikkei Marketing Journal and Nikkei Industrial Daily. *Press* dummy: If *press* ≥ 1, then this variable = 1. If *press* = 0, then this variable = 0. *Spread:* Difference between best bid and best ask quote deflated by the midpoint of spread. *Depth1:* Total Yen value of best bid and ask quotes. *Trade:* Total trading volume (millions of Yen). *Price:* Closing price. *Mcap:* Market capitalization (millions of Yen), defined as the closing price multiplied by the outstanding number of shares.
Table 3. The average values of liquidity metrics sorted by daily information flows

Panel A: Bid-ask spread by daily information flows

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<th>freq.</th>
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<td>4,841</td>
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<td>23.726</td>
<td>29.367</td>
<td>1,737</td>
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<td>22.304</td>
<td>29.050</td>
<td>640</td>
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<td>21.259</td>
<td>99</td>
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<td>8</td>
<td>17.883</td>
<td>18.714</td>
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<td>9</td>
<td>13.539</td>
<td>10.144</td>
<td>23</td>
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<td>20.898</td>
<td>17.534</td>
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<th>freq.</th>
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<td>15.322</td>
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<td>13.690</td>
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<td>12.130</td>
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Panel B: Depth by daily information flows

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Table 4-A. Regression results of information flows on bid-ask spread.

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<td>Spread</td>
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The results of time dummies (day-of-week and monthly indicators) are compressed. The t-values in square bracket are computed by the cluster-robust standard errors. ***, **, and * indicates the significance levels at 1%, 5% and 10% respectively. Spread: difference between best bid and best ask quote deflated by the midpoint of spread. Disclosure: daily count of corporate disclosure. Press: daily count of newspaper articles. Trade: Total trading volume (millions of Yen). Price: Closing price. Mcap: Market capitalization (millions of Yen), defined as the closing price multiplied by the outstanding number of shares.
Table 4-B. Regression results of information flows on depth.

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<td>[4.41]</td>
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<td>32.3675***</td>
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<td>[4.01]</td>
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<td>[6.07]</td>
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</tbody>
</table>

The results of time dummies (day-of-week and monthly indicators) are compressed. The t-values in square bracket are computed by the cluster-robust standard errors. ***, **, and * indicates the significance levels at 1%, 5% and 10% respectively. Depth1: Total Yen value of best bid and ask quotes Disclosure: daily count of corporate disclosure. Press: daily count of newspaper articles. Trade: Total trading volume (millions of Yen). Price: Closing price. Mcap: Market capitalization (millions of Yen), defined as the closing price multiplied by the outstanding number of shares.
### Table 5-A. Regression results by subsample sorted by information transparency.

<table>
<thead>
<tr>
<th>Dep. Var.</th>
<th>Spread</th>
<th>Subsample: <strong>Analyst Coverage</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>N&lt;=1</td>
</tr>
<tr>
<td>Disclosure</td>
<td>0.8822***</td>
<td>0.274</td>
</tr>
<tr>
<td>Press</td>
<td>-0.0181</td>
<td>0.7824***</td>
</tr>
<tr>
<td>adj. R-sq</td>
<td>0.1817</td>
<td>0.1551</td>
</tr>
<tr>
<td>F-value</td>
<td>27.00***</td>
<td>16.67***</td>
</tr>
<tr>
<td>No. of Obs.</td>
<td>236,778</td>
<td>201,200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dep. Var.</th>
<th>Spread</th>
<th>Subsample: <strong>Management Forecast Error</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Q1</td>
</tr>
<tr>
<td>Disclosure</td>
<td>-0.3395</td>
<td>0.2857</td>
</tr>
<tr>
<td>Press</td>
<td>1.9037***</td>
<td>1.5679***</td>
</tr>
<tr>
<td>adj. R-sq</td>
<td>0.2942</td>
<td>0.2626</td>
</tr>
<tr>
<td>F-value</td>
<td>41.23***</td>
<td>43.88***</td>
</tr>
<tr>
<td>No. of Obs.</td>
<td>316,571</td>
<td>316,599</td>
</tr>
</tbody>
</table>

The results of time dummies (day-of-week and monthly indicators) and other control variables (*trade, price, mcap*) are compressed. The t-values in square bracket are computed by the cluster-robust standard errors. ***, **, and * indicates the significance levels at 1%, 5% and 10% respectively. 

**Spread**: difference between best bid and best ask quote deflated by the midpoint of spread. **Disclosure**: daily count of corporate disclosure. **Press**: daily count of newspaper articles.

Analyst coverage: The number of medium value of analyst coverage measured monthly. Management forecast error: the absolute (unsigned) value for the difference between realized annual earnings and initial management forecast of earnings, scaled by total assets outstanding.
Table 5-B. Regression results with cross-terms with analyst coverage and management forecast error.

<table>
<thead>
<tr>
<th>Dep. var.</th>
<th>Spread</th>
<th>Dep. var.</th>
<th>Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disclosure x Analyst(1)</td>
<td>0.9226***</td>
<td>Disclosure x MngFrcst(1)</td>
<td>-0.4597**</td>
</tr>
<tr>
<td>[4.29]</td>
<td></td>
<td>[1.91]</td>
<td></td>
</tr>
<tr>
<td>Disclosure x Analyst(2)</td>
<td>0.3077**</td>
<td>Disclosure x MngFrcst(2)</td>
<td>0.1849</td>
</tr>
<tr>
<td>[2.00]</td>
<td></td>
<td>[0.89]</td>
<td></td>
</tr>
<tr>
<td>Disclosure x Analyst(3)</td>
<td>0.1216</td>
<td>Disclosure x MngFrcst(3)</td>
<td>-0.0098</td>
</tr>
<tr>
<td>[0.68]</td>
<td></td>
<td>[-0.05]</td>
<td></td>
</tr>
<tr>
<td>Disclosure x Analyst(4)</td>
<td>0.0129</td>
<td>Disclosure x MngFrcst(4)</td>
<td>0.8424*</td>
</tr>
<tr>
<td>[0.10]</td>
<td></td>
<td>[1.92]</td>
<td></td>
</tr>
<tr>
<td>Press x Analyst(1)</td>
<td>-0.6953***</td>
<td>Press x MngFrcst(1)</td>
<td>2.6121***</td>
</tr>
<tr>
<td>[-2.86]</td>
<td></td>
<td>[7.54]</td>
<td></td>
</tr>
<tr>
<td>Press x Analyst(2)</td>
<td>0.5601**</td>
<td>Press x MngFrcst(2)</td>
<td>2.1004***</td>
</tr>
<tr>
<td>[2.36]</td>
<td></td>
<td>[6.90]</td>
<td></td>
</tr>
<tr>
<td>Press x Analyst(3)</td>
<td>1.1988***</td>
<td>Press x MngFrcst(3)</td>
<td>1.7458***</td>
</tr>
<tr>
<td>[4.60]</td>
<td></td>
<td>[7.77]</td>
<td></td>
</tr>
<tr>
<td>Press x Analyst(4)</td>
<td>1.3293***</td>
<td>Press x MngFrcst(4)</td>
<td>0.7241**</td>
</tr>
<tr>
<td>[8.66]</td>
<td></td>
<td>[2.16]</td>
<td></td>
</tr>
<tr>
<td>Analyst(2)</td>
<td>-2.4800***</td>
<td>MngFrcst(2)</td>
<td>0.7078</td>
</tr>
<tr>
<td>[-3.16]</td>
<td></td>
<td>[0.99]</td>
<td></td>
</tr>
<tr>
<td>Analyst(3)</td>
<td>-2.7050***</td>
<td>MngFrcst(3)</td>
<td>0.7785</td>
</tr>
<tr>
<td>[-2.99]</td>
<td></td>
<td>[1.15]</td>
<td></td>
</tr>
<tr>
<td>Analyst(4)</td>
<td>1.653</td>
<td>MngFrcst(4)</td>
<td>4.5110***</td>
</tr>
<tr>
<td>[1.51]</td>
<td></td>
<td>[5.08]</td>
<td></td>
</tr>
<tr>
<td>const.</td>
<td>64.7985***</td>
<td>const.</td>
<td>99.9193***</td>
</tr>
<tr>
<td>[15.74]</td>
<td></td>
<td>[18.46]</td>
<td></td>
</tr>
</tbody>
</table>

adj. Rsq 0.199  adj. Rsq 0.2844 |
F-value 36.88***  F-value 72.95*** |
No. of Obs. 812,218  No. of Obs. 1,266,301 |

The results of time dummies (day-of-week and monthly indicators) and other control variables (trade, price, mcap) are compressed. The t-values in square bracket are computed by the cluster-robust standard errors. ***, **, and * indicates the significance levels at 1%, 5% and 10% respectively. Spread: difference between best bid and best ask quote deflated by the midpoint of spread. Disclosure: daily count of corporate disclosure. Press: daily count of newspaper articles.
Analyst(#)\): the binary variable taking 1 if the analyst coverage number is in the # quartile and 0 otherwise. MngFrcst(#): the binary variable taking 1 if the management forecast error is in the # quartile and 0 otherwise.
Table 6. Information type classification, front page effect and investor’s attention effect.

(A) Information type: earnings vs others

<table>
<thead>
<tr>
<th>Dep. var.</th>
<th>Spread</th>
<th>Depth1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings Disclosure</td>
<td>1.3477***</td>
<td>-6.7508***</td>
</tr>
<tr>
<td></td>
<td>[6.93]</td>
<td>[-3.53]</td>
</tr>
<tr>
<td>Other Disclosure</td>
<td>0.0745</td>
<td>-7.8484***</td>
</tr>
<tr>
<td></td>
<td>[0.35]</td>
<td>[-3.05]</td>
</tr>
<tr>
<td>Earnings Press</td>
<td>0.1245</td>
<td>3.6563</td>
</tr>
<tr>
<td></td>
<td>[0.86]</td>
<td>[1.50]</td>
</tr>
<tr>
<td>Other Press</td>
<td>2.2680***</td>
<td>34.8190***</td>
</tr>
<tr>
<td></td>
<td>[9.97]</td>
<td>[4.01]</td>
</tr>
<tr>
<td>log(trade)</td>
<td>-4.0046***</td>
<td>-1.6683</td>
</tr>
<tr>
<td></td>
<td>[-13.09]</td>
<td>[-1.09]</td>
</tr>
<tr>
<td>log(price)</td>
<td>-3.9368***</td>
<td>-1.205</td>
</tr>
<tr>
<td></td>
<td>[-8.60]</td>
<td>[-0.39]</td>
</tr>
<tr>
<td>log(mcap)</td>
<td>-2.9706***</td>
<td>23.0838***</td>
</tr>
<tr>
<td></td>
<td>[-5.80]</td>
<td>[6.19]</td>
</tr>
<tr>
<td>const.</td>
<td>107.2870***</td>
<td>-219.7663***</td>
</tr>
<tr>
<td></td>
<td>[18.49]</td>
<td>[-5.43]</td>
</tr>
</tbody>
</table>

| adj. Rsq | 0.2738 | 0.0494 |
| F-value  | 95.70*** | 18.30*** |
| No. of Obs. | 1,349,357 | 1,349,367 |

(B) Front Page in newspapers

<table>
<thead>
<tr>
<th>Dep. var.</th>
<th>Spread</th>
<th>Depth1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disclosure</td>
<td>0.0496</td>
<td>-11.8579***</td>
</tr>
<tr>
<td></td>
<td>[0.29]</td>
<td>[-3.63]</td>
</tr>
<tr>
<td>Front Page</td>
<td>3.5323***</td>
<td>77.7458***</td>
</tr>
<tr>
<td></td>
<td>[7.30]</td>
<td>[4.14]</td>
</tr>
<tr>
<td>Non-Front Page</td>
<td>1.9003***</td>
<td>28.0110***</td>
</tr>
<tr>
<td></td>
<td>[9.60]</td>
<td>[3.96]</td>
</tr>
<tr>
<td>log(trade)</td>
<td>-4.0214***</td>
<td>-1.9139</td>
</tr>
<tr>
<td></td>
<td>[-13.18]</td>
<td>[-1.20]</td>
</tr>
<tr>
<td>log(price)</td>
<td>-2.9262***</td>
<td>23.7115***</td>
</tr>
<tr>
<td></td>
<td>[-5.74]</td>
<td>[6.08]</td>
</tr>
<tr>
<td>log(mcap)</td>
<td>-3.9414***</td>
<td>-1.2566</td>
</tr>
<tr>
<td></td>
<td>[-8.60]</td>
<td>[-0.41]</td>
</tr>
<tr>
<td>const.</td>
<td>106.9264***</td>
<td>-224.9156***</td>
</tr>
<tr>
<td></td>
<td>[18.50]</td>
<td>[-5.38]</td>
</tr>
</tbody>
</table>

adj. Rsq | 0.2737 | 0.0489 |
F-value  | 100.80*** | 18.78*** |
No. of Obs. | 1,349,357 | 1,349,367 |

Table 6. Continued

(C) Aggregated information flows of other firms

<table>
<thead>
<tr>
<th>Dep. var.</th>
<th>Spread</th>
<th>Depth1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disclosure</td>
<td>-0.1738</td>
<td>-14.9831***</td>
</tr>
<tr>
<td></td>
<td>[-0.57]</td>
<td>[-3.17]</td>
</tr>
<tr>
<td>Press</td>
<td>2.8764***</td>
<td>37.5054***</td>
</tr>
<tr>
<td></td>
<td>[9.69]</td>
<td>[4.27]</td>
</tr>
<tr>
<td>Disclosure</td>
<td>0.0006</td>
<td>0.0144**</td>
</tr>
<tr>
<td></td>
<td>[0.81]</td>
<td>[2.06]</td>
</tr>
<tr>
<td>x All Disclosure</td>
<td>-0.0023***</td>
<td>-0.0183***</td>
</tr>
<tr>
<td></td>
<td>[-7.77]</td>
<td>[-3.24]</td>
</tr>
<tr>
<td>Press</td>
<td>0.0069***</td>
<td>-0.0041</td>
</tr>
<tr>
<td></td>
<td>[10.33]</td>
<td>[-1.00]</td>
</tr>
<tr>
<td>All Disclosure</td>
<td>-0.0033***</td>
<td>-0.0056</td>
</tr>
<tr>
<td></td>
<td>[-4.47]</td>
<td>[-1.05]</td>
</tr>
<tr>
<td>log(trade)</td>
<td>-4.0174***</td>
<td>-1.9461</td>
</tr>
<tr>
<td></td>
<td>[-13.17]</td>
<td>[-1.22]</td>
</tr>
<tr>
<td>log(price)</td>
<td>-2.9342***</td>
<td>23.7623***</td>
</tr>
<tr>
<td></td>
<td>[-5.76]</td>
<td>[6.07]</td>
</tr>
<tr>
<td>log(mcap)</td>
<td>-3.9378***</td>
<td>-1.2622</td>
</tr>
<tr>
<td></td>
<td>[-8.59]</td>
<td>[-0.41]</td>
</tr>
<tr>
<td>const.</td>
<td>107.4402***</td>
<td>-222.5036***</td>
</tr>
<tr>
<td></td>
<td>[18.54]</td>
<td>[-5.43]</td>
</tr>
</tbody>
</table>

adj. Rsq 0.2739 0.0485
F-value 90.52*** 17.56***
No. of Obs. 1,349,357 1,349,357

The results of time dummies (day-of-week and monthly indicators) are compressed. The t-values in square bracket are computed by the cluster-robust standard errors. ***, **, and * indicates the significance levels at 1%, 5% and 10% respectively. Spread: difference between best bid and best ask quote deflated by the midpoint of spread. Depth1: Total Yen value of best bid and ask quotes Disclosure: daily count of corporate disclosure. Press: daily count of newspaper articles. All disclosure: Total count of disclosure releases from the other companies at the same date except for the announcing company. All press: Total count of press articles about the other companies at the same date except for the announcing company.
Table 7. The spread components and alternative depth measure

<table>
<thead>
<tr>
<th>Model</th>
<th>Dep. var.</th>
<th>efficient spread</th>
<th>realized spread</th>
<th>adverse selection cost</th>
<th>depth5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[1]</td>
<td>[2]</td>
<td>[3]</td>
<td>[4]</td>
<td></td>
</tr>
<tr>
<td>Disclosure</td>
<td>0.6853***</td>
<td>-0.3802***</td>
<td>1.0852***</td>
<td>-25.9642***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[4.08]</td>
<td>[-3.08]</td>
<td>[10.47]</td>
<td>[-3.31]</td>
<td></td>
</tr>
<tr>
<td>Press</td>
<td>2.1813***</td>
<td>0.8778***</td>
<td>1.3080***</td>
<td>146.2575***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[10.15]</td>
<td>[9.54]</td>
<td>[9.43]</td>
<td>[4.41]</td>
<td></td>
</tr>
<tr>
<td>Disclosure *press</td>
<td>-0.5345***</td>
<td>-0.1341***</td>
<td>-0.4030***</td>
<td>-22.1684***</td>
<td></td>
</tr>
<tr>
<td>Log(trade)</td>
<td>-0.5036*</td>
<td>-1.4735***</td>
<td>0.8751***</td>
<td>-1.7996</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[-1.93]</td>
<td>[-11.65]</td>
<td>[4.64]</td>
<td>[-0.29]</td>
<td></td>
</tr>
<tr>
<td>Log(price)</td>
<td>-4.2598***</td>
<td>-2.0262***</td>
<td>-2.2366***</td>
<td>-9.1236</td>
<td></td>
</tr>
<tr>
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<td>[-8.97]</td>
<td>[-6.68]</td>
<td>[-11.04]</td>
<td>[-0.91]</td>
<td></td>
</tr>
<tr>
<td>Log(mcap)</td>
<td>-5.4735***</td>
<td>0.197</td>
<td>-5.5812***</td>
<td>107.8807***</td>
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</tr>
<tr>
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<td>[-11.44]</td>
<td>[0.89]</td>
<td>[-18.33]</td>
<td>[7.38]</td>
<td></td>
</tr>
<tr>
<td>Const.</td>
<td>113.1856***</td>
<td>20.6141***</td>
<td>92.1486***</td>
<td>-1.03e+03***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[19.40]</td>
<td>[7.03]</td>
<td>[29.38]</td>
<td>[-6.46]</td>
<td></td>
</tr>
<tr>
<td>Adj. R2</td>
<td>0.2829</td>
<td>0.0519</td>
<td>0.1632</td>
<td>0.1512</td>
<td></td>
</tr>
<tr>
<td>F-value</td>
<td>75.94***</td>
<td>61.48***</td>
<td>131.19***</td>
<td>18.31***</td>
<td></td>
</tr>
<tr>
<td>No. Of Obs.</td>
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<td>1,349,282</td>
<td>1,349,280</td>
<td>1,349,367</td>
<td></td>
</tr>
</tbody>
</table>

The results of time dummies (day-of-week and monthly indicators) are compressed. The t-values in square bracket are computed by the cluster-robust standard errors. ***, **, and * indicates the significance levels at 1%, 5% and 10% respectively.
Table 8. Regression results with fixed effect.

<table>
<thead>
<tr>
<th>Model</th>
<th>[1]</th>
<th>[2]</th>
<th>[3]</th>
<th>[4]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dep. Var.</td>
<td>Dep. Var.</td>
<td>Spread</td>
<td>Depth1</td>
<td>Depth1</td>
</tr>
<tr>
<td><strong>Disclosure</strong></td>
<td>0.6171***</td>
<td>0.7576***</td>
<td>-1.5429</td>
<td>-2.9727*</td>
</tr>
<tr>
<td></td>
<td>[10.19]</td>
<td>[9.58]</td>
<td>[-1.48]</td>
<td>[-1.79]</td>
</tr>
<tr>
<td><strong>Press</strong></td>
<td>0.1073***</td>
<td>0.1603***</td>
<td>3.9682**</td>
<td>3.4290*</td>
</tr>
<tr>
<td></td>
<td>[3.27]</td>
<td>[4.57]</td>
<td>[2.05]</td>
<td>[1.88]</td>
</tr>
<tr>
<td>Disclosure x press</td>
<td>-0.0981***</td>
<td>0.9977*</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[-5.01]</td>
<td>[1.85]</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Log(trade)</strong></td>
<td>-3.9788***</td>
<td>-3.9791***</td>
<td>-0.2643</td>
<td>-0.261</td>
</tr>
<tr>
<td></td>
<td>[-24.53]</td>
<td>[-24.54]</td>
<td>[-0.13]</td>
<td>[-0.13]</td>
</tr>
<tr>
<td><strong>Log(price)</strong></td>
<td>-0.8005</td>
<td>-0.7994</td>
<td>-16.4498</td>
<td>-16.4616</td>
</tr>
<tr>
<td></td>
<td>[-0.45]</td>
<td>[-0.45]</td>
<td>[-0.96]</td>
<td>[-0.96]</td>
</tr>
<tr>
<td><strong>Log(mcap)</strong></td>
<td>-10.698 ***</td>
<td>-10.7002 ***</td>
<td>43.6365*</td>
<td>43.6587*</td>
</tr>
<tr>
<td></td>
<td>[-6.02]</td>
<td>[-6.02]</td>
<td>[1.72]</td>
<td>[1.72]</td>
</tr>
<tr>
<td><strong>Const.</strong></td>
<td>169.9478 ***</td>
<td>169.9506 ***</td>
<td>-339.2920**</td>
<td>-339.3211**</td>
</tr>
<tr>
<td></td>
<td>[15.99]</td>
<td>[16.00]</td>
<td>[-2.19]</td>
<td>[-2.19]</td>
</tr>
<tr>
<td>Fixed effect</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Adj. Rsq</td>
<td>0.1014</td>
<td>0.1014</td>
<td>0.003</td>
<td>0.003</td>
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<td>81.10***</td>
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The results of time dummies (day-of-week and monthly indicators) are compressed. The t-values in square bracket are computed by the cluster-robust standard errors. ***, **, and * indicates the significance levels at 1%, 5% and 10% respectively.
EXTRAORDINARY LOSS EFFECTS ON MANAGEMENT FORECASTS: EVIDENCE FROM JAPANESE FIRMS

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ABSTRACT

Listed firms in Japan are mandated to provide management forecasts of earnings at the beginning of each fiscal year. Previous studies report that managers tend to provide optimistic forecasts and found systematic bias factors. The purpose of this study is to further investigate management bias by examining the effect of extraordinary losses on management forecasts. This study uses 26,087 firm-year samples of listed firms in Japan from 2003 to 2014. This paper found that managers, saddled with past extraordinary losses, provide optimistic management bias. Specifically, additional analysis find manager’s forecast behavior within a same fiscal year. The finding suggested managers initially expect a business recovery after recording an extraordinary loss, then provide overly optimistic forecasts, yet then revise their forecast downward for the same period, and finally fail to achieve their forecasted profits. This paper will contribute to the further understanding of management bias from an extraordinary loss view, a rarely-studied area of management bias.

Key Words: management forecasts, forecasts credibility, disclosure, extraordinary loss
1. Introduction

Unlike voluntary disclosure in the United States, listed firms in Japan are mandated to provide management forecasts of earnings (sales, ordinary income, ordinary profit, and net income) at the beginning of each fiscal year. Providing internal information to outsiders, such as institutional investors, individual investors, and financial analysts, management forecasts can help investors and analysts make their investment decisions. Indeed, management forecasts are widely recognized to yield useful information on corporate valuation (Gotoh and Sakurai, 1993; Ota, 2002). Moreover, management forecasts are much more accurate than consensus forecasts, The Institutional Broker’s Estimate System: I/B/E/S (Ota and Kondo, 2011). Nevertheless, the credibility of management forecasts is an important issue of management forecasts. Therefore, in “management forecasts” research, much attention has been paid to management bias: the difference between actual earnings and forecasted earnings.

Previous studies have advanced our understanding of the major factors in management bias. Otomasa and Enomoto (2007) and Gotoh (1997) reported managers provide optimistic forecasts. Additionally, Nishi and Kaneda (2009) found that since managers have a natural tendency to show a record of both continuing progress and financial stability, when faced with the financial distress, they regularly provide optimistic forecasts. Furthermore, Ota (2002, 2011) indicates that firm size, firm growth, financial distress, dividend forecasts, macroeconomic factors, and prior forecast error are all associated with management bias. In addition, Shimizu (2007) suggests that, because business environments and managers often will remain the same, institutionalized management bias can last for years. Since previous studies have focused mainly on these systematic management bias factors, little is known about how information-flow, i.e., profit and loss, affects management forecasts.

Because realized earnings play a large part in determining management forecasts, previous year’s profits and losses significantly affect these forecasts. The purpose of this study is to further investigate management bias by examining the effect of earning’s extraordinary losses on management forecasts. This research is important as management earnings’ forecasts are often the major, attested to corporate valuation variables for listed firms in Japan, therefore, knowledge of the management bias from the information-flow view perspective is important for investors, regulators, and policymakers. This paper will contribute to the further understanding of management bias from an information-flow basis, a rarely-studied area of management bias.

The reminder of the paper is organized as follows. In section 2, I develop a hypothesis, describe data sample and research methods. Section 3 discusses experimental results. Section 4 presents a summary and conclusion.

2. Methodology

2.1 Extraordinary loss and management forecasts

This paper investigates the impact of extraordinary losses on management bias. Management bias is defined as actual profit minus forecasts profit, scaled by forecasts profit\(^1\); positive signs (hereafter positive forecast bias) can signal either achieved forecasts profit or conservative forecasts, and negative signs can signal either unachieved forecasts profit or

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\(^1\) Shimizu (2007) is used as references. Another studies in Japan use total assets for scaled variable.
optimistic forecasts. Figure 1 presents the average management bias of sales, ordinary profit, and net income from 1997 to 2014. Although the average sale bias is close to zero, in contrast, the average biases of ordinary profit and net income are much volatile and negative, especially during the financial crisis of 2009. Among these three forecasts, net income has the largest, significant negative bias. What account for the striking difference between ordinary profit and net income? Extraordinary loss reflects this difference, whereby extraordinary loss refers to “extraordinary and large amount of losses” Even for managers, therefore, the difficulties to forecast extraordinary loss and its impact on profit loss is substantial. However, because extraordinary loss does not happen constantly, down-side risk (risk of profit reduction) is diminished after posting an extraordinary loss. For this reason, I hypothesize that managers, when faced with extraordinary losses, are able to estimate profit easily and do not provide optimistic forecast bias for the following fiscal period.

2.2 Hypothesis development

In this paper, I conjecture that managers, when faced with extraordinary loss, will provide positive management bias (do not provide optimistic forecasts) for the following fiscal periods. The reasons for the development of this hypothesis are as follows;

1) Business restructuring

Extraordinary loss includes losses such as the sale of plant assets and the extraordinary payment of retirement benefits. These costs are generated through business restructuring. In a volatile and competitive business environment, managers need to promote further restructuring to adopt external environment. Thus, extraordinary loss is taken as a result of business restructuring. For these reasons, firms who have recorded and experienced extraordinary losses often estimate profit recovery through the business restructuring (Elliot and Hanna, 1996; Ikeda et al, 2013; Kitagawa, 2013).

2) Managers’ conservative projection

Conservative managers precociously record losses which arise from negative net present values assets (property, plant, and equipment). Then managers will often expect profit recovery even after they record a large amount of losses. In contrast, because non-conservative managers do not subtract negative net present value assets, and who thus record a small amount of losses over multi-fiscal periods, will not improve profitability in the next fiscal period. (Frankel and Roychowdhury, 2008). Accordingly, this study proposes the hypothesis managers, saddled with past extraordinary losses, will provide positive management bias for the following fiscal period.

2.3 Data and variables

(1) Data, sampling

This investigation collected earnings forecasts and other financial data from Nekkei Financial Quest, a commercial database provided by Nihon Keizai Shinbun, the premier business newspaper publication in Japan. Sampling procedures are as follows. (1) using listed firms in Japan, (2) adopting the Japanese Accounting Standard, (3) using end of March account closing date, and (4) excluding financial industry, i.e., Banks, Insurances companies, and Security companies. Table 1 below shows sample date of each stock exchange’s market for years 2003-2014. Because variations in this sample over each stock exchange’s market and

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2 End of March fiscal year is the most common fiscal year end for firms in Japan.
3 Revised earnings forecasts data are available from 2003.
years were insignificant, sample selection did not affect empirical results\(^4\).

(2) Measures

This study considers management forecasts will have a positive bias when a manager is saddled with past extraordinary losses. Management bias is measured by forecasts error in Eq.(1):

\[ NI_{ERR_t} = (E_t - MF_t)/E_t \]  (1)

where \( NI_{ERR} \) represent management forecast error for firm; \( E \) represents actual earnings for the firm; \( MF \) represents earnings forecasts at the beginning of each fiscal year. A positive sign for \( NI_{ERR} \) implies that, on average, firms have a conservative bias (under-forecasting) while negative value for \( NI_{ERR} \) represents an optimistic bias (over-forecasting). This paper will also focus on management forecast processes such as Asano (2007). This study measured three disclosure patterns of forecasts within 1 fiscal year, which are \( NI_{INN} \), \( NI_{REVI} \), and \( NI_{SUR} \). These variables are defined in Table 2. If management predicts an increase in profit, then \( NI_{INN} \) is positive. \( NI_{REVI} \) refers to management corrective forecasts. When management makes a downward revision, \( NI_{REVI} \) shows negative value. \( NI_{SUR} \) is the difference between actual earnings and final management forecasts during the same period. When actual earning exceeds the final forecasts, \( NI_{SUR} \) is positive. Finally, to investigate directly how extraordinary loss affects forecasts by maintaining the impact of systematic bias factors, this paper included other management bias factors for the control variables, , from previous studies\(^6\). The control variables are defined in Table 2. Finally, other control variables are defined in table 2.

2.4 Model

This paper hypothesizes that managers, when saddled with past extraordinary losses, provide positive management bias for the following fiscal period. The model for test hypothesis 1 is as follows:

\[ NI_{ERR_{i,t+k}} = \alpha + \beta_1 EL_{i,t} + \beta_2 EP_{i,t} + \beta_3 \Delta ROS_{i,t} + \beta_4 LEVERAGE_{i,t} + \beta_5 \ln SIZE_{i,t} + \beta_6 \ln AGE_{i,t} + \varepsilon_{i,t} \]  (2)

A significantly positive coefficient of extraordinary loss (hereafter EL) indicate positive management bias for managers faced with past EL. Extraordinary profit and other variables are used to control management bias factors. To eliminate macro-shock, i.e, financial crisis, panel data was used to test hypothesis 1 with a fixed-effect model. In addition, to test forecast processes, process variables, i.e, \( NI_{INN} \), \( NI_{REVI} \), and \( NI_{SUR} \) were included as dependent variables in eq.(2)

\(^4\) After the financial crisis of 2009, the firm sample size declined, but using panel data analysis controls annual fluctuations.

\(^5\) These variables are scaled by total assets of the last fiscal year.

\(^6\) Control variables included Firm growth, financial distress, firm size, and firm age.
3. Results

3.1 Basic results

Table 5 presents empirical results for Eq. (2) regression. Although this investigation mainly focused on EL coefficients to be significantly positive, results were significantly negative (<1%) and disconfirmed hypothesis 1. Even when the other management bias factors are fixed, results suggest that managers saddled with past extraordinary losses provide optimistic management forecasts for the following fiscal period: coefficient of EL (-11.204) indicates that actual earnings, on average, were over -11% of management forecasts.

The reason for this unexpected result is as follows. First, extraordinary losses do not lead to profit recovery through business restructuring. In this case, management error would be negative due to actual earnings that do not exceed forecasted profit. Second, although firms improve their performances after recording EL, managers overestimate the profit recovery. As a result, managers initially expect business recovery for the following fiscal periods, provide overly optimistic forecasts, and yet actual earnings subsequently fail to achieve managements’ forecasted profit margins. To further test these explanations, this paper investigated how each forecast processes and profit growth (decline) affected management bias. Each forecast process and profit growth variable were included into the dependent variables of Eq. (2):

Tables 6 shows EL coefficients for each forecast process and profit growth was significant (>1%). This result implies that managers are overly optimistic in their forecast and expect business recovery at the beginning of the year (INN+1, 0.919), yet then revise their forecast downward for the same period (REV1+1, -0.087), and finally fail to achieve their forecasted profits. In addition, firms record an increase in profit (Growth+1, 0.761). The results from additional test were consistent with the second explanation above. Figure 2 represent the relationship between EL and forecast processes. Each box shows forecasts processes and the coefficient is in the parentheses parameters. The signs of EL coefficient indicate by arrows.

Consequently, managers’ initial optimistic forecasts are the reason for the negative relation between EL and management bias. Based on this result, 3.2 section presents an additional analysis.

3.2 Difference Magnitude of extraordinary losses differences

This section investigates whether management bias is affected the differences in the magnitude of EL. Eq. (3) is used to test this question, which include IN_INN and IN_INN·EL (Cross-term) to control the management bias. In addition, I use dummy variables for measure the magnitude of extraordinary losses.

\[ NI_{ERRi,t} = \alpha + \beta_1 NI_{INNi,t+1} + \beta_2 NI_{INNi,t+1} \cdot EL_{i,t} + \beta_3 EL_{i,t} + \beta_4 EP_{i,t} + \beta_5 \Delta ROS_{i,t} + \beta_6 LEVERAGE_{i,t} + \beta_7 \ln SIZE_{i,t} + \beta_8 \ln AGE_{i,t} + \varepsilon_{i,t} \]  

(3)

Previous studies note that firms experience business recovery when a large amount of extraordinary losses are recorded (Elliot and Hanna, 1996). To the contrary, non-conservative managers often record a small amount of losses over several fiscal periods so that firms do not improve profit immediately. For example Kitagawa (2013) uses an EL dummy, a ratio of EL to total assets below 1% as a proxy variable for Non-conservative managers. Following Kitagawa’s example, this investigation uses dummy variables, EL 0.01 (1%) for
Empirical results are shown in Table 7. The (1) column represents EL 0.01 results and the (2) column represents EL 0.03 results. The EL coefficient is all positive, however, EL 0.03 is only significantly positive: 1% without the year-effect; 10% for including year-effect. These results suggest that only a large amount of EL affects management bias in a positive way. This empirical results further shows that since (1) EL 0.01 was not significant for non-conservative managers, these firms with non-conservative managers, as opposed to firms with conservative managers, did not experience business recovery during the following fiscal period. This results support Elliot and Hanna (1996) as I stated above.

4. Conclusion

This study investigated how extraordinary loss affects management bias, and found that managers, saddled with past extraordinary losses, provide optimistic management bias for the following fiscal period. This result is disproved to my hypothesis, yet additional analysis attested to extraordinary loss being associated with optimistic management bias. Specifically, finding suggested that managers initially expect a business recovery for the following fiscal year, then provide overly optimistic forecasts, yet then revise their forecast downward for the same period, and finally fail to achieve their forecasted profits. On the other hand, as Kitagawa (2013) noted, most analysts provide pessimistic (conservative) forecasts for firms with past extraordinary losses and do not reflect the impact of extraordinary losses on business recovery in their forecasts. Therefore, when extraordinary losses are present, managers and analysts exhibit contradictory biases.

Figure 3 shows an example of managers’ and analysts’ contradictory earnings forecasts. When firms both report 100 billion yen earnings for the prior period and also record extraordinary losses, managers will provide a 200 billion yen earnings forecasts for the following fiscal period. Analysts, however, provide 80 billion yen earnings forecast for the following fiscal period. Indeed, while managers will exaggerate profit after recording extraordinary losses, their firm’s actual earnings will be adjusted to 150 billion yen.

Thus, should investors rely on managers’ or analysts’ forecasts? Future research will focus on how investors’ decisions are affected differently by managers’ and analysts’ forecasts.

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7 EL 0.01 is 35% and EL 0.03 is 15% in all samples.
8 Figure 3 values represent the author’s explanatory results and not actual empirical results.
REFERENCES


### Table 1: Firm sample data

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<th>2nd section of the TSE</th>
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<td>2014</td>
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9 Tokyo Stock Exchange
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<th>Variables</th>
<th>Meanings</th>
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<td>NI_ERR</td>
<td>Forecasts error</td>
<td>$(E_t - MF_t) / E_t</td>
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<td>NI_INN</td>
<td>Innovation</td>
<td>$(MF_t - E_{t-1}) / TA_{t-1}$</td>
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<td>NI_REVI</td>
<td>Revision</td>
<td>$(MF_{t, Q3} - MF_t) / TA_{t-1}$</td>
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<td>NI_SUR</td>
<td>Surprise</td>
<td>$(E_t - MF_{t, Q3}) / TA_{t-1}$</td>
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<tr>
<td>NI_ACC</td>
<td>Forecast accuracy</td>
<td>$(</td>
</tr>
<tr>
<td>NI_GROW</td>
<td>Increase (decline) profit</td>
<td>$(E_t - E_{t-1}) / E_{t-1}$</td>
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<td>EL</td>
<td>Extraordinary loss</td>
<td>Extraordinary loss / Total Assets</td>
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<tr>
<td>EP</td>
<td>Extraordinary profit</td>
<td>Extraordinary loss / Total Assets</td>
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<td>Leverage</td>
<td>Financial distress</td>
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<td>ln (Age)</td>
<td>Firm Age</td>
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Table 3: Descriptive statistics (N=26,087)

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<th>S.D</th>
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<th>Median</th>
<th>3Q</th>
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<td>0.002</td>
<td>0.023</td>
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Table 4: Correlation (N=26,087)

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<td>0.117</td>
<td>-0.072</td>
<td>-0.104</td>
<td>0.067</td>
<td>0.009</td>
<td>0.153</td>
<td>0.108</td>
<td>0.001</td>
<td>0.142</td>
<td>0.132</td>
</tr>
<tr>
<td>11</td>
<td>ln (Size)</td>
<td>0.137</td>
<td>-0.194</td>
<td>0.152</td>
<td>0.109</td>
<td>-0.229</td>
<td>-0.012</td>
<td>-0.048</td>
<td>0.022</td>
<td>-0.005</td>
<td>0.116</td>
<td>0.375</td>
</tr>
<tr>
<td>12</td>
<td>ln (age)</td>
<td>0.062</td>
<td>-0.173</td>
<td>0.114</td>
<td>0.084</td>
<td>-0.202</td>
<td>-0.024</td>
<td>-0.090</td>
<td>-0.001</td>
<td>-0.140</td>
<td>0.037</td>
<td>0.330</td>
</tr>
</tbody>
</table>

Spearman's rank-correlation coefficient is above; Pearson's product-moment correlation coefficient is below
Table 5: NI_ERR Regression Results

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>NI_ERR_{t+1}</th>
<th>NI_ERR_{t+2}</th>
<th>NI_ERR_{t+3}</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL</td>
<td>-11.204</td>
<td>-9.342</td>
<td>-8.418</td>
</tr>
<tr>
<td></td>
<td>[1.642]***</td>
<td>[1.663]***</td>
<td>[1.597]***</td>
</tr>
<tr>
<td>EP</td>
<td>-6.326</td>
<td>-6.696</td>
<td>-4.000</td>
</tr>
<tr>
<td></td>
<td>[2.033]***</td>
<td>[2.170]***</td>
<td>[2.134]*</td>
</tr>
<tr>
<td>ROS</td>
<td>19.518</td>
<td>8.225</td>
<td>8.642</td>
</tr>
<tr>
<td></td>
<td>[1.686]***</td>
<td>[1.805]***</td>
<td>[1.907]***</td>
</tr>
<tr>
<td>leverage</td>
<td>-0.081</td>
<td>-0.047</td>
<td>-0.025</td>
</tr>
<tr>
<td></td>
<td>[0.011]***</td>
<td>[0.011]***</td>
<td>[0.012]**</td>
</tr>
<tr>
<td>ln(size)</td>
<td>0.166</td>
<td>0.154</td>
<td>0.145</td>
</tr>
<tr>
<td></td>
<td>[0.013]***</td>
<td>[0.015]***</td>
<td>[0.016]***</td>
</tr>
<tr>
<td>ln(age)</td>
<td>0.218</td>
<td>0.190</td>
<td>0.135</td>
</tr>
<tr>
<td></td>
<td>[0.044]***</td>
<td>[0.048]***</td>
<td>[0.051]***</td>
</tr>
<tr>
<td>Intercept</td>
<td>-2.587</td>
<td>-2.448</td>
<td>-2.273</td>
</tr>
<tr>
<td></td>
<td>[0.209]***</td>
<td>[0.229]***</td>
<td>[0.234]***</td>
</tr>
<tr>
<td>Industry</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Year</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Adj-R(^2)</td>
<td>0.072</td>
<td>0.056</td>
<td>0.050</td>
</tr>
<tr>
<td>N</td>
<td>23166</td>
<td>20376</td>
<td>17725</td>
</tr>
</tbody>
</table>

Note: *** p<0.01, ** p<0.05, * p<0.1.

Note: Parentheses article parameter indicates Robust standard errors.
### Table 6: Forecasts Processes Regression Results

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>INN_{+1}</th>
<th>REVI_{+1}</th>
<th>SUR_{+1}</th>
<th>Growth_{+1}</th>
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</thead>
<tbody>
<tr>
<td>EL</td>
<td>0.919</td>
<td>-0.087</td>
<td>-0.067</td>
<td>0.761</td>
</tr>
<tr>
<td></td>
<td>[0.017]***</td>
<td>[0.013]***</td>
<td>[0.010]***</td>
<td>[0.022]***</td>
</tr>
<tr>
<td>EP</td>
<td>-0.613</td>
<td>-0.039</td>
<td>-0.012</td>
<td>-0.757</td>
</tr>
<tr>
<td></td>
<td>[0.024]***</td>
<td>[0.018]**</td>
<td>[0.013]</td>
<td>[0.032]***</td>
</tr>
<tr>
<td>ROS</td>
<td>-0.428</td>
<td>0.091</td>
<td>0.047</td>
<td>-0.290</td>
</tr>
<tr>
<td></td>
<td>[0.021]***</td>
<td>[0.015]***</td>
<td>[0.011]***</td>
<td>[0.026]***</td>
</tr>
<tr>
<td>leverage</td>
<td>0.001</td>
<td>0.000</td>
<td>0.000</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>[0.000]***</td>
<td>[0.000]</td>
<td>[0.000]***</td>
<td>[0.000]***</td>
</tr>
<tr>
<td>ln(size)</td>
<td>-0.002</td>
<td>0.001</td>
<td>0.001</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>[0.000]***</td>
<td>[0.000]***</td>
<td>[0.000]***</td>
<td>[0.000]**</td>
</tr>
<tr>
<td>ln(age)</td>
<td>-0.006</td>
<td>0.003</td>
<td>0.002</td>
<td>-0.001</td>
</tr>
<tr>
<td></td>
<td>[0.001]***</td>
<td>[0.000]***</td>
<td>[0.000]***</td>
<td>[0.001]</td>
</tr>
<tr>
<td>Intercept</td>
<td>0.050</td>
<td>-0.027</td>
<td>-0.012</td>
<td>0.007</td>
</tr>
<tr>
<td></td>
<td>[0.002]***</td>
<td>[0.002]***</td>
<td>[0.001]***</td>
<td>[0.003]**</td>
</tr>
<tr>
<td>Industry</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Year</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Adj-R^2</td>
<td>0.383</td>
<td>0.118</td>
<td>0.047</td>
<td>0.200</td>
</tr>
<tr>
<td>N</td>
<td>23166</td>
<td>23166</td>
<td>23166</td>
<td>23166</td>
</tr>
</tbody>
</table>

Note: *** p<0.01, ** p<0.05, * p<0.1.

Note: Parentheses article parameter indicates Robust standard errors.
Table 7: NI_ERR (EL 1%, 3%) Regression Results

<table>
<thead>
<tr>
<th></th>
<th>(1) EL 0.01</th>
<th></th>
<th>(2) EL 0.03</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[1.562]***</td>
<td>[1.563]***</td>
<td>[1.302]***</td>
<td>[1.294]***</td>
</tr>
<tr>
<td>EL</td>
<td>0.049</td>
<td>0.013</td>
<td>0.211</td>
<td>0.154</td>
</tr>
<tr>
<td></td>
<td>[0.035]</td>
<td>[0.035]</td>
<td>[0.081]***</td>
<td>[0.080]*</td>
</tr>
<tr>
<td>NI_INN_{t+1}×EL</td>
<td>-1.488</td>
<td>-0.437</td>
<td>-1.963</td>
<td>-0.635</td>
</tr>
<tr>
<td></td>
<td>[1.961]</td>
<td>[1.966]</td>
<td>[2.087]</td>
<td>[2.074]</td>
</tr>
<tr>
<td></td>
<td>[2.113]***</td>
<td>[2.064]***</td>
<td>[2.139]***</td>
<td>[2.100]***</td>
</tr>
<tr>
<td>ROS</td>
<td>10.298</td>
<td>13.137</td>
<td>10.224</td>
<td>12.997</td>
</tr>
<tr>
<td></td>
<td>[1.535]***</td>
<td>[1.566]***</td>
<td>[1.534]***</td>
<td>[1.565]***</td>
</tr>
<tr>
<td>leverage</td>
<td>-0.058</td>
<td>-0.063</td>
<td>-0.058</td>
<td>-0.063</td>
</tr>
<tr>
<td></td>
<td>[0.011]***</td>
<td>[0.011]***</td>
<td>[0.011]***</td>
<td>[0.011]***</td>
</tr>
<tr>
<td>ln(size)</td>
<td>0.124</td>
<td>0.129</td>
<td>0.125</td>
<td>0.129</td>
</tr>
<tr>
<td></td>
<td>[0.011]***</td>
<td>[0.012]***</td>
<td>[0.012]***</td>
<td>[0.012]***</td>
</tr>
<tr>
<td>ln(age)</td>
<td>0.140</td>
<td>0.126</td>
<td>0.140</td>
<td>0.126</td>
</tr>
<tr>
<td></td>
<td>[0.040]***</td>
<td>[0.040]***</td>
<td>[0.040]***</td>
<td>[0.040]***</td>
</tr>
<tr>
<td>Intercept</td>
<td>-2.099</td>
<td>-1.803</td>
<td>-2.100</td>
<td>-1.806</td>
</tr>
<tr>
<td></td>
<td>[0.181]***</td>
<td>[0.182]***</td>
<td>[0.182]***</td>
<td>[0.183]***</td>
</tr>
<tr>
<td>Industry</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Year</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Adj-R^2</td>
<td>0.063</td>
<td>0.095</td>
<td>0.063</td>
<td>0.095</td>
</tr>
<tr>
<td>N</td>
<td>23166</td>
<td>23166</td>
<td>23166</td>
<td>23166</td>
</tr>
</tbody>
</table>

Note: *** p<0.01, ** p<0.05, * p<0.1.

Note: Parentheses article parameter indicates Robust standard errors.
Figure 1: Management bias (1997-2014)

Figure 2: Management forecasts processes

Figure 3: Managers’ and analysts’ forecasts
This paper demonstrates how accounting researchers can operationalize unobservable (and thus unmeasurable) concepts (e.g., management’s intention) into statistical analysis as latent variable(s) using structural equation model (SEM). By re-examining a resent oft-cited article, we demonstrate alternative causal models that are at least as well supported by the data. One distinct feature of using SEM in re-examination is that it can be performed using only the variance-covariance matrix of the original paper.

*Keywords:* Structural Equation Model(SEM), latent variable, real earnings management
INCORPORATING UNOBSERVABLE CONSTRUCTS INTO STATISTICAL ANALYSIS BY USING STRUCTURAL EQUATION MODELS

1. Introduction

This paper is the first part of our study that attempts to demonstrate how accounting researchers can use structural equation model (hereafter SEM) to improve the robustness of their research. This paper, in particular, demonstrate how one can use SEM to incorporate unobservable constructs into empirical analysis. The second part of our project (reference omitted) will demonstrate how one can use SEM in accommodating endogeneity problems between correlated variables, often called ‘controls,’ in statistical analyses.

In accounting research, researchers often need to operationalize certain unobservable constructs, such as management’s intention and earnings management, while conducting statistical analyses. A typical approach to deal with such unobservable concepts and behaviors is to employ ‘proxy’ variables that are assumed to be closely related to the concepts/behaviors of interest.

For example a researcher might hypothesize that managers manage earnings upward (behavior) to avoid violating debt covenants and credit default (concept). In order to test this hypothesis, the researcher needs to measure both the amount of managed earnings and the firm’s closeness to violating debt covenants.

Since both are directly unobservable, the researcher needs to use observable and measurable variables to conduct empirical analysis. She might use some variants of Jones model to estimate discretionary accruals as the proxy of managed earnings amount and use debt-to-equity ratio to proxy for the closeness to violating debt covenants. Then she conducts statistical analysis using these proxies. In addition, she is likely to add several other variables to the statistical model hoping adding such variables results in satisfying ceteris paribus condition.

The above description of a typical accounting research raises three concerns. The first is how the observed explanatory variables used in the analysis and the concepts they are assumed to proxy are related. The second is whether the (possible) causal relationship being hypothesized are reflected in the relationship between observed variables. The third is how the (observed) dependent variable used in the analysis and the behavior it is assumed to measure are related.

This paper tries to demonstrate how the first and third issues can be examined and eased by using SEM. In SEM, one can introduce unobserved variables (latent variables) into statistical models and we believe this is a significant benefit over other statistical procedures used in the extant accounting literature.

Our companion paper (Obinata & Yaekura, 2015) deals with the second issue above. The focus there is the possible endogeneity between variables and how SEM can introduce multiple causal links among variables, which we also believe is the significant benefit of SEM.

Another practical benefit of SEM that we introduce in this study is that certain SEM
procedures require merely the means and variance-covariance matrix or correlation matrix of
the variables used. This special feature of SEM allows those researchers who do not have
access to the original data set can reproduce and re-examine extant study as long as the
abovementioned statistics is provided in the original study.

We do not intend to argue that SEM can always arrive at a better model specification,
rather we would like to remind our colleagues that we can use a powerful tool whose capability
is yet to be fully appreciated in our literature.

The remainder of this paper is organized as follows. Section 2 will briefly describe
SEM and survey its use in the literature. Section 3 will demonstrate how one can utilize SEM
by re-examining one of the well-cited study, namely Roychowdhury (2006). Section 4
provides concluding remarks.

2. Structural Equation Model(SEM)

2.1. Quick overview of SEM
Here we provide a brief description of SEM. For further details, there are many excellent
textbooks including Kline (2010) and Schumacker & Lomax (2010). There are also
numerous resources available on the internet.

SEM combines two types of models. The first is called measurement models. This model
is used to estimate the relationship between the observed variables and unobserved (latent)
variables. For example, while one cannot directly observe the firm’s closeness to violating
debt covenants, one might conjecture the closeness is reflected in such observable variables as
debt-to-equity ratio and current ratio.

The second is the structural model, which depicts the relationships between the variables
of interest by the researcher. The variables here can be observed variables and latent
variable as estimated in the measurement model. For example, one might expect the
closeness measured above to increase the managers’ incentive to manipulate earnings (likely
another latent variable).

The key feature of SEM is to estimate these two models simultaneously, which enables us
to incorporate multiple, recursive, and reciprocal relationship between variables. In addition,
SEM allows variables to be measured with errors. Both of these features are not allowed in
OLS and other regression models. The earlier feature of SEM is what we are going to utilize
in our companion paper that deals with endogeneity problem.

In order to estimate the whole model, SEM uses the variance and covariance of variables in
the model. This leads to another practical benefit of SEM, that is one can perform SEM
analysis without the original data set as long as the variance-covariance matrix is provided.
This unique feature of SEM is what we will entertain in this paper.

2.2. SEM in the accounting literature
Examples of the usage of SEM in accounting literature are found in other areas than
financial accounting, i.e., managerial (Lambert & Larcker, 1987; Leker & Salomo, 2000;
Cormier & Magnan, 2007; Chenhall, 2007), behavioral (Benford & Hunton, 2000; Baines & Langfield-Smith, 2003; Chong & Chong, 2002; Parker & Kohlmeyer, 2005; Poznanski & Bline, 1997; Sweeney & Summers, 2002; Viator, 2001), and education (Smith et al., 2002). Smith & Langfield-Smith (2004) provides an excellent assessment of SEM as an alternative tool to OLS and path analysis in managerial accounting research.

These examples, although not frequent, perhaps reflect the fact that the neighborhood disciple to these studies, especially psychology and organizational studies, are more receptive to the use of SEM.

On the other hand, the use of SEM in archival-financial area of accounting literature is very rare, similar to the state in its neighborhood, empirical finance literature. We could identify only two published articles, Ziebart (1987) and Catanach (2000) that use SEM in this area.

Ziebart (1987) studied simultaneously how the stock market reacted to the issuance of annual financial statements. He combined the price-based analysis and volume-based analysis into one structure that allows each to affect the other. Further, he introduced four latent variables (called ’dimensions’ in his study) that are measured by using financial ratios that are expected to be affected by the dimensions. He simultaneously estimated the four dimensions and the effect of four dimensions on abnormal price and volume changes.

Catanach (2000) examined whether operating cash flows (OCF) information helps to assess the degree of financial distress of financial institutions (among other research questions). He introduced three latent variables that represent credit risk, liquidity risk, and interest-rate risk, each estimated by financial ratios. For the structural estimate, he evaluated the association between latent variables and observed OCF, finding that credit risk an interest-rate risk are both negatively correlated to OCF.

Both of these studies, in our opinion, demonstrated the possibility that SEM can widen our understandings. Probably due to SEM’s exploratory nature being considered unacceptable, however, the use of SEM in financial archival area has been very scarce. In the followings of this paper, we will make a more modest proposal, which is to utilize SEM in testing the robustness of research findings rather than establishing new theories solely relying on SEM.


3.1. Overview of Roychowdhury (2006) Study

Roychowdhury (2006) examined whether managers manipulate real business activities to avoid reporting annual losses. Examples of such otherwise unnecessary business activities include price discounts to temporary increase sales and overproduction to reduce cost of goods sold, and reduction of discretionary expenditures.

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We have found two papers that deal with issues on the border of accounting and finance literature, i.e., corporate capital structure. Both Titman & Wessels (1988) and Chang et al. (2009) consider themselves finance research and the latter calls for more use of SEM in the finance literature.
This paper draws a lot of attention in the literature and is being cited very frequently (Chi et al., 2011; Ge & Kim, 2014a; Hong et al., 2014; Kim & Park, 2014; Kim et al., 2012; Lee, 2011; Liu, 2014; McGuire et al., 2011; Zang, 2011). These papers use the identification of real earnings management proposed in Roychowdhury (2006) to answer to various accounting questions. Thus we believe close examination of Roychowdhury (2006) is fully warranted.

Roychowdhury (2006) decomposes income before extraordinary items (hereafter ibei) into cash flow from operations (hereafter cfo) and accruals (hereafter accruals). Both cfo and accruals contain abnormal components (hereafter abn cfo and abn accruals, respectively). Finally, abnormal production (hereafter abn prod) and abnormal discretionary expenditure (hereafter abn disexp), the device of real earnings management, are assumed to result in abn cfo. Figure 1 visualizes the above setting.

Roychowdhury (2006) claims evidence that is consistent with the hypotheses that managers manipulate real activities to avoid reporting annual losses.


We find the basic setting summarized in the above subsection is counterintuitive for the following two reasons. First, in his setting, earnings management through manipulating accruals and real earnings management are treated as mutually exclusive. Second, abn prod and abn disexp are assumed to affect only cash flows, not accruals.

We re-estimated the model described in Figure 1 using SEM. We used the correlation table provided as Table 3 in Roychowdhury (2006) and used summary statistics data (ssd) feature, available in Stata version 13. The result of the re-estimation is in Table 1.

In Table 1, we observe the coefficient on abn prod is negative. This suggests that overproduction leads to reduction of earnings, contradicting to the conjecture in Roychowdhury (2006). We also estimated the same structure, but using total production (prod) and total discretionary expenditure (disexp) and obtained Table 2. The coefficient on prod is negative again.

The above rather parsimonious re-estimation using correlation table demonstrates the possibility that SEM can provide deeper insights that OLS and its variants cannot offer.

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2 For the definition of variables, see Appendix A. of Roychowdhury (2006).
3 Stata uses maximum likelihood estimation under ssd. We set the number of iteration to 16,000, which is the maximum allowed in Stata. Some of our estimation converged before we reached 16,000th iteration and others did not, however, the latter became stable in term of the coefficients estimated.
4 Since the (1) correlation between abn cfo and prod and (2) correlation between abn cfo and disexp happen to be identical (-0.10), estimated coefficients are also identical.
Now we proceed to examine the model further. Since we are not convinced that (abnormal) productions and discretionary expenditures only affect (abnormal) cash flows, we apply SEM allowing productions and expenditures affect both on accruals and cash flows. The model we estimate takes the form of Figure 2. Notice there are two arrows drawn from both abn prod and abn disexp. This is one of the unique feature of SEM that is not possible under OLS.

The result of estimation is in Tables 3 and 4.

The result demonstrates the benefit of SEM analysis. It shows that both abn prod and abn disexp are related to both abn cfo and abn accruals. Therefore, the assumption in Roychowdhury (2006), that abn prod and abn disexp only affect cash flows, is not warranted.

Furthermore, we find the sign of the estimated coefficient on abn prod is negative, which means when managers produce more than otherwise necessary amounts, earnings goes down. This finding suggests that abn prod is not an appropriate proxy for real earnings management.

Now we introduce latent variable into our analysis. The latent variable REM stands for real earnings management. We assume this REM variable reflects manager’s inventive to manage real earnings. We also allow such management’s incentive to be associated with the appearance of abnormal activities, reflected in abn cfo, abn prod, and abn disexp. Figure 3 visualizes our new model. Note the arrows from REM is directed to both earnings (ibe) and abnormal activities.

The result of estimation is in Tables 5.

First of all, both abn accruals and REM have significantly positive coefficients. This is consistent with the hypothesis that managers manage earnings through accruals management and real management. These two complement each other and are not mutually exclusive. Since abn accruals and REM are significantly positively correlated, they tend to occur simultaneously.

Second, when managers have an incentive to use (income increasing) real earnings management, one observes that abn cfo and abn disexp decrease while abn prod increases. Since decrease in abn cfo means lower earnings, contrary to the argument of Roychowdhury (2006), lower abn cfo does not imply income increasing earnings.
management. Note we do not argue that REM causes the change in cash flows and others. Rather we are merely demonstrating their positive/negative co-movements with REM.

Further, relatively low $R^2$ suggests that the relationship between REM and abn prod is much weaker compared to the other two abnormal variables.

Overall, the above analyses demonstrated that SEM allowed us to re-examine the extant study without accessing the original data. Our result suggests there are unsolved issues around the way we measure real earnings management, which makes us wonder whether the inferences drawn by using Roychowdhury (2006) are indeed valid.

4. Discussion and Conclusion

In this study, we pointed out that SEM allows researchers to reproduce original studies by using variance-covariance matrix or correlation matrix. Furthermore, these matrices can be used to estimate different structure between the variables used in the original study. All these can be done without using the raw data.

This feature of SEM is of significant practical merit since it is often very difficult to exactly reproduce an empirical analysis and/or to compare alternative models even with the same dataset.

Other advantages of SEM include that it allows us to introduce unobservable (latent) variables into model structure.

This feature is also important for accounting researchers since we are often faced with unobservable constructs such as management’s incentives.

To demonstrate the above advantage of SEM, we applied SEM to the variance-covariance matrix provided in Roychowdhury (2006). We showed that some of the variables used in the original study behave contrary to the conjecture of the original paper. By adding latent variable (REM) into the model structure, we demonstrated that both accrual management and real earnings management complement each other for income increasing/decreasing purpose. These findings are more robust than the findings of the original paper.

On the other hand, what we have not done in this paper is to propose the true model of (real) earnings management. What we have done instead is to propose an alternative model that appears to be closer to the truth than the extant model. What we propose in this paper is to improve the robustness of findings by using SEM to test possible alternative models before choosing one.

Although there are many proposed tests of fits for SEM, there is no single procedure that chooses the best model in absolute sense. This is no different from what we encounter when we run OLS’s. Before such procedure is established, we have no other choice but to mix our knowledge of the subject and of statistical methods when we attempt to choose the best model among alternatives.
Last, but not the least, we would like to argue that all empirical researchers\(^5\), experimental or archival, should be written and published with variance-covariance matrix and/or correlation matrix. We believe this will enable us to produce more robust research outputs and help advancing our knowledge of accounting.

\(^5\)We fear that, by writing this paper, researchers become reluctant to provide the matrices. In such a case, we hope academic journals to establish editorial policy that demands publication of the matrices,
REFERENCE


Hosei University.


Figure 1: Setting of Roychowdhury(2006) Study

Figure 2: Multiple effects of it abn prod and \textit{abn disexp}
Figure 3: Both abnormal accruals and REM affect earnings.

<table>
<thead>
<tr>
<th>Dep. var. = ibei</th>
<th>Direct Effect</th>
<th>Total Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coef.</td>
<td>z-value</td>
</tr>
<tr>
<td>abn_cfo</td>
<td>0.8309***</td>
<td>1,773.89</td>
</tr>
<tr>
<td>abn_accruals</td>
<td>0.7112***</td>
<td>1,518.43</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>0.9962</td>
<td></td>
</tr>
<tr>
<td>dep. var. = abn_cfo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>abn_prod</td>
<td>-0.5269***</td>
<td>-66.30</td>
</tr>
<tr>
<td>abn_disexp</td>
<td>-0.3920***</td>
<td>-49.32</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>0.1711</td>
<td>0.9925 (overall)</td>
</tr>
</tbody>
</table>

Table 1: Estimation Result of Figure 1 using SEM
All the variables used are taken from Table 3 in Roychowdhury (2006). The sample size id 21,758 firm-years.
Table 2: Estimation Result of Figure 1 using SEM, with Total Numbers

<table>
<thead>
<tr>
<th></th>
<th>Direct Effect</th>
<th>Total Effect</th>
</tr>
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<tbody>
<tr>
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<tr>
<td>cfo</td>
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<td>1,773.89</td>
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<tr>
<td>accruals</td>
<td>0.7112***</td>
<td>1,518.43</td>
</tr>
<tr>
<td>( R^2 )</td>
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<td>prod</td>
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<tr>
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</tr>
<tr>
<td>( R^2 )</td>
<td>0.0338</td>
<td>0.9912 (overall)</td>
</tr>
</tbody>
</table>

Table 3: Estimation Result of Figure 2 using SEM

<table>
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<tr>
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</tr>
</thead>
<tbody>
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<td>Coef.</td>
<td>z-value</td>
</tr>
<tr>
<td>dep. var. = ibei</td>
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<td></td>
</tr>
<tr>
<td>abn_cfo</td>
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<td>117.78</td>
</tr>
<tr>
<td>abn_accruals</td>
<td>0.5477***</td>
<td>111.13</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>0.5704</td>
<td></td>
</tr>
<tr>
<td>dep. var. = prod</td>
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<td></td>
</tr>
<tr>
<td>disexp</td>
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<td>-12.79</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>0.0174</td>
<td>0.3845 (overall)</td>
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<table>
<thead>
<tr>
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</tr>
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<tbody>
<tr>
<td></td>
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<td>z-value</td>
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<td>dep. var. = abn_cfo</td>
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</tr>
<tr>
<td>abn_accruals</td>
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<tr>
<td>abn_prod</td>
<td>-0.4757***</td>
<td>-75.08</td>
</tr>
<tr>
<td>abn_disexp</td>
<td>-0.4586***</td>
<td>-75.05</td>
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<td>( R^2 )</td>
<td>0.5704</td>
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<td>dep. var. = abn_prod</td>
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<td>dep. var. = abn_disexp</td>
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<tr>
<td>( R^2 )</td>
<td>0.0147</td>
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<tr>
<td></td>
<td>Direct Effect</td>
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<tr>
<td>------------------</td>
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<td>------------------</td>
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<td></td>
<td>Coef.</td>
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<tr>
<td>dep. var. = ibei</td>
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<td></td>
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<tr>
<td>cfo</td>
<td>0.8309***</td>
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</tr>
<tr>
<td>accruals</td>
<td>0.7113***</td>
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<tr>
<td>abn_prod</td>
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<tr>
<td>abn_disexp</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>R²</td>
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</tr>
<tr>
<td>dep. var. = cfo</td>
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<td></td>
</tr>
<tr>
<td>abn_prod</td>
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<td>-66.30</td>
</tr>
<tr>
<td>abn_disexp</td>
<td>-0.3920***</td>
<td>-49.32</td>
</tr>
<tr>
<td></td>
<td>R²</td>
<td>0.1711</td>
</tr>
<tr>
<td>dep. var. =</td>
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<td></td>
</tr>
<tr>
<td>abn_prod</td>
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<tr>
<td>abn_disexp</td>
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</tr>
<tr>
<td></td>
<td>R²</td>
<td>0.0016</td>
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Table 4: Estimation Result of Figure 2 using SEM, with Total Numbers

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
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<td>33.07</td>
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<tr>
<td>REM</td>
<td>0.4311***</td>
<td>101.57</td>
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<tr>
<td></td>
<td>R²</td>
<td>0.3441</td>
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</table>

<table>
<thead>
<tr>
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<th>z-value</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
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<td>abn_prod</td>
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<tr>
<td>abn_disexp</td>
<td>-0.3518***</td>
<td>-13.92</td>
<td>0.1238</td>
</tr>
</tbody>
</table>

Table 5: Estimation Result of Figure 3 using SEM
CAUSAL EFFECTS OF QUARTERLY REPORTING – AN ANALYSIS OF BENEFITS AND COSTS

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ABSTRACT

We exploit a quasi-natural experiment to analyze the causal effects of mandatory quarterly reporting in Singapore: While firms with a market capitalization above S$75 million had to publish quarterly financial statements starting in 2003, firms with a market capitalization below this threshold were excluded from the regulation. By isolating the causal effect of quarterly reporting using regression discontinuity analysis, we provide evidence on the benefits and costs of mandatory quarterly reporting. We find that mandatory quarterly reporting does not reduce information asymmetry, but causes firms to deviate from their prior investment strategy. On net, mandatory quarterly reporting imposes a burden on firms as perceived by the market’s valuation. Implications for regulators are discussed.

Key words: Quarterly reporting, benefits and costs, regression discontinuity
JEL classification: M41, M48

1 We gratefully appreciate the provision of data from the Singapore Exchange (SGX). We thank Maximilian Muhn and Simon Rottke for helpful comments and suggestions. All remaining errors are ours.
1. Introduction

The frequency of financial reporting is an important policy question that concerns accounting regulators worldwide. However, there is no consensus among regulators whether yearly, semi-annually or quarterly financial reporting maximizes social welfare. In the United States, for instance, the interim reporting frequency has developed from yearly to semi-annually and finally to quarterly reporting. In contrast, the European Union has just abolished quarterly interim management statements. Still, some European countries and stock exchanges enforce stricter regulations and exceed the EU requirements by mandating quarterly reporting. Policy makers in Japan, Hong Kong and Singapore have faced strong criticism following the proposal to mandate quarterly reporting (Bhojraj and Libby 2005). Subsequently, only Japan mandated quarterly reports for all listed firms while Hong Kong maintained semi-annually reporting and Singapore adopted a mixed approach. The divergent regulations suggest a strong disagreement on the benefits and costs of mandatory quarterly reporting.

Proponents of a higher reporting frequency argue that annual reports alone cannot fulfill investors’ demand for timely information. Therefore, interim financial reports are particularly important since they cover shorter and more frequent reporting intervals and are still subject to the requirements of accounting standards. Hence, more frequent reporting helps investors and financial intermediaries to assess a firm’s performance more timely.

By contrast, shorter reporting intervals cause criticism among regulators, firms, and academics. Opponents of more frequent disclosure argue that it may cause the management to behave myopically by making short-term investments to report numbers in interim reports that are more attractive to investors (e.g., Gigler et al. 2014). For instance, in 2009, the Anglo-Dutch consumer goods company Unilever abandoned quarterly reporting and switched to semi-annual reporting. Chief Executive Officer Paul Polman argued that a semi-annual reporting strategy would help the firm to focus on a long-term investment perspective (Ignatius 2012).

The Unilever example indicates that the benefits of more frequent financial reports are not apparent for firms at first sight. Given the high administrative costs for firms in preparing interim reports, it is important to understand whether a higher frequency of interim reports is economically efficient. Prior research on the benefits and costs of increased reporting, however, is not conclusive. Kanodia and Lee (1998) theoretically show that more frequent reporting disciplines managers’ investment choices. Gigler and Hemmer (1998), on the other hand, argue that increased reporting frequency potentially reduces a firm’s voluntary disclosure and Gigler et al. (2014) suggest that mandating more frequent reporting increases the probability of managerial short-termism. While the three former studies are analytical, Fu, Kraft, and Zhang (2012) provide empirical evidence that a higher reporting frequency is associated with lower information asymmetry and a lower cost of capital for a sample of US firms from 1951-1973. By contrast, van Buskirk (2012) finds no relation between monthly reporting and information asymmetry for US retail trade firms from 1993-2001. Ernstberger et al. (2014) find that mandatory quarterly reporting is related to a higher level of real activities manipulation using a sample EU-15 firms. Kraft, Vashishtha, and Venkatachalam (2014) show that an increased reporting frequency is associated with a large decline in investments based on a very similar sample of US firms from 1950-1970 as in Fu, Kraft, and Zhang (2012).

Besides the fact that prior research is not conclusive, most studies do not provide empirical evidence or use research designs that do not allow for causal interpretations. We

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2 Other examples are Porsche and Google which decided to abolish quarterly reporting (Porsche) or frequent earnings guidance (Google) to better focus on long-term goals.
address these limitations and shed light on the economic consequences of increased reporting frequency with a quasi-natural experiment. Our main contribution is that we document causal effects of an increase in reporting frequency for small firms. Moreover, we both analyze the information effect (in the form of information asymmetry) and the economic effect (in the form of investment behavior) as well as the net effect to provide a more complete picture of the benefits and costs of increased reporting.

Analyzing the effect of increased reporting frequency is difficult. In general, a mandatory change in reporting frequency affects all firms in a particular jurisdiction. Consequently, there is no control group of firms that are unaffected by the regulatory change and it is impossible to answer the counterfactual question how firms and shareholders would have behaved without a mandatory increase in reporting frequency.

By contrast, studying the effect of a voluntary increase in reporting frequency allows for a control group. The treatment group, however, suffers from a self-selection bias which does not allow causal inferences. All factors that jointly affect the decision to voluntarily increase reporting frequency as well as the benefits and costs may drive potential results.

An ideal setting to study the causal effect of a mandatory increase in reporting frequency would be an exogenous experiment in which firms were randomly assigned to adopt a higher reporting frequency. We have found a quasi-natural experiment that comes close to such an ideal setting: In 2001, the Disclosure and Accounting Standards Committee (DASC) in Singapore recommended the government to mandate more frequent financial reports to enhance the confidence in the market in response to the Asian financial crisis of 1997 (Rahman et al. 2007). After a public discussion about the proposed amendments, Singapore introduced mandatory quarterly reporting for public firms in 2003. Following the Singapore Exchange (SGX) Listing Rule 705, firms with a market capitalization below S$75 million were exempted from the new regulation and were allowed to stick to semi-annual reporting.

We use a regression discontinuity design to exploit this setting. We compare firms just above the threshold that had to adopt mandatory quarterly reporting to firms just below the threshold that kept on reporting semi-annually. This is a good quasi-natural experiment since the exact threshold is not related to firm fundamentals. The SGX announced the S$75 million market capitalization cutoff in April 2003. However, the market capitalization as of March 31, 2003 was used to determine whether firms were exempted from the regulation. Hence, firms did not know about the cutoff and thus could not manipulate their market capitalization to avoid compliance.

The regression discontinuity design isolates the effect of mandatory quarterly reporting from any other concurrent financial, economic, or political change. Thus, we can draw causal inferences about the effect of increased reporting frequency. The disadvantage of this design, however, is that our results are most likely not generalizable to larger firms since we are analyzing smaller firms with a market capitalization around S$75 million. Nevertheless, the effect of mandatory quarterly reporting for smaller firms is particularly interesting. Small firms are likely to benefit the most from increased reporting frequency as their information environment is usually not as rich as that of larger firms (e.g., Collins, Kothari, and Rayburn 1987). Hence, the incremental information value of quarterly reporting should be higher. On the other hand, smaller firms are also likely to experience disproportionately high costs given that increased reporting frequency entails fixed costs.

We aim to analyze the benefits and costs of increased reporting frequency for small firms. We thereby distinguish an information effect from a real effect. The informational benefits likely comprise more transparency and less information asymmetry. Our expectations about the information effect are, however, mixed. Theoretical research suggests that an improvement in public disclosures reduces information asymmetry. Nonetheless, it is
questionable whether interim financial statements actually yield reliable information since they require more managerial estimates than annual financial statements and they are generally not audited. Moreover, firms may decrease the extent of other voluntary disclosures when mandated to report more frequently (Gigler and Hemmer 1998). Hence, it is unclear whether increased reporting frequency leads to more transparency and less information asymmetry.

Increased reporting can also have a real effect. Short-termism may cause managers to change their investment behavior. Under capital market pressure, managers may forgo certain investments that are highly profitable in the long run, but cause short-term losses. Thus, increased reporting frequency could cause value-destroying underinvestment. Then again, more frequent financial disclosure may also discipline managers in their investment behavior since monitoring is easier for shareholders if they have access to more frequent information. Hence, our expectations about the real effect are also mixed and, ultimately, the benefits and costs of increased reporting frequency regime are an empirical question.

For the information effect, we use different liquidity measures to proxy for information asymmetry. Irrespective of different short and long-term estimation windows around the publication of interim reports, we find that mandatory quarterly reporting does not affect information asymmetry. However, we find a real effect of increased reporting. Capital expenditures decrease significantly for firms that start to provide quarterly reports, which is in line with the short-termism hypothesis. To strengthen the confidence in our research design, we include sensitivity analyses similar to Iliev (2010). We estimate our models using pseudo cutoffs at S$50 million and S$100 million, and analyze the relation between our dependent variables and the reporting frequency indicator for years before the regulatory change. These analyses support both our identification and findings. Overall, our results show that mandatory quarterly reporting does not reduce information asymmetry, but causes firms to deviate from their investment strategy. Finally, we use stock returns around announcements of mandatory quarterly reporting to gauge an overall value impact. We find a negative economic net effect as perceived by the market. Our findings have important implications for regulators. Since we find that quarterly reporting is perceived as a net burden, a debate on the current threshold in Singapore may be appropriate. Moreover, by November 2015, all EU member states will have abolished quarterly interim management statements. National stock exchanges, however, may still impose more frequent reporting. Our results might inform them as well.

The remainder of the paper is structured as follows. In Section two, we develop the theoretical foundation and review prior research on the economic consequences of interim reporting. Section three describes the institutional setting and Section four introduces the research design and sample. In Section five, we present the findings for our research question. Section six concludes the paper.

2. Theory and related literature

We distinguish an “information effect” from a “real effect” in our analysis of the costs and benefits of increased reporting frequency. The information effect is based on the notion that asymmetric information can distort price efficiency. More frequent reporting might improve a firm’s information environment and thus decrease information asymmetry. In pure exchange economies, firms’ business decisions are held fix and, hence, the only effect of more frequent disclosure is to decrease uncertainty. In the absence of direct reporting costs, it

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3 The economic effect also includes the direct cost of preparing interim financial statements. In the current version of the paper, however, we do not have sufficient data to analyze this effect empirically. However, it is obvious that an increase in reporting frequency is c.p. associated with an increase in direct costs.
seems that it is always advantageous to report more frequently. However, outside of a pure exchange economy, more frequent reporting may alter firms’ real decisions at the cost of economic efficiency. For instance, management may change their investment behavior to generate more favorable short-term numbers. We consider this as the real effect of increased reporting.

Information effect

Theory and prior research on the benefits and costs of increased reporting frequency is not conclusive. Theoretical models predict that public disclosures reduce information asymmetry between investors since they provide equal access to information (e.g., Diamond 1985; Bushman 1991). Hence, increased reporting frequency may lower information asymmetry if more information is available to the public. However, this might not apply to interim reporting. In contrast to annual financial statements, interim financial statements require more managerial estimates and they are generally not audited. Empirical evidence shows that managers use this room for discretion to manipulate interim earnings (e.g., Mendenhall and Nichols 1988; Das, Shroff, and Zhang 2009; Kajüter, Klassmann, and Nienhaus 2014). Thus, interim financial statements may not improve public financial disclosures. Moreover, even if interim financial statements improve public financial disclosures, it is unclear whether information asymmetry decreases. Kim and Verrecchia (1994) argue that if private information is endogenous, an improvement in public financial information may create information asymmetry since informed traders process public information into additional private information. Furthermore, Gigler and Hemmer (1998) argue that more frequent mandatory reporting can lead to less voluntary disclosures by firms which in turn may reduce informational efficiency of prices. Finally, the availability of more frequent financial information may cause information intermediaries, such as analysts and the financial press, to produce less information since there is more public information available which reduces the incremental value of information produced by intermediaries (Healy and Palepu 2001). In contrast, a richer public information set makes it less costly for information intermediaries to acquire information and thus they may have incentives to produce more information.

Empirical evidence on the impact of more frequent reporting on information asymmetry is also mixed. Fu, Kraft, and Zhang (2012) find that a higher reporting frequency is associated with lower information asymmetry and lower cost of capital. However, as Verdi (2012) notes, the authors might have found opposite results if they used short-term instead of long-term estimation windows around the publication of interim reports. In contrast to Fu, Kraft, and Zhang (2012), van Buskirk (2012) finds no relation between monthly reporting and information asymmetry. Butler, Kraft, and Weiss (2007) document that earnings timeliness improves for firms voluntarily increasing their reporting frequency. However, firms that mandatorily change their reporting frequency do not experience such an improvement in earnings timeliness. Taken together, it is questionable whether increased reporting frequency helps to mitigate information asymmetry – which is a key argument by proponents of more frequent reporting.

Real effect

More frequent reporting can also have real effects by distorting managers’ investment decisions. Following Kraft, Vashishtha, and Venkatachalam (2014), reporting frequency can affect investment behavior through three different channels. First, increased reporting

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4 Note that the model in Kim and Verrecchia (1994) refers to market experts such as financial analysts who follow a firm closely. Moreover, the analysis focuses on the short-term effect of financial disclosures. Hence, the findings of Kim and Verrecchia (1994) may not apply to our setting.
frequency may cause managers to behave myopically if they have to report financial results in shorter intervals. Bebchuk and Stole (1993) show that managers have incentives to underinvest to boost current earnings by borrowing from future earnings. Since current earnings are positively related with future earnings, the boost in current earnings increases a firm’s current stock price. In the long run, however, underinvestment destroys shareholder value (Stein 1989). Gigler et al. (2014) support this notion and argue that shareholder impatience combined with more frequent financial reporting amplifies actions by managers that are more likely to generate favorable bottom line results at the cost of shareholder value. Empirical evidence is also in line with the short-termism/myopia hypothesis. In a laboratory experiment, Bhojraj and Libby (2005) show that managers behave myopically under price pressure and a higher reporting frequency. Ernstberger et al. (2014) analyze the effect of semi-annually and quarterly reporting on real activities manipulation using a large sample of European firms. They find that quarterly reporting is associated with a higher degree of real activities manipulation which entails myopic decisions favoring short-term cash flows over long-term value. Kraft, Vashishtha, and Venkatachalam (2014) show that an increased reporting frequency is associated with a large decline in investments based on a sample of US firms from 1950-1970. In a survey of more than 400 CFOs in the US, Graham, Harvey, and Rajgopal (2005) report that almost 80 per cent of CFOs would decrease discretionary spending such as research and development and more than 55 per cent would delay starting a new project to meet quarterly earnings targets. Hence, the myopia channel predicts fewer investments following an increase in reporting frequency.

Second, more frequent reporting increases the timeliness of financial information and thus helps to improve transparency and monitoring. Given agency frictions, managers have incentives to spend resources to grow a firm beyond its optimal size (Jensen 1986). Without proper monitoring, managers “build an empire” and overinvest to increase their power within a firm (Hope and Thomas 2008). Managers also have incentives to underinvest (Myers 1977; Myers and Majluf 1984). If increased reporting frequency reduces information asymmetry and facilitates transparency, investors can better monitor managements’ actions which should discipline managers’ investment behavior (e.g., Kanodia and Lee 1998; Gigler et al. 2014). Hence, there may be a disciplinary effect of quarterly reporting that prevents managers from under- or overinvesting. Consequently, the disciplining channel predicts either an increase or decrease in the investment level depending whether a firm had an under- or overinvestment problem before.

Third, a decrease in information asymmetry through increased reporting may also impact the investment behavior. Less information asymmetry entails lower cost of capital and thus allows cheaper financing. Moreover, lower cost of capital leads to c.p. more positive NPV projects. Therefore, firms may invest more. This financing channel predicts more investment upon an increase in reporting frequency.

Summary

We view changes in information efficiency and the real effects as potential benefits and costs of increased reporting frequency. However, the mixed theoretical and empirical evidence does not allow deriving directed hypotheses on the information asymmetry and investment behavior effect. Moreover, both effects are not entirely independent from each other. A decrease in information asymmetry can also impact a firm’s investment behavior. Hence, we ultimately consider the benefits and costs of increased reporting frequency an empirical question. We also try to gauge an economic net effect found in firms’ stock returns around announcements related to the introduction of quarterly reporting. Other aspects of an increased reporting frequency such as direct costs or proprietary costs are neither reflected in the information effect nor in the real effect. An analysis of the economic net effect, however,
allows gauging an overall valuation impact of an increased reporting frequency. Similar to
the information effect and the real effect, our expectations about the economic net effect are a
priori mixed and, hence, we do not derive hypotheses.

Our study is most closely related to Fu, Kraft, and Zhang (2012) and the working
papers of Ernstberger et al. (2014) and Kraft, Vashishtha, and Venkatachalam (2014). Fu,
Kraft, and Zhang (2012) provide evidence on the information effect of more frequent
reporting while the other two papers shed light on the real effect. The research designs of all
three studies, however, do not allow for causal interpretations. Fu, Kraft, and Zhang (2012)
and Kraft, Vashishtha, and Venkatachalam (2014) use a sample of US firms from (about)
1950-1970, which undergo voluntary and mandatory changes from annually to semi-annually
and finally to quarterly reporting. At first sight, this is an appealing setting to investigate the
consequences of an increased reporting frequency. However, the sample is largely dominated
by firms (up to 90%) that voluntarily report more frequently than required. Verdi (2012)
notes that with this sample “a fundamental concern is whether the research design
successfully mitigates a potential self-selection bias” (p. 152). Ernstberger et al. (2014)
analyze cross-sectional variation in the reporting frequency of EU-15 countries and find that
more frequent reporting is associated with more real activities manipulation. Cross-sectional
studies, however, make it difficult to isolate the effect of reporting frequency from countries’
other institutional features.

Our main contribution is to address the shortcomings of these papers by exploiting a
unique setting that allows for a quasi-natural experiment. Thereby, we document causal
effects of an increased reporting frequency. Moreover, by analyzing the information and the
real effect as well as the economic net effect, we draw a more complete picture of the benefits
and costs of mandatory quarterly reporting.

3. Setting

In 2001, the Disclosure and Accounting Standards Committee (DASC) in Singapore
recommended the government to mandate quarterly reports for financial years starting in
2003 (The Business Times Singapore 2002c). Until then, voluntary quarterly reporting was
uncommon in Singapore. In 2001, less than 3% of more than 400 SGX listed companies
prepared quarterly reports voluntarily (The Business Times Singapore 2001). Former Deputy
Prime Minister and Minister of Finance Lee Hsien Loong followed the DASC’s
recommendation that quarterly reporting would benefit listed companies in the long run as
they become more transparent and the bill was passed in July 2002 (The Business Times
Singapore 2002a). Right after its foundation in August 2002, the Council on Corporate
Disclosure and Governance (CCDG), a government agency that issues accounting standards
and reviews corporate governance and disclosure practices, announced that it would review the
regulation.

On October 14, 2002, the CCDG sent a letter to the Prime Minister recommending that
the mandatory adoption of quarterly reporting by firms with a market capitalization of S$20
million or below should be deferred to 2004 (The Business Times Singapore 2002d). The
recommendation was accepted by the government on October 18, 2002, and one week later,
the SGX amended Listing Rule 705. Besides the provision that smaller firms with a market
capitalization of S$20 million or below as of September 30, 2002, were permitted to start
quarterly reporting in 2004, Listing Rule 705(1) included a provision on the reporting date.
For financial years starting in 2003, announcements had to be made within 60 days after the

\[\text{Appendix 7.2 of the SGX Listing Rule presents the information requirements for quarterly, half-yearly and full year financial statements.}\]
end of the reporting period, while the deadline was reduced to 45 days for financial years starting in 2004 (The Business Times Singapore 2002e).

Still, the regulations caused severe criticism among firms. In a parliamentary debate on April 24, 2003, Deputy Prime Minister Lee emphasized his confidence in quarterly reporting but noted that it is a burden for smaller firms. He announced that the threshold of S$20 million would be increased to S$75 million based on the market capitalization as of March 31, 2003. Moreover, instead of delaying the mandatory adoption of quarterly reporting for smaller firms by one year, Mr. Lee declared that firms below the threshold would be exempted from the regulation to prepare quarterly reports (SGX Listing Rule 705(2)). Firms that go public after March 31, 2003 with a market capitalization of S$75 or below were as well allowed to report only semi-annually (SGX Listing Rule 705(3)). Due to the higher threshold, the number of firms exempted from mandatory quarterly reporting increased from 100 to 300 (The Business Times Singapore 2003). Furthermore, the government announced that the reporting requirements would be reviewed again in mid-2005.6

4. Research design
4.1 Regression discontinuity

Our identification strategy relies on regression discontinuity analysis which is commonly used in economics – but seldom applied in finance or accounting.7 Under certain conditions, regression discontinuity designs can “approach the gold standard of a randomized experiment” (Atanasov and Black 2014). The basic idea behind regression discontinuity is that firms above or below an arbitrary threshold of a forcing variable are treated while firms on the other side are not. For firms within the proximity of the threshold, the assignment to the treatment is virtually random. We use this design to analyze the benefits and costs of increased reporting frequency in Singapore in 2003. We compare firms just above the threshold of S$75 million market capitalization (forcing variable) that had to adopt mandatory quarterly reporting to firms just below the threshold that kept on reporting semi-annually. This is a good quasi-natural experiment since the exact threshold is not related to firm fundamentals.

For a sharp regression discontinuity design, the forcing variable should fully explain which firms are treated. In our sample, we eliminate 19 firms (14.7%) that were below the threshold, but voluntarily provided quarterly financial statements. All firms with a market capitalization above S$75 million comply with the Listing Rule 705 and prepare quarterly financial statements. The small number of firms that voluntarily provide quarterly financial statements and the full compliance with Listing Rule 705 provide a strong setting for a regression discontinuity analysis. For robustness, however, we also use a “fuzzy” regression discontinuity design including the voluntary quarterly reporters and our results and inferences remain unchanged.

Gao et al. (2009) provide evidence that firms have incentives to stay small to avoid costly regulations. For a nearly random assignment of the treatment to firms close to the threshold, however, it is important that the firms did not anticipate the rule or could not manipulate their market capitalization. Neither is an issue in our setting. The S$75 million

6 Following the review and its acceptance by the Ministry of Finance in 2006, quarterly reporting is still voluntary for firms with a market capitalization of S$75 million or below. However, the firms’ market capitalization is reviewed each year starting on December 31, 2006. Firms that exceed the threshold have a grace period of one year before they have to provide quarterly reports. If a firm’s market capitalization falls below the threshold, it has to continue quarterly reporting (The Business Times Singapore 2006).

7 A few examples are Black, Jang, and Kim (2006), Rauh (2006), Chava and Roberts (2008), and Iliev (2010).
market capitalization cutoff was announced in April 24, 2003. However, the market capitalization as of March 31, 2003 was used to determine whether firms were exempted from the regulation. Hence, firms did not know about the cutoff and could thus not manipulate their market capitalization to avoid compliance. Even if firms knew about the threshold through private information, it would be costly for them to manipulate their market capitalization. Unlike to Iliev (2010), who uses a public float as the forcing variable to analyze the effects of SOX Section 404, a mere share buy-back or a change in institutional ownership won’t affect the forcing variable. To change the market capitalization, managers would have to undertake actions that decrease firm value which is detrimental to shareholders’ interest. Thus, the lack of anticipation of the rule and the imperfect as well as costly control over market capitalization provide some confidence in a truly exogenous assignment of treatment firms. Figure 1 shows all Singaporean firms with a market capitalization between S$5 million and S$145 million as of March 31, 2003. If firms anticipated the threshold of S$75 million and were able to influence their market capitalization to avoid compliance, one would expect an unusual number of firms just below the S$75 million cutoff. However, since Figure 2 shows a smooth distribution around the market capitalization of S$75 million, our assumption that the treatment is exogenous seems reasonable.

Finally, it is important to analyze confounding events that may amplify or mitigate the effect of increased reporting frequency. One major change in 2003 was the introduction of IFRS in Singapore. However, the IFRS adoption affected all firms equally. Moreover, Singapore GAAP was very close to the IFRS reporting requirements (Ding et al. 2007). In particular the rules for interim reporting under Financial Reporting Standard 34 (FRS 34) were identical to International Accounting Standard 34 (IAS 34). To our knowledge, there were no other events. Hence, any effect in the outcome variables can be attributed to the increased reporting frequency.

We focus on firms that had a market capitalization between S$25 million and S$125 million as of March 31, 2003. The focus on firms close to the cutoff mitigates a possible bias from unobservable factors that are both correlated with market capitalization and our outcome variables. Moreover, we include a polynomial in the forcing variable to control for any remaining effect of market capitalization on information asymmetry and investment behavior. Since the choice of the bandwidth around the discontinuity is a key aspect of the regression discontinuity design, we also use a narrower window of firms with a market capitalization between S$50 million and S$100 million for robustness. Our estimations use the following basic model

\[ \text{Outcome Variable} = \alpha + \beta_1 QR + \beta_2 MV + \beta_3 MV^2 + \beta_4 MV^3 + \sum_{i=1}^{N} \beta_{4+i} Controls_i + \epsilon, \]  

where \(QR\) is a dummy variable for firms that report quarterly, \(MV\) is the market capitalization as of March 31, 2003, and \(Controls_i\) are control variables as defined in the next section.

4.2 Empirical measures

Information asymmetry

We use two variables to proxy for information asymmetry: bid-ask spreads (BIDASK) and return volatility (RETVOL). Since quarterly reporting might affect short-term and long-
term information asymmetry differently, we use both a short-term (four weeks) and long-term (one year) estimation window.

We measure bid-ask spreads as the median of the difference between the daily closing bid and ask prices divided by either the midpoint for the four weeks period starting 45 days after the end of the first quarter \(\text{BIDASK}_{\text{short}}\) or the midpoint for the one year period starting 45 days after the end of the first quarter \(\text{BIDASK}_{\text{long}}\). Following Leuz and Verrecchia (2000), we control for firm size \(\text{SIZE}\), turnover volume \(\text{TURNOVER}\), return volatility \(\text{RETVOL}\) and free float \(\text{FFLOAT}\). Following Leuz and Verrecchia (2000), we control for firm size \(\text{SIZE}\), turnover volume \(\text{TURNOVER}\), return volatility \(\text{RETVOL}\) and free float \(\text{FFLOAT}\).

**Investment behavior**

In our analyses on the costs of quarterly reporting, we use capital expenditures \(\text{CAPX}\) to proxy for the firms’ investment behavior. We scale \(\text{CAPX}\) by beginning-of-the-year property, plant and equipment. We use two modifications of \(\text{CAPX}\) as our dependent variable. First, we use the \(\text{CAPX}\) of 2004 \(\text{CAPX}_{t+1}\), since capital investments are the outcome of a long-term decision-making-process and the effect of mandatory quarterly reporting in 2003 might not immediately be reflected in the \(\text{CAPX}\) of 2003. Second, we use the average of \(\text{CAPX}\) between 2003 and 2005 \(\text{CAPX}_{t,t+1,t+2}\) to account for a random variation in capital expenditures. To control for firms’ growth opportunities, we include the market-to-book ratio \(\text{MTB}\), measured as the sum of market value of equity and beginning-of-the-year total liabilities divided by beginning-of-the-year total assets. In addition, we control for firms’ internal financing capabilities using operating cash flow \(\text{CFO}\). We scale \(\text{CFO}\) by beginning-of-the-year property, plant and equipment. Again, we control for industry-fixed effects.

**4.3 Sample and descriptive statistics**

We start our sample selection process with all public firms incorporated in Singapore on March 31, 2003. We exclude financial firms since regulatory requirements and their nature of investments are different from that of industrial companies. We obtain company data from Worldscope and stock prices from Datastream. Furthermore, we identify voluntary quarterly reporting firms using Compustat. To merge the different databases, we require non-missing ISINs in each database. Moreover, we directly obtained the exact market capitalization data from the Singapore Exchange (SGX) which was used to determine mandatory quarterly reporters. This ensures the accuracy of our treatment and control group allocation. We restrict our sample to firms with a market capitalization between S$25 million and S$125 million as of March 31, 2003 to ensure that we compare similar firms around the threshold. After generating all variables for our estimations, we are left with a sample of 100 firms that have a financial year starting on or after January 1, 2003.

[TABLE 1]
Of those 100 firms, 72 firms have a market capitalization of S$75 million or below while 28 firms have a market capitalization above the threshold. The regression discontinuity design presumes that treatment and control firms are substantially similar prior to the treatment on the outcome variables and a set of covariates other than the forcing variable. However, since our forcing variable market capitalization is also a proxy for firm size, we allow firms to differ in aspects that are related to size. Panel A of Table 1 compares the treatment and control firms in 2002, 2003 and 2004. In 2003, i.e. the first year of compliance, quarterly reporters have a median bid-ask spread of 1.8% while semi-annual reporters have a higher spread of 3.3%. However, the difference between both groups might be driven by firm size since a Wilcoxon rank sum test shows significant differences between bid-ask spreads also for 2002, i.e. one year before quarterly reporting became mandatory for our treatment group. The same applies to our second proxy for information asymmetry, RETVOL. In general, all of our dependent and control variables are within plausible ranges for the pre-adoption year 2002, the adoption year 2003 and the post-adoption year 2004. The descriptive statistics reveal no distinct pattern on how the interim reporting regulation affects information asymmetry.

On the other hand, however, the descriptive statistics indicate that the investment behavior of our treatment and control group changes between 2002 and 2004. There is almost no difference in CAPX of quarterly and semi-annual reporting firms in 2002 (9% of PPE for QR = 1 and 10% of PPE for QR = 0) and 2003 (11.1% of PPE for QR = 1 and 9.4% of PPE for QR = 0). In 2004, CAPX of quarterly reporting firms is 10.9% of PPE compared to 17.5% of semi-annual reporting firms.

Moreover, the two groups do not differ significantly from each other on our selected control variables in any year except for FFLOAT in 2002. The covariate balance of TURNOVER, FFLOAT, BETA, MTB, and CFO provides some confidence that our treatment and control firms do not differ on many other unobservables. We also use a narrower window of firms with a market capitalization between S$50 million and S$100 million at costs of a smaller sample size (n=43) and find similar results.

Panel B of Table 1 shows the industry distribution of our sample. Most industries have observations in both the treatment and the control group. Furthermore, Fisher’s exact test reveals that observations from both groups are not systematically related to certain industries (p-value 0.185).

5. Results

Information effect

Table 2 presents the results for a set of regression discontinuity models for firms close to the S$75 million threshold. The estimations are run in the first year when the treatment firms started to report quarterly (2003). All regressions include a quarterly reporting dummy (QR) and linear, quadratic and cubic polynomials of the forcing variable market capitalization to control for possible non-linear effects of market capitalization on information asymmetry. Our results do not change if we use a quadratic or quartic functional form of the forcing variable. Moreover, following Gelman and Imbens (2014), there are some risks that estimators for causal effects with high-order polynomials can be misleading. Therefore, we also run all regressions with the linear form of the forcing variable only. Results and inferences, however, are substantially the same.
Panel A reports the results for firms with a market capitalization between S$25 million and S$125 million. Regressions (1) and (2) use a short-term window of the bid-ask spread for four weeks starting 45 days after the end of the first quarter of the financial year 2003. There is neither a significant effect of quarterly reporting on short-term spreads in regression (1) nor in regression (2) where we control for size, turnover, volatility and free float. This is similar in regressions (3) and (4) for the long-term spreads of a one year window starting 45 days after the end of the first quarter of the financial year 2003. Depending on the estimation window, some firms have median bid-ask spreads of zero. Consequently, the sample size decreases slightly in some regressions. We also use return volatility as an alternative proxy for information asymmetry in regressions (5) to (8). The results are substantially similar and QR remains insignificant in each specification.

In addition, we narrow down our analyses to firms with a market capitalization between S$50 million and S$100 million. One the one hand, firms around the threshold become even more comparable, while, on the other hand, the sample size decreases to 43 firms. Thereof, 19 firms have a market capitalization above S$75 million. Due to the small sample size, findings should be interpreted carefully. As shown in Panel B of Table 2, the results and inferences, however, remain the same. Taken together, we show that there is no effect of introducing quarterly reporting on the bid-ask spreads or return volatility of small firms.

Real effect

Next, we analyze whether quarterly reporting has a measurable effect on the investment behavior of small firms. We use capital expenditures scaled by the beginning-of-the-year property, plant and equipment as the dependent variable. The descriptive statistics already indicated that treatment and control firms show a similar investment behavior when both groups had to report semi-annually. After some firms had to start to provide quarterly reports, however, the treatment firms invest less than the control firms. This is supported by a set of regression discontinuity models in Table 3. In Panel A, we report the results for firms with a market capitalization between S$25 million and S$125 million. Regression (1) and (2) use the capital expenditure of the financial year 2004 as the dependent variable. The dependent variable in (3) and (4) is the average capital expenditure between 2003 and 2005. We use the market-to-book ratio and operating cash flow as control variables. In all four regression models, QR is significantly negative at least at the 5 per cent level. Hence, the treatment firms start to invest significantly less compared to the control firms. On average, quarterly reporting leads to a decrease of about 20.6 percentage points in capital expenditures one year after the initiation and about 19.7 percentage points in a three-year average window relative to the investment level of semi-annual reporters. Given that the mean ratio of capital expenditures scaled by the beginning-of-the-year property is 27%, this decrease is also economically significant.

Again, we use a different window for firms with a market capitalization between S$50 million and S$100 million in Panel B. The results and inferences are substantially similar. Moreover, to strengthen the confidence in our research design, we include sensitivity analyses similar to Iliev (2010). We estimate our models using pseudo cutoffs at S$50 million.
and S$100 million. The QR dummy variable loads in none of these alternative specifications. Furthermore, we analyze the relation between investment behavior and the reporting frequency indicator for 2001 and 2002 before the regulatory change took place. Again, we do not find any differences in the investment behavior for our treatment and control firms. These analyses support both our identification and findings.

Economic net effect

The prior two sections show that quarterly reporting does not mitigate information asymmetry, but causes management to invest less than they might have invested under a semi-annual reporting regime. However, there are potentially other benefits and costs associated with increased reporting frequency. For instance, the direct costs of preparing interim financial statements should increase and there may be proprietary information costs, not captured in the prior analyses. Following Iliev (2010), we try to gauge the net valuation effect by analyzing stock returns around announcements that relate to the introduction of quarterly reporting in Singapore. We choose events that make mandatory quarterly reporting more or less likely for certain groups of firms. The reactions to these events reflect the change in firm valuation as perceived by the market. Note that the estimated reactions likely do not capture the full effect of the regulation since the reactions reflect changes in the market’s belief. Moreover, most firms were only temporarily exempted from preparing quarterly financial statements. Hence, the full valuation effect of mandating quarterly reporting is likely larger.

Table 4 shows the 3-day and 5-day cumulated abnormal returns for two equally-weighted portfolios on event dates that changed the probability of mandatory quarterly reporting for some firms. QR* = 1 includes firms for which quarterly reporting became more likely and QR* = 0 includes all firms for which quarterly reporting became less likely. We also construct a net portfolio (Diff.) that buys all firms with a higher probability of mandatory quarterly reporting and that sells all firms with a lower probability of mandatory quarterly reporting. If increased reporting has a negative net effect on firms, we expect a negative abnormal return on the net portfolio (i.e., Diff < 0).

The first event (10/14/2002) is the recommendation by the CCDG that mandatory quarterly reporting by firms with a market capitalization of S$20 million or below should be deferred to 2004 (The Business Times Singapore 2002d). If mandatory quarterly reporting imposes a net burden on firms, this event means good news for the QR* = 0 firms with a market capitalization below S$20 million. For QR* = 1 firms, there is no change in the probability of quarterly reporting and therefore we expect no reaction. We find a negative abnormal return for our net portfolio with a return of -1.904% (CAR[-1;1]) and -3.507% (CAR[-2;2]) supporting the notion of a negative net valuation effect. This effect, however, is largely driven by a substantial negative abnormal return of the QR* = 1 firms rather than a positive return of our QR* = 0 firms. Prior to the recommendation, the CCDG had already announced that it would review the mandatory quarterly reporting bill which was passed in 2002. The market had already expected a recommendation that would leave quarterly reporting voluntary for all firms. Therefore, we find relatively high negative abnormal returns for our QR* = 1 firms with a market capitalization above S$20 million instead of relatively high positive abnormal returns for firms below S$20 million. A few days later, the government accepted the recommendation (10/18/2002). Again, we find negative abnormal returns for our net portfolio suggesting a negative net effect of mandatory quarterly reporting.

9 The Business Times Singapore reported on September 10, 2002: “Market watchers expect the council to recommend that quarterly reporting be voluntary. This is pretty much what the London Stock Exchange, Europe’s biggest stock market, recently recommended in opposing a European Union push for mandatory quarterly reports.” (The Business Times Singapore 2002b).
Although the signs of the abnormal returns for these two events are consistent with our expectations, none of the returns is significant at conventional levels. However, recall that firms were only exempted from quarterly reporting for one year. Thus, the effect is not as strong as a permanent exemption.

The third event is the government’s announcement that firms with a market capitalization of S$75 million or below are permanently excluded from mandatory quarterly reporting. This exemption is a strong relief for firms with a market capitalization between S$25 million and S$75 million dollar (i.e., $QR^* = 0$). These firms show very high positive abnormal returns of +3.496% (CAR[-1;1]) and +4.707% (CAR[-2;2]) which are significant at the one per cent level. For the other group (i.e., $QR^* = 1$), the probability of mandatory quarterly reporting did not change much and the magnitude of abnormal returns is less than one per cent as well as insignificant.

The findings of the event study suggest that the costs of quarterly reporting outweigh the benefits for small firms. The market perceives mandatory quarterly reporting as a net burden.

6. Conclusion

We analyze the causal effects of mandatory quarterly reporting using regression discontinuity analysis. Following SGX Listing Rule 705, only a small fraction of Singaporean firms was mandated to start quarterly reporting in 2003. We find, contrary to popular belief, that quarterly reporting does neither decrease long-term nor short-term information asymmetry. Since our sample comprises only small firms with a market capitalization between S$25 million and S$125 million, our finding suggests that expected benefits of increased transparency may not apply to all firms. Furthermore, we find that the investment level of quarterly reporting firms is significantly lower than the investment level of semi-annual reporting firms. Finally, our event study results are consistent with the notion that mandatory quarterly reporting imposes net costs on small firms. These results are robust to several modifications.

Due to the causal interpretability, our study has important contributions for regulators. Ever since Singapore’s government announced mandatory quarterly reporting for listed companies in 2001, there has been a long-running debate on the benefits and costs of a higher reporting frequency. 14 years later, there is still no consensus. While a significant fraction of practitioners argues that the decision of quarterly reporting should be left to the firms, others argue that the threshold should be raised to S$150 million or that quarterly reporting should be mandatory for everyone (The Business Times Singapore 2014). Given our lack of evidence on the benefits of quarterly reporting for small firms, a discussion on the current threshold is appropriate. Our findings are also important for other regulators around the world. In 2013, the European Commission abolished interim management statements in favor of semi-annual reporting. Contrary to the Commission’s initial proposal, national stock exchanges are still allowed to impose stricter reporting requirements. Our findings might support their decision as well.
REFERENCES


## Appendix A: Variable definitions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unit</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIDASK</td>
<td>Ratio</td>
<td>Bid-ask spread, calculated as the median of the difference between the daily closing bid and ask prices divided by either the midpoint of the four weeks period starting 45 days after the end of the first quarter ($BIDASK_{short}$) or the midpoint of the one year period starting 45 days after the end of the first quarter ($BIDASK_{long}$).</td>
</tr>
<tr>
<td>RETVOL</td>
<td>Ratio</td>
<td>Return volatility, calculated as the standard deviation of stock returns over either the four weeks period starting 45 days after the end of the first quarter ($RETVOL_{short}$) or the one year period starting 45 days after the end of the first quarter ($RETVOL_{long}$).</td>
</tr>
<tr>
<td>CAPX</td>
<td>Ratio</td>
<td>Capital expenditures, calculated as capital expenditures (WC04601) scaled by beginning-of-the-year property, plant and equipment (WC02501).</td>
</tr>
<tr>
<td>SIZE</td>
<td>S$ million</td>
<td>Firm size, calculated as beginning-of-the-year market value of equity (MV).</td>
</tr>
<tr>
<td>TURNOVER</td>
<td>Ratio</td>
<td>Turnover volume, calculated as the median of daily trading volume (VO times P) divided by the market value of equity over either the four weeks period starting 45 days after the end of the first quarter or the one year period starting 45 days after the end of the first quarter.</td>
</tr>
<tr>
<td>FFLOAT</td>
<td>Ratio</td>
<td>Percentage of shares that are not closely held (NOSHFF).</td>
</tr>
<tr>
<td>BETA</td>
<td>Ratio</td>
<td>Yearly beta per month end.</td>
</tr>
<tr>
<td>MTB</td>
<td>Ratio</td>
<td>Market-to-Book ratio, calculated as the sum of market value of equity (MV) and beginning-of-the-year total liabilities (WC03351) divided by beginning-of-the-year total assets (WC02999).</td>
</tr>
<tr>
<td>CFO</td>
<td>Ratio</td>
<td>Operating cash flow, calculated as cash flow from operations (WC04201) scaled by beginning-of-the-year property, plant and equipment (WC02501).</td>
</tr>
<tr>
<td>Industry</td>
<td>Integer</td>
<td>Industry dummy variable based on the Fama-French 12 sector definition.</td>
</tr>
</tbody>
</table>
Figure 1: Market capitalization

This figure shows the market capitalization of public firms in Singapore as of March 31, 2003. The graph only includes firms with a market capitalization between S$5 million and S$145 million. Firms with a market capitalization above S$75 million were required to start quarterly reporting in 2003. From the 261 sample firms, 213 firms are below the threshold while 48 firms have a market capitalization above S$75 million.
Table 1: Descriptive statistics

This table presents the descriptive statistics for the dependent and independent variables of our sample firms with a market capitalization between S$25 million and S$125 million as of March 31, 2003. Panel A shows medians by reporting frequency for one year before quarterly reporting became mandatory (2002), the year quarterly reporting became mandatory (2003), and for one year after quarterly reporting became mandatory (2004). The column Diff. reports z-statistics for the Wilcoxon rank sum test. Panel B shows the industry distribution by reporting frequency. Fisher’s test gives the p-value of Fisher’s exact test. *, **, *** denotes significance at the 0.10, 0.05, and 0.01 level (two-tailed tests).

Panel A: Summary statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>QR = 1</td>
<td>QR = 0</td>
<td>Diff.</td>
</tr>
<tr>
<td>BIDASK</td>
<td>0.024</td>
<td>0.052</td>
<td>3.20***</td>
</tr>
<tr>
<td>RETVOL</td>
<td>2.133</td>
<td>2.912</td>
<td>2.67***</td>
</tr>
<tr>
<td>CAPX</td>
<td>0.090</td>
<td>0.100</td>
<td>0.09</td>
</tr>
<tr>
<td>SIZE</td>
<td>119.460</td>
<td>56.170</td>
<td>-6.03***</td>
</tr>
<tr>
<td>TURNOVER</td>
<td>0.000</td>
<td>0.000</td>
<td>-0.18</td>
</tr>
<tr>
<td>FFLOAT</td>
<td>0.570</td>
<td>0.430</td>
<td>-1.73*</td>
</tr>
<tr>
<td>BETA</td>
<td>0.759</td>
<td>0.870</td>
<td>0.70</td>
</tr>
<tr>
<td>MTB</td>
<td>0.999</td>
<td>1.016</td>
<td>-0.41</td>
</tr>
<tr>
<td>CFO</td>
<td>0.149</td>
<td>0.174</td>
<td>0.51</td>
</tr>
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</table>

Panel B: Industry distribution

<table>
<thead>
<tr>
<th>Industry</th>
<th>QR = 1</th>
<th>QR = 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer NonDurables – Food, Tobacco, Textiles, Apparel, Leather, Toys</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Consumer Durables – Cars, TVs, Furniture, Household Appliances</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Manufacturing – Machinery, Trucks, Planes, Off Furn, Paper, Com Printing</td>
<td>4</td>
<td>22</td>
</tr>
<tr>
<td>Oil, Gas, and Coal Extraction and Products</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Chemicals and Allied Products</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>Business Equipment – Computers, Software, and Electronic Equipment</td>
<td>5</td>
<td>11</td>
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<tr>
<td>Telephone and Television Transmission</td>
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<td>1</td>
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<tr>
<td>Utilities</td>
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<td>0</td>
</tr>
<tr>
<td>Wholesale, Retail, and Some Services (Laundries, Repair Shops)</td>
<td>7</td>
<td>13</td>
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<tr>
<td>Healthcare, Medical Equipment, and Drugs</td>
<td>2</td>
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<tr>
<td>Finance</td>
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<td>0</td>
</tr>
<tr>
<td>Mines, Constr, BldMt, Trans, Hotels, Bus Serv, Entertainment</td>
<td>7</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>28</td>
<td>72</td>
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<tr>
<td>Fisher’s test</td>
<td>0.185</td>
<td></td>
</tr>
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</table>
Table 2: Benefits of mandatory quarterly reporting

This table presents the results for the effect of quarterly reporting on information asymmetry. Panel A shows the results for firms with a market capitalization between S$25 million and S$125 million while Panel B shows the results for firms with a market capitalization between S$50 million and S$100 million. In (1) and (2), the dependent variable is the logarithm of the bid-ask spread for the four weeks window starting 30 days after the end of the first quarter of the financial year 2003. The dependent variable in (3) and (4) is the logarithm of the bid-ask spread for the one year window starting 30 days after the end of the first quarter of the financial year 2003. In (5) to (8), the dependent variable RETVOL is the standard deviation of daily returns. Control variables are defined in Appendix A. All regressions use industry-fixed effects based on the Fama-French 12 sector definition. *, **, *** denotes significance at the 0.10, 0.05, and 0.01 level (two-tailed tests). Robust t-statistics are reported in brackets.

### Panel A: S$25 million ≤ MV ≤ S$125 million

<table>
<thead>
<tr>
<th></th>
<th>BIDASK_{short}</th>
<th>BIDASK_{long}</th>
<th>RETVOL_{short}</th>
<th>RETVOL_{long}</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
</tr>
<tr>
<td>QR</td>
<td>0.386</td>
<td>0.247</td>
<td>-0.497</td>
<td>-0.454</td>
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<tr>
<td></td>
<td>[0.71]</td>
<td>[0.59]</td>
<td>[-1.36]</td>
<td>[-1.29]</td>
</tr>
<tr>
<td>log(SIZE)</td>
<td>0.076</td>
<td>0.030</td>
<td>-0.557***</td>
<td>-0.131</td>
</tr>
<tr>
<td></td>
<td>[0.28]</td>
<td>[0.17]</td>
<td>[-4.10]</td>
<td>[-1.02]</td>
</tr>
<tr>
<td>log(TURNOVER)</td>
<td>-0.215***</td>
<td>-0.302***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[-4.73]</td>
<td>[-7.70]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>log(RETVOL)</td>
<td>0.447***</td>
<td>0.723***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[3.15]</td>
<td>[5.45]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>log(FFLOAT)</td>
<td>-0.386*</td>
<td>-0.003</td>
<td>-0.035</td>
<td>-0.102</td>
</tr>
<tr>
<td></td>
<td>[-1.98]</td>
<td>[-0.03]</td>
<td>[-0.31]</td>
<td>[-0.75]</td>
</tr>
<tr>
<td>BETA</td>
<td>0.215***</td>
<td>0.302***</td>
<td>2.996***</td>
<td>3.641***</td>
</tr>
<tr>
<td></td>
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<td>[2.90]</td>
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<td></td>
<td>2.576***</td>
<td>2.496***</td>
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<tr>
<td></td>
<td>[3.18]</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>MV polynomials</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Industry fixed effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Observations</td>
<td>97</td>
<td>97</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Adj. R²</td>
<td>10.8%</td>
<td>39.2%</td>
<td>15.1%</td>
<td>59.8%</td>
</tr>
</tbody>
</table>

### Panel B: S$50 million ≤ MV ≤ S$100 million

<table>
<thead>
<tr>
<th></th>
<th>BIDASK_{short}</th>
<th>BIDASK_{long}</th>
<th>RETVOL_{short}</th>
<th>RETVOL_{long}</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
</tr>
<tr>
<td>QR</td>
<td>0.229</td>
<td>-0.283</td>
<td>-0.562</td>
<td>-0.376</td>
</tr>
<tr>
<td></td>
<td>[0.32]</td>
<td>[-0.41]</td>
<td>[-0.87]</td>
<td>[-0.53]</td>
</tr>
<tr>
<td>log(SIZE)</td>
<td>1.085***</td>
<td>0.628*</td>
<td>-0.213</td>
<td>-0.385*</td>
</tr>
<tr>
<td></td>
<td>[2.80]</td>
<td>[1.89]</td>
<td>[-0.90]</td>
<td>[1.94]</td>
</tr>
<tr>
<td>log(TURNOVER)</td>
<td>-0.245***</td>
<td>-0.335***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[-3.27]</td>
<td>[-5.05]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>log(RETVOL)</td>
<td>0.094</td>
<td>0.476**</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[0.36]</td>
<td>[2.50]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>log(FFFLOAT)</td>
<td>-0.712*</td>
<td>-0.055</td>
<td>0.156</td>
<td>-0.357*</td>
</tr>
<tr>
<td></td>
<td>[-1.95]</td>
<td>[-0.24]</td>
<td>[0.74]</td>
<td>[-2.04]</td>
</tr>
<tr>
<td>BETA</td>
<td>0.234</td>
<td>0.22</td>
<td>0.203</td>
<td>0.131</td>
</tr>
<tr>
<td></td>
<td>[0.88]</td>
<td>[0.96]</td>
<td>[0.88]</td>
<td>[0.96]</td>
</tr>
<tr>
<td></td>
<td>0.313</td>
<td>0.75</td>
<td>1.02</td>
<td>1.00</td>
</tr>
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<td></td>
<td>[1.02]</td>
<td>[1.29]</td>
<td>[1.00]</td>
<td>[1.29]</td>
</tr>
<tr>
<td>MV polynomials</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Industry fixed effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<td>Observations</td>
<td>41</td>
<td>41</td>
<td>43</td>
<td>43</td>
</tr>
<tr>
<td>Adj. R²</td>
<td>0.0%</td>
<td>27.5%</td>
<td>0.0%</td>
<td>13.9%</td>
</tr>
</tbody>
</table>
Table 3: Costs of mandatory quarterly reporting

This table presents the results for the effect of quarterly reporting on the investment level. Panel A shows the results for firms with a market capitalization between S$25 million and S$125 million while Panel B shows the results for firms with a market capitalization between S$50 million and S$100 million. In (1) and (2), the dependent variable $\text{CAPX}$ is the capital expenditure of the financial year 2004. The dependent variable in (3) and (4) is the mean capital expenditure between 2003 and 2005. Control variables are defined in Appendix A. All regressions use industry-fixed effects based on the Fama-French 12 sector definition. *, **, *** denotes significance at the 0.10, 0.05, and 0.01 level (two-tailed tests). Robust t-statistics are reported in brackets.

**Panel A: S$25 million ≤ MV ≤ S$125 million**

<table>
<thead>
<tr>
<th></th>
<th>$\text{CAPX}_{t+1}$</th>
<th>$\text{CAPX}_{t, t+1, t+2}$</th>
<th>$\text{CAPX}_{t+1}$</th>
<th>$\text{CAPX}_{t, t+1, t+2}$</th>
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<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td></td>
</tr>
<tr>
<td>$QR$</td>
<td>-0.313**</td>
<td>-0.267**</td>
<td>-0.251**</td>
<td>-0.197***</td>
</tr>
<tr>
<td></td>
<td>[-2.52]</td>
<td>[-2.33]</td>
<td>[-2.53]</td>
<td>[-2.64]</td>
</tr>
<tr>
<td>$MTB$</td>
<td>0.110**</td>
<td></td>
<td>0.107***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[2.49]</td>
<td></td>
<td>[3.18]</td>
<td></td>
</tr>
<tr>
<td>$CFO$</td>
<td>0.022***</td>
<td></td>
<td>0.038***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>[3.26]</td>
<td></td>
<td>[6.87]</td>
<td></td>
</tr>
<tr>
<td>$Constant$</td>
<td>-0.263</td>
<td>-0.374</td>
<td>0.379</td>
<td>0.281</td>
</tr>
<tr>
<td></td>
<td>[-0.49]</td>
<td>[-0.71]</td>
<td>[1.09]</td>
<td>[0.96]</td>
</tr>
<tr>
<td>$MV$ polynomials</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Industry fixed effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Observations</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Adj. $R^2$</td>
<td>1.1%</td>
<td>5.8%</td>
<td>8.2%</td>
<td>38.8%</td>
</tr>
</tbody>
</table>

**Panel B: S$50 million ≤ MV ≤ S$100 million**

<table>
<thead>
<tr>
<th></th>
<th>$\text{CAPX}_{t+1}$</th>
<th>$\text{CAPX}_{t, t+1, t+2}$</th>
<th>$\text{CAPX}_{t+1}$</th>
<th>$\text{CAPX}_{t, t+1, t+2}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td></td>
</tr>
<tr>
<td>$QR$</td>
<td>-0.395***</td>
<td>-0.353***</td>
<td>-0.296**</td>
<td>-0.262**</td>
</tr>
<tr>
<td></td>
<td>[-3.07]</td>
<td>[-2.88]</td>
<td>[-2.54]</td>
<td>[-2.45]</td>
</tr>
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<td></td>
<td>[2.74]</td>
<td></td>
<td>[4.06]</td>
<td></td>
</tr>
<tr>
<td>$CFO$</td>
<td>-0.043</td>
<td>-0.098***</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[-0.95]</td>
<td>[-2.88]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$Constant$</td>
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<td>2.819</td>
<td>3.903</td>
</tr>
<tr>
<td></td>
<td>[-0.40]</td>
<td>[-0.29]</td>
<td>[0.48]</td>
<td>[1.00]</td>
</tr>
<tr>
<td>$MV$ polynomials</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Industry fixed effects</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<td>Observations</td>
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<tr>
<td>Adj. $R^2$</td>
<td>44.1%</td>
<td>57.2%</td>
<td>25.8%</td>
<td>62.6%</td>
</tr>
</tbody>
</table>
Table 4: Net effect of mandatory quarterly reporting

This table presents the results for the net valuation effect of quarterly reporting. We conduct an event study at event dates changing the probability of mandatory quarterly reporting for some firms. \( QR^* = 1 \) includes all firms for which quarterly reporting became more likely and \( QR^* = 0 \) includes all firms for which quarterly reporting became less likely. We also construct a net portfolio (i.e., Diff.) that buys all firms with a higher probability of mandatory quarterly reporting and that sells all firms with a lower probability of mandatory quarterly reporting. We use an estimation window of 180 days for the market model starting 10 days prior to the event window. *, **, *** denotes significance at the 0.10, 0.05, and 0.01 level (two-tailed tests). Wilcoxon rank sum z-statistics are reported in brackets.

<table>
<thead>
<tr>
<th>Event [Expectation]</th>
<th>Event date</th>
<th>CAR[-1;1]</th>
<th>CAR[-2;2]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( QR^* = 1 )</td>
<td>( QR^* = 0 )</td>
<td>Diff.</td>
</tr>
<tr>
<td>CCDG recommends to exclude firms with a market capitalization of S$20 million or below from quarterly reporting.</td>
<td>10/14/2002</td>
<td>-2.890</td>
<td>-0.986</td>
</tr>
<tr>
<td>[Relief for ( QR^* = 0 ) firms and thus higher abnormal returns: Diff. &lt; 0]</td>
<td>[-0.94]</td>
<td>[-1.03]</td>
<td>[-0.86]</td>
</tr>
<tr>
<td>The government announces that firms with a market capitalization of S$20 million or below (as of 09/30/2002) are allowed to defer the application of quarterly reporting by one year.</td>
<td>10/18/2002</td>
<td>0.105</td>
<td>1.200</td>
</tr>
<tr>
<td>[Relief for ( QR^* = 0 ) firms and thus higher abnormal returns: Diff. &lt; 0]</td>
<td>[0.09]</td>
<td>[0.91]</td>
<td>[-0.41]</td>
</tr>
<tr>
<td>The government announces that firms with market capitalization of S$75 million or below (as of 03/31/2003) are excluded from quarterly reporting entirely.</td>
<td>04/24/2004</td>
<td>-0.647</td>
<td>3.496***</td>
</tr>
<tr>
<td>[Strong relief for ( QR^* = 0 ) firms and thus higher abnormal returns: Diff. &lt; 0]</td>
<td>[-0.23]</td>
<td>[4.60]</td>
<td>[-1.20]</td>
</tr>
</tbody>
</table>
STAKEHOLDER INVOLVEMENT AND INSTITUTIONAL RESPONSE IN VIETNAMESE ACCOUNTING EDUCATION

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ABSTRACT

To date there are only few papers that address the current state of accounting education in Vietnam. Prior research into Vietnamese Higher Education Institutions (HEI) suggestion that despite the development of mass higher education, the quality is deteriorating and the market and the society is losing trust in the ability of universities to produce qualified and skilled graduates. In response, the state, particularly the Ministry of Education and Training (MoET), is reinforcing accountability mechanisms while granting some level of institutional autonomy to these HEIs. However, it is unclear how this reform affects the quality of accounting education. Furthermore, there is little research on the involvement of external stakeholders, particularly professional bodies and accounting firms, in influencing graduate competencies through contributing to accounting programs. This study contributes to the literature by explicitly investigating the involvement of different stakeholders in accounting education within Vietnamese universities. We conduct 17 interviews with representatives from Ministry of Education and Training (MoET) and Ministry of Finance (MoF), the line ministry responsible for accounting/finance-related institutions, professional bodies and accounting firms and university administrators and accounting academics from a leading Vietnamese university.

The findings suggest that MoET, and the parent university, only regulates and supervises an overall curriculum framework but has granted substantial independence to universities, in particular in developing and approving accounting programs. In contrast, MoF has little regulatory authority and only participates in accounting education at university level through a consultative role. There is a strong role of external guidance in accounting education, as external stakeholders such as accounting firms and other employers are extensively consulted with in the assessment, development and modification of accounting curriculum and specific courses. Accounting firms play a more active role than professional bodies in influencing accounting education, with the latter organising various activities to engage with both accounting students and academics, though their access to university/school’s top management is limited. University administrators exercises their given autonomy by undertaking various policies and controls to improve teaching quality and better cater to the changing labour market.
needs. However, the effectiveness of the controls, especially teaching evaluation, is constrained due to no integration of evaluation results to promotion or reward decisions. Academics enjoy substantial discretion in designing and delivering accounting courses but there is a lack of opportunity for collegial decision-making process or individual academics’ contribution to systematic changes in accounting programs. Overall, our study suggests that accounting education in Vietnam is driven by growing institutional autonomy combined with increasing external guidance and reduced state control. However, accounting education quality still depends on the piecemeal efforts of individual academics due to the absence or low effectiveness of system-wide policies and controls that motivate improvements in teaching quality. Our findings enable regulators and decision-makers to better understand the dynamics between stakeholders in accounting education and in developing policies to enhance accounting graduates’ competencies and outcomes.
1. Introduction
Higher education has gone through significant reforms recently. In both developed and developing countries, universities have been corporatized and commercialised, or at the very least, experienced significant changes in their governance and accountability structure (Parker, 2011). A key question for research on higher education is how universities respond to changing environment and external demands (Kehm, 2010). Understanding the forces that constitutes the changing environment of higher education and institutional responses will be critical for informed decision making at university levels as well for related stakeholders of accounting education, including the government, university management, academics, and the community (Parker, 2011). This is particularly salient for accounting education, being criticised as losing its relevance and failing to meet the expectations of the accounting labour market (Bui & Porter, 2010; Crawford, Helliar, & Monk, 2011; Jackling & De Lange, 2009).

Universities are traditionally operating in an environment characterised by complex and sometimes contradicting expectations and pressures. Different environmental influences are interpreted and enacted through the actions of organisational members, such as university and school managers, and academics. However, due to the complexity and variety of environmental forces, organisational members can respond by using different or competing actions (Lounsbury, 2008; Scott, 2001). Hence it is not surprising that different actors within an university may choose a different reaction, or response, to a given environmental stimuli or influence. It is hence unlikely that within each university there will be an uniform strategy developed to deal with environmental pressures (Lounsbury, 2008). Understanding how different actors interpret and respond to external forces is important as it is the interaction, or combination, of these responses will shape the status, and future, of accounting education.

In this context, the objective of this study research study is to examine and add to our knowledge of the involvement of different stakeholders in accounting education within Vietnamese universities. Using views of major stakeholders in accounting education in Vietnam, we examine the development and the effectiveness of the involvement of different stakeholders in accounting education within Vietnamese universities.

The remainder of this paper is organised as follows. The next section briefly explains the Vietnam higher education system and the different pressures and expectations. The third section, reviews the literature associated with accounting education. The fourth section outlines the research objectives and questions. The fifth section describes the research framework employed in this study. The sixth section presents the findings and the implications of these results. The seventh section presents the discussion and conclusions and further areas for research.

2. Vietnam higher education system and the different pressures and expectations
In this study, instead of focusing of developing countries like prior research (Parker, 2011, etc.), we focus on the case of a developing country, Vietnam. Vietnam is an interesting case because it remains a site of contradiction between socialism and a growing market economy (Welch, 2010). The Vietnamese government accords higher education a vital role in producing highly skilled labour in a number of fields. In doing this, two main forces are operational throughout the higher education sector.

The sociologist state-control ideology is still dominant in the Vietnamese higher education system. Vietnam followed a state-directed market economy since 1986 where the state sector plays a decisive role in directing economic development. There has been a general trend towards less control of the state over universities. However, in Vietnam, the management of
universities are still governed by directives and prescriptions issued by the state and the scope of institutional autonomy remains limited (Pham, 2012). The state exercises control through various ministries. Ministry of Education and Training (MOET) has regulatory responsibilities for universities across the system, while a number of other ministries have regulatory responsibilities for individual universities and colleges (Pham, 2012).

Despite the tight state control, the quality of education has been criticised as deteriorating (Khanh & Hayden, 2010; Yamamoto, 2004). There is significant concern over the lack of quality controls within higher education institutions and the dominating perception is that skills of graduates are low and insufficient to keep up with and satisfy the changing market demands. MoET admitted in 2009 that “we have not performed the task of supervising higher education quality effectively, …; not maintained standards of many higher education inputs” (Report 760/BC-BGD&ĐT, 2009, p. 9). In response, the government has launched higher education reform which potentially changes the dynamics between the state control and institutional autonomy. The essence of this reform is the shift of a direct control role by the state to one of stewardship, and the granting of more decision making authority to governing councils of institutions (Hayden & Thiep, 2007; Pham, 2012).

Operating alongside the state-control ideology is the market-driven ideology. The development of the market economy, especially the entry of multinational firms in Vietnam, has increased the demand for high quality accounting graduates. Vietnamese accounting standards in Vietnam have evolved from Vietnam Accounting Standards, to one that seeks to harmonise with international IFRS (Bell, Hoque, Cong Phuong, & Dinh Khoi Nguyen, 2012; Nguyen & Gong, 2014; Phan, 2014). This requires new sets of technical accounting knowledge and skills to be acquired by accounting graduates. University education plays an important role in this process, as it provides the first step to the entry into the accounting profession. Successful and responsive accounting education provides the foundation and will enable graduates to become high quality accounting practitioners in the future. From this market-centred perspective, accounting educators need to change accounting curriculum to respond to market demands and hence remain their relevance. This perspective also suggests that HEIs are disciplined by market mechanisms, and hence HEI management should be given autonomy to run their institutions in the best way that meet the market expectations and preserve (increase) their institutional reputation. Further, the introduction of market mechanisms brings with them competition between universities for resources. Traditionally competition between public owned institutions is rare as they enjoy prestigious status and large block of government funding. However, the entry of private funded institutions may challenge this status as these institutions will undertake strategies to increase the quality and attractiveness of their programmes to prospective students (Pham, 2012).

The literature also suggests relatively minor involvement of external stakeholders and parties in Vietnamese higher education system (Khanh & Hayden, 2010). However, the situation might be different for accounting education. The entry of Big 4 accounting firms and generally increasing demand of high quality accountants will mean that accounting employers might have an incentive to contribute to accounting curriculum development at either the level of MoET, or individual higher education institution. Additionally, international and national professional bodies such as CPA and ACCA can have an interest to influence university curriculum as they provide the foundation knowledge and skills for accounting graduates that will enter their professional bodies. Further, thanks to the globalisation of the accounting profession, accounting students may have much better understanding of the required competencies of professional accountants (Kavanagh & Drennan, 2008), who will in turn place pressures on accounting educators to ensure that their university education is relevant in preparing them for an accounting professional career. Additionally, Vietnamese businesses are
adopting IFRS in a voluntary manner. Though a pathway or roadmap towards IFRS has not been finalised (Phan, 2014), it is clear that understanding and applying IFRS is now a desirable skill among accountants. There are market demands, and motivation for businesses, and particularly Ministry of Finance, to play a role in curriculum development to ensure that IFRS training is included in the curriculum framework. Hence, there is a case for arguing that the involvement of external stakeholders in accounting education will be to a higher extent than those currently observed with other disciplines across the higher education system.

3. Literature review
3.1 The role of the state

A common theme in the restructuring of higher education systems in many countries in the past few decades has been the changing relationship between universities and the state (Amaral, Jones, & Karseth, 2002). Universities have increasingly been exposed to reduced state funding and subsidies and more reliance on market-generated revenues (Gray, Guthrie, & Parker, 2002). Further, the government is changing from an authoritative oversight to granting more autonomy to universities on program control and budgets (Alexander, 2000). Simultaneously the government expects higher education to provide high quality labour forces through massification. The increase in student enrolments, however, puts the pressure on quality. World Bank (1996) observed that “many public systems to operate with overcrowded and deteriorating physical facilities, inadequate staffing, poor library resources, and insufficient scientific equipment and instructional materials” (p.2). Consequently, there is intensified tension between policy makers and university management and faculty due to different objectives, with the former preferring market-based indicators, and the latter favouring those reflecting educational experience. Parker (2011) suggests that universities respond to the varying and divergent expectations by transforming their education towards vocationally-oriented, employment-focused programmes and courses.

Studies conducted in developed countries indicate that university governance reforms might not increase university freedom or autonomy. In the UK, the separation of funding structure for teaching and research has reduced strategic flexibility of universities (Deem, 2004; Lapsley & Miller, 2004). Governance reforms in Western Europe has led to the shift from collegial governance to a model that incorporates management styles of the private sector (De Boer, Enders, & Schimank, 2007). Similarly, the governance reform in Japan may strengthen accountability through performance management but also limits academic autonomy as it requires governmental approval of universities’ administrative and academic goals. Instead of freeing the universities, this model may risk excessive control by the government (Yamamoto, 2004).

Similarly, reforms in developing countries have been aimed at reducing the direct role of governments in providing educational, health, social and other services, in the pursuit of higher efficiency and effectiveness of service delivery (Parker, 2011). However, in Vietnam, the governance of the higher education is still highly centralised. The government exercises control through various ministries (Hayden and Thiep, 2007). These ministries advise the government on how the higher education system can contribute to national and sector-specific targets and goals. Ministry of Education and Training (MOET) has by far the most extensive influence on the system. It allocates enrolment quotes for individual institutions and individual programs of study, decides the block grants and scholarships granted to public sector institutions. It manages the appointment process of university chairs, and organises the nation-wide examinations for admission into universities and colleges. MOET also approves curriculum frameworks for all programs of study across the system (Mai, 2014). Currently MOET has direct management
responsibility for about one quarter of all public-sector institutions, including two key national universities. The rest is still under the direct management of 12 other ministries (Khanh & Hayden, 2010; Mai, 2014).

HERA (2005) redefined the role of the state in the higher education system. Instead of a direct intervening and control role, the state will move to a “stewardship role” whereby it will focus, among others, on the implementation of the development strategy for the system, quality assurance and accreditation. Much decision-making authority of the state will be transferred to the governing councils of institutions (Khanh & Hayden, 2010). When these governing councils become fully operational and self-accrediting, they can be capable of approving each institution’s own curriculum framework (Hayden & Thiep, 2007). Further, HERA tries to remove line-ministry control and replaces it with greater autonomy given to governing councils (Hayden & Thiep, 2007).

3.2 Competition between universities

Competition between Vietnamese universities varies between public universities and private universities. Large public universities that are situated in big cities enjoy large block of government funding and traditionally a prestigious status and hence competition between these universities is limited (Pham, 2012). Thanks to the government support, the tuition fees at these universities are fixed at a low level. In contrast, private universities are people-owned, e.g. set up and operated at a local level by communities or professional organisations. These universities are traditionally viewed as lower-tiered compared to state universities, do not achieve state funding based on the number of enrolments, and hence has to raise their funding totally from student tuition fees. Due to the lower reputation and higher tuition fees, these universities would have to try harder in developing their accounting curriculum so as to gain credibility with prospective students and increase their standing with the labour market. Furthermore, some competition has emerged between institutions as they are allowed to admit “in-service” out of quota students (that pay higher tuition fees than in-quota students). Institutions can also decide whether they want to use university-wide cut-off mark for entrance or use discipline/faculty-specific cut-off marks (World Bank, 2008). Hence, universities can compete to have higher quality students by using higher cut-off marks.

3.4 External guidance and role played by other stakeholders

Much of the accounting education reform efforts around the world have been driven by calls from professional bodies (e.g. Accounting Education Change Commission, 1990; Bedford et al., 1986). Universities have made changes to their accounting programmes in order to make accounting education more responsive to the profession’s demands. Despite this, Boyce (2004) suggests that accounting education continues to display technical reductionism and shows little evidence of substantial change in content.

In response, professional bodies and employers can act as new players in the education market. Multinationals, or professional bodies start to offer their own undergraduate or postgraduate qualifications, believing that this might be a better way to meet their labour needs. For example, ICAA in Australia has gained approval to award a Graduate Diploma to all ICAA candidates completing the CA programme (Howieson, 2003). Furthermore, accounting practitioners have much potential to offer to accounting education as they have practical experience to bring richness to the classroom. Besides, they can use teaching opportunities to identify suitable candidates for recruitment (Howieson, 2003). In the context of Vietnam, it is required that each institution has a governing body that comprise of external members. It is still debatable what role these external members play in influencing the accounting curriculum and graduate competencies (Pham, 2012).
3.5 University management

Studied conducted in developed countries indicate that the roles played by university administration are being redefined. Vice chancellors and principals are turned into chief executive officers, with governing boards being downsized to be similar to a corporate board and a managerialist style of the private sector dominating the university administration (Parker, 2011). Senior management positions are dominated by professional managers, whose authority and power are increasing. With this has come declining autonomy given to disciplines, departments and schools. The ability of academics to make strategic and operational decisions, such as degrees to be offered, mode and content of delivery is increasingly limited (Neumann & Guthrie, 2002; L. Parker, 2011). The study by Enders et al. (2013) using data from Dutch university systems suggests that university autonomy has shifted from reliance on institutional trust and professional autonomy to a new concept of “regulatory autonomy” where universities become the strategic actors and implementer of governmental control. At the same time that choices are made to strengthen managerial discretion and internal control of universities, more state policies are issued to steer organisational choices.

In Vietnam, though HERA proposes to increase autonomy granted to institutions, in reality, institutions have been reluctant or have little experience to make their own decisions. Most of the key decisions, including curriculum framework, admission, budget and staffing, investment, are made by MOET. University management has little authority to make any real long term impact on the management of their institution (World Bank, 2008). Further, there are insufficient internal and external quality controls. With the central placement and admission system, even schools with low quality programmes survive (World Bank, 2008). Control on teaching quality is mostly through “encouraging” activities. Teaching is monitored mostly through quantitative indicators, such as starting and finishing time of lectures, or absence rate of lecturers from their assigned lectures (Mai 2014). University management is reluctant to undertake performance evaluation of individual lecturers, mostly due to the absence of directives or guidance from MOET. There is no university-wide monitoring, as well as no comparison between plan and actual performance (Mai, 2014).

Despite this, there might be signs that Vietnamese universities are undertaking different strategies to increase their status, revenues and become more competitive. Student teaching evaluation has been made compulsory for accounting courses at many universities (Pham, 2012). Some have developed new academic programmes and set up partnership agreements with overseas universities. They are also offering programmes in English in order to attract students, boost their national and international ranking, and enable them to charge higher tuition fees (Anh and Winter, 2010, p. 164). This in turn will give universities more revenue and flexibility in their strategic and operational activities (Anh & Winter, 2010).

3.6 Academic authority and accountability

Prior studies suggest that as a result of the performance management reforms within universities, academics are losing their role as independent and professional scholars and the ability to operate and make decisions in a collegial manner. Instead, they are being redefined as specialised employees of the corporatized university, such as teaching expert, research managers or marketing specialists. Further, their teaching and delivery mode and content are increasingly geared towards more instrumental, functionalist, employment focus (Parker 2011). Indeed, the study by De Boer et al. (2007) conducted in four countries: England, the Netherlands, Germany and Australia find a general decrease in academic self-governance while the other four mechanisms, including state regulation (except for England where it decreases), external guidance, managerial self-governance and competition gained in momentum and importance.
However, Boyce (2004) maintains that despite efforts to disempower academics, their role in such activities as syllabus design, text selection, setting and marking assessments, delivering teaching in front of the class, remains. Further, the accreditation of professional bodies of university accounting courses may indeed increase the power of academics. Even within the constraints of the technical materials accredited by the professional bodies, academics have substantial discretion in the way they deliver such materials (L. D. Parker, 2001). While the influence and power of individual academics reduce, the importance and prevalence of peer review in determining resource allocation through the “quasi-markets” has increased (de Boer et al., 2007).

However, it is uncertain whether the higher education reforms in Vietnam has much impact on academic self-governance. Quality management remains in the control of academics through course designs and peer evaluation. At the university level, a training and scientific committee is responsible for academic development plans and the opening or closure of certain study programs. However, the effectiveness of academic self-governance is increasingly questioned (Pham, 2012). One possible reason for this is the excessive workload for academics resulting from the compulsory curriculum framework. A four-year degree program typically requires 210 credit points. Each unit of credit is equivalent to 15 hours of lecture classes, or 30-45 lab work, or 45 to 90 apprenticeship (World Bank, 2008, p. 29).

4 Research Objectives and research questions
Rather than examining the whole governance system within the Vietnamese HEIs like some prior studies (Anh & Winter, 2010; Enders et al., 2013; Khanh & Hayden, 2010), our study’s aim is to examine the ideologies and mechanisms that drive the development and delivery of accounting programs. The state provides a coercive pressure on accounting education through a curriculum framework that prescribes the general objectives, the minimum knowledge requirements, and the structural components of non-accounting and accounting courses (Pham, 2012). However, there might be some level of discretion exercised by university management and academics (Yamamoto, 2004) especially in relation to how they teach and deliver the materials to students. Academic autonomy and self-governance is critical to the creation and transfer of knowledge, and the fulfilment of the societal role entrusted to universities. Simultaneously, external stakeholders such as accreditation bodies, professional bodies and accounting firms are trying to reinforce and increase their influence on accounting programme through a variety of mechanisms and pressures (Brown & McCartney, 1995; Etherington & Richardson, 1994). Provided the inherent tension between state control, market mechanisms, and academic autonomy, it is important to examine how university management and academics in Vietnamese universities manage and overcome the structural constraints and prescriptions of system, and respond to different pressures to ensure continued relevance and attractiveness of their accounting curriculum. Answering this question will have relevance for not only developing countries such as Vietnam, but also developed countries where accounting education continues to experience the challenging forces of decreased and changing state funding, increasing market competition and generally shrinking academic autonomy (Parker, 2011).

This study seeks to uncover the stakeholder perceptions and influence on accounting education, with a particular focus on curriculum development within higher education institutions in Vietnam. We are interested in the role played by the following stakeholders in the shaping and changes to the accounting programme.

- Government authorities including MoET, line ministries and Ministry of Finance
- Accounting professional bodies
We also examine how university players respond to these institutional and competitive pressures by different stakeholders. The university players include:

- University management (the rectors, governing councils and central university management units and functions)
- Deans and school managers
- Accounting academics

The main research question addressed by this study is:

*How do Vietnamese universities respond to and accommodate multiple pressures and influences from various stakeholders in the development and delivery of accounting programme?*

The sub-research questions are:

1. What role is played and the level of influence made by different stakeholder groups in the process of curriculum development?
2. What strategies are used by universities to reconcile the increasing need for institutional autonomy with the continued state control and supervision in developing the accounting curriculum?

5. Research framework - Higher education governance model

As we examine the role played by different stakeholders in accounting education, it is appropriate to adopt a theoretical framework that allows simultaneous investigation of the various forces that affect higher education. De Boer et al. (2007) proposed a heuristic tool for exploring changes in higher education governance, what they call a “governance equalizer”. This includes five dimensions: state regulation, managerial self-governance, external guidance, market competition, and academic self-governance, where:

- **state regulation** refers to the state’s regulation and directives that regulate an institution’s behaviours;
- **managerial self-governance** refers to hierarchical authority within an institution. For an university, this include rectors or presidents at the top level, and deans in the middle level, and the role played by these actors in goal-setting, decision-making and policy implementation within the institution;
- **stakeholder guidance** refers to influences of external stakeholders through goal setting and advice. These stakeholders can be delegated by the state to guide an institution in carrying out certain regulations. However, stakeholders can also be other organisations that are independent of the state;
- **market competition** in higher education refers to the competition among and within universities for scarce resources through “quasi-markets”, including students, funding, money, personnel, and prestige.
- **academic self-governance** refers to academic authority in determining institutions’ goals and supervising operation as well as outcomes. This mechanism implies a collegial decision-making style and a reliance on peer review.

We will be applying de Boer et al (2007)’s model to examine changes within the accounting education programme offered within Vietnamese universities. Using this model, we aim to
investigate which types of governance are the most dominant within Vietnamese accounting education, and through which, explore which stakeholder plays the most significant role in affecting accounting education change. Further, this enables us to understand the strategies adopted by university and school management and academics in responding to these external influences and maintaining or improving the quality of accounting education.

We modify this model to accommodate the recent changes in higher education systems in Vietnam. We will separate these elements into external forces and internal forces. External forces include those coming from the state, the market, and other external organisations. We call the role of the state as “state regulation and control”. In the case of Vietnamese accounting education, the state refers to two key government agencies: Ministry of Education and Training, that is in charge of regulating and supervising all educational organisations in Vietnam; and Ministry of Finance, that is in charge of accounting and finance-related programmes and a number of higher education institutions set up specifically to meet the labour needs of the finance sector in Vietnam.

The market refers to other universities and the competition between universities for students and funding. However, the market also includes the students themselves, both existing and prospective, and possibly their parents, as their perceptions and expectations will undoubtedly will have an impact on the approach and strategies adopted by university management and academics. We term this “market competition and expectations”.

External guidance, for the purpose of our paper, includes the influences from accounting employers and accounting professional bodies, and other accreditation bodies that might have a direct or indirect impact on accounting education at the university level. However, as there might be direct participation in accounting education, we term this role as “influences from other stakeholders” as guidance implies a more detached role.

The two internal forces include managerial self-governance and academic self-governance. University and school management issues policies and decisions that affect the curriculum structure and content of the accounting programme, as well as implements controls to ensure the teaching and learning quality. In particular, school management can play a role of delivering university-level policies and decisions to academics (which mimics a top-down managerial model) or represent academic interests and viewpoints of their respective schools and faculty (which mimics an academic self-governance model) (de Boer and Goedegebuure, 2009).

Academic self-governance refers to the discretion and autonomy exercised by academics in their teaching activities, independent of the influences from university or school management. As the direct deliverer of accounting education to the students, academics can choose to acquiesce to the demands from the market, the state, or other stakeholders, or comply with the rules and policies set by university or school management (Boyce 2004). They can also choose to circumvent these pressures and rules, and adopt their own individual styles and approaches (Parker 2011). Alternatively, they can exercise discretion as it is allowed within the limits set by regulations and rules (Parker 2001). Academics can also find new ways to expand their influence, such as through peer review systems and their role in determining resource allocation (de Boer et al., 2007).

These different external and internal forces will cause different impacts on accounting education. They forces can be supplementary, or contradict each other. University managers and academics, in responding to these different forces, can choose to accommodate all of them if the forces are supplementary or consistent with each other. However, if the forces are contradictory, inevitably university managers and academics will have to choose to be more
responsive to one or some forces than the others, or even comply with one/few force(s) at the expense of the others. Simultaneously, academics are not powerless in the face of these forces. They will try to maintain their autonomy and authority, at least in some areas of decision making. Their self-governance will interact with the internal and external forces in driving the process and outcomes of accounting education. Notably, the state, the market and other stakeholders can also influence accounting education directly. For example, professional bodies can organise career seminars with accounting students without the involvement from academics. However, they can also do so within the parameters allowed by university management or academics. Hence, we argue that the external forces can only affect accounting education through the interpretation, or the decisions made by internal forces. Figure 1 highlights our research framework, adapted from de Boer et al (2007)’s model.

![Research framework](image)

**Figure 1: Research framework – Stakeholder influence and university governance of accounting education**

### 5.1 Method
We select a case study to examine these research questions. This case organisation is University of Economics and Law (UEL). This university is one of the eight prestigious universities merged to become a university group called Vietnam National University Ho Chi Minh City (VNU-HCM). This group was founded on 27 January 1995 to become a “the centre of excellence in education and research in Vietnam” (VNU-HCM, 2015)). This parent university has the same level of authority as MOET, and hence its member universities have to follow not only prescriptions by MOET but also directives and strategies developed by VNU-HCM. Different from other public universities that are under direct control of state agencies (MOET,
MOF and MPI), VNU-HCM controls key policy decisions on organization, enrolment and funding of member universities (World Bank, 2008).

The Mission of UEL is

“UEL contributes in the social development and progress by ways of training, researching activities and offering high quality services in the fields of economics, management, and law.” (UEL, 2015)

One of the researchers used to be a lecturer at UEL. She used her contacts at UEL to approach the rector and relevant university managers. Based the contacts gained her years of working for UEL she was able to interview a number of accounting lecturers and students. A letter of introduction was written by the rector to introduce the researcher to relevant external stakeholders, including MOET and MoF, professional bodies and employers. While most of the interviewees are recruited based on direct personal contacts and introduction by the rector, some interviews are gained through the snowballing method.

In total, we conducted 17 interviews. The interviewees other than the students are those that have occupied their current position for at least 3 years, and in most cases, have substantial experience working for the organisation (more than 5 years). Furthermore due to their position and experience they are deemed the most appropriate to represent the viewpoint of the institution's management level or the external organisation. The accounting students interviewed are Year 3 and Year 4 students, who have completed, or almost completed the accounting programme.

Each interviewee is sent an information sheet and where applicable, the letter of introduction. Once he/she agrees to participate in the research he/she is sent a list of interview questions and consent form, at least 2 days before the interview. The interview is organised at the time and place convenient to the interviewee, normally in his/her office. No compensation is given to the interviewee. All the interviews are semi-structured whereby a number of questions (5 to 6) are used to guide the interview, but the interviewee is encouraged to explore or focus on the areas that he/she is most interested in, or has the most knowledge about. Some demographics questions are asked at the start of the interview, as an ice-breaking exercise, but also to collect information on the interviewee’s background, teaching experience and expertise, etc. As all the interviewees are Vietnamese, the interviews are conducted in Vietnamese. All the information sheets, letter of introduction, sample interview questions sent and related communication between the interviewer and the interviewee(s) are also in Vietnamese.

Most of the interviewees were undertaken by the aforementioned researcher and took place in Hochiminh city. However, some interviewees represent MOET and MoF, which are located in Hanoi. These interviews were hence conducted by a second researcher, who was based in Hanoi at the time. The interviews last from 40 minutes to 2 hours. The average length of the interviews is 50 minutes.
A list of sample interview questions are included in Appendix 1. Generally, most interviews cover the following five main issues:

1. Role played by different stakeholders
2. Strategies used by institutions in the areas of curriculum design, academic development and promotion, and course design, delivery and assessment, and teaching quality controls
3. Strategies used by individual academics in ensuring teaching quality
4. Directions for the future/desired changes

All the interviews are recorded by two separate devices. The interviews are transcribed and translated by a Vietnamese language specialist. We use two specialists, both of which had to sign transcriber confidentiality agreements. They were tested and trained by a researcher in the research before commencing their work.

The translated transcripts were coded using Nvivo10. A coding tree was established based on the study’s research framework. The main nodes are: managerial self-governance, academic self-governance, state regulation and control, market competition and expectation, and influences from other stakeholders. Relevant sub-nodes were developed using the insights gained from the coding process. Two researchers were involved in the coding. A third researcher constantly provided guidance, feedback and double-checking to ensure reliability and compatibility of the coding. Based on the coding, the researchers were able to discern the perceptions and activities of different stakeholders in influencing accounting education, as well as the strategies used by university players (management and academics) in responding and accommodating these stakeholders’ pressures.
6 Findings
6.1 State control

The most relevant state agencies in our case are MOET and MOF. MOET, as the agency with the most extensive system-wide authority, exercises its control on universities through direct and indirect methods. Directly, it issues the curriculum framework for undergraduate degrees that all universities have to follow. However, both MOET officers and interviewees from UEL suggest that this framework also prescribes the general parameters, leaving the content to be determined by individual institutions. LE2 clarifies “the framework includes two groups of subjects that are ‘compulsory’ and ‘elective’. Among compulsory courses, there are only some general courses that have to follow the guideline of the ministry. Other compulsory specialized courses and elective courses are up to the school of accounting to decide.” The compulsory courses include such general courses as Marxism-Leninism, Communist Party history, economic theories. Though some students interviewed thought these courses to be unimportant, the lecturers and government officers think that they are very relevant, bringing “philosophy and reasoning to the syllabus” (SM1) and hence they benefit all students, disregard of their disciplines.

Despite this, MOET officers themselves admit that the framework is too detailed as it specifies compulsory and optional subjects for individual disciplines/fields. An officer suggests that the “right framework” will need to cover only “the percentage of basic and specific knowledge or the level of difference among fields” (ME1). This will ensure the harmonization and consistency among schools that educate in the same disciplines. However, tension arises as schools want independence in developing their own programs. Hence, despite a common curriculum framework, there are wide discrepancies and varieties in the content and structure of accounting programs offered among universities and colleges.

Hence, harmonisation has given way to institutional autonomy as universities are given the right to build their own education programs. MOET only regulates the process universities has to follow in developing new programs. Specifically, each school needs to establish an investigative group to find out the market’s need, and then, forma program development team that includes experienced lecturers and representatives from businesses. The new program must be discussed and assessed by a board of professional internal and external consultants. MOET also set “requirements of degree, experience and the percentage of external participants” on this board, and only a maximum of two lecturers can join this board. In the case of accounting programs, emphasis is placed on the representation of professional bodies and accounting firms on the board. Each school’s scientific board then approves the new program. Hence, the regulated “democratic and scientific” procedure ensures that “education will be scientific, latest updated and suitable for practical needs” (ME1), and that it is not “a product of any individual or authoritative management” (ME2).

Against our expectation, we do not find that the state is authoritative in the way they set or communicate regulations. An officer from MOET explains “if [universities] cannot understand the implications of standard-setters, we will publish guidelines or host workshops to help them apply better. For example, next year we will host training courses in application” (ME1). There are some differences in viewpoint between MOET and universities, but in most cases these difference are minor, because before setting new regulations, MOET seeks consultation from universities.

MOET also issues regulations relating to the tuition fees applicable to different types of classes offered within each programme. These are normal classes, high quality classes, and talented classes. Students in normal classes follow the traditional curriculum delivered entirely in
Vietnamese and pay a subsidised fees (about 5 million VND per academic year). High quality classes provide higher quality education, through more qualified teachers and better teaching facilities and materials. However, the university also charges higher tuition fees (“the students in these classes would pay about 5 times the amount a student in a normal class would pay a year, so that makes it about 20 million VND a year”, UM1). Talented classes are designed for top students in each year, selected based on university entrance exam, excellent English language skills, and a GPA over 7.5. These classes receive significant support, funding, and scholarships from the government and hence they are the best quality classes in terms of student input, teaching quality, and graduate outcomes in the university. Overall, the level of teaching investments into talented versus high quality classes is similar. The major difference is “their sources of finances”, “one’s income comes from the government subsidies and the other comes from students’ tuition fees (UM1).

All university players (managers and lecturers) were of the view that MOET’s control on enrolment number and tuition fees is the main hindrance to the university’s ability to respond to changing market demands and improve teaching quality. Some universities have high quality staff and are able to offer new classes or admit more students, but their enrolment number is capped by MOET. Similarly, low tuition fees paid by normal students lead to large classes and restrict institutional ability to upgrade teaching equipment’s or facilities, or hire more staff. However, there are signs that this may change in the future as MOET grants more financial autonomy to universities. A lecturer explains:

> Maybe in the next few years, universities can only be independent in terms of finance. The scale of admissions still need to adhere to the regulations of MoET. From what I've heard, the MoET will not give specific requirements for universities in terms of admission, but monitor the process through a student to teacher or teacher to student ratio and the availability of facilities. (LE3)

To ensure compliance with its regulations, MOET conducts inspections at selected universities annually. However, these inspections are mainly structure and process-based, rather than to check specific content of educational programs. MOET set up a separate inspection department 6 years ago that specialises in assessment, publishing official documents and setting out assessment criteria (ME1). The elements of programs subjected to inspection include:

> We will check if schools do surveys, how is the results and the way they carry out, if they involve foreign programs in. Also, who are included in the board of creators of program, if they are experienced and skilled enough, are there any presentatives from businesses. We examine reports of assessment and agreement of consultants and the board of science. Annually, if schools hold activities to update new information. Except from what I have just listed, we cannot decide the subjects’ content. (ME1)

Hence, despite the various regulations and supervisory activities, MOET control on universities is not as extensive or effective as one would have expected and universities have significant discretion regarding their accounting programs. However, this granted autonomy also causes significant concern among some interviewees, especially those from MOF. An officer from MOF was dismayed at the fact that any university can offer an accounting programme, disregard of their teaching/academic orientation or focus:

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1 However, as the funding from the state is limited, each year UEL can only take in 50 students on average for these talented classes and can only offer this class for the accounting/auditing major. High quality classes “bring in foreign modules and teach more in English” and “there are also more activities for the students to partake in”, such as company tours and internships at accounting firms (ME2).
Just like the agenda to invest in and open up new businesses, the situation is still very chaotic. That means that universities are still allowed to open its doors, regardless of whether they have sufficient resources or satisfy the prerequisite requirements or not. Technology institutions should focus only on technology. Why do they want to extend the scope of their teaching to accounting? (MF2)

In contrast to MOET, MOF has little influence in any educational or training aspects of universities, except for universities directly under its authority (10 finance-focused universities and colleges). Hence, MOF has no say on whether accounting program offered by a particular university is of adequate quality, or whether a new accounting program should be established in the first place. The role of MOF with regards to accounting education is consultative rather than intervening, as “sometimes we have universities [that are under MOF] send us their textbooks and materials for us to review and monitor the changes in legislation and standards as well as the allocation of knowledge among the courses”. MOF interviewees were concerned that MOET supervision of universities is too loose, and consequently a recent inspection conducted by MOET has found out that many universities are “not qualified to be even be established”, and many others do not have “appropriate amount of teachers and resources” (MF2).

Hence, MOF has little engagement with universities, those that are not under MOF supervisory authority. Even when it does, it comes out of “professional responsibility” rather than legislated authority (MF1). MOF partners with some finance universities, who “usually organize events and ask the MoF to participate”, but overall they are not very active in this (MF2). MOF officers who are considered experts in the field are also invited to participate in some projects or guest lecturing, but this does not happen often. In contrast, MOF has close relationship with industry, through both official and unofficial channels. For example, auditing companies usually contact MOF to ask for advice on particular transactions and annually, or to present up-to-date information on accounting standards or policies. MOF also consults accounting firms regularly in the process of writing accounting standards.

MOF also seeks to exert their influence on accounting education through students and lecturers. They send employees to talk to students about current legislations and standards, and about how to apply accounting knowledge or theory to practice. While the students highly appreciate this, MOF interviewees acknowledge that their influence is too minor to make a difference on accounting education.

Instead, a more appropriate strategy is to influence lecturers. MOF writes accounting books that are based on their own research, and guidelines by International Accounting Standards Board and Big4 firms. These books and materials are shared with lecturers. Additionally, they organise direct meetings with accounting lecturers to discuss about practical situations (MF1). The most challenging task, however, lies in changing the mind set of lecturers. An officer lamented “many teachers still keep the old mind set of learning theoretically despite us emphasizing many times of the need to teach methods... They do not renew the information, the thinking and the teaching method. Nowadays, many people regard their Master’s or Doctor’s degree as a jewellery, their research does not stick to reality. They even collect information from some sources to make up a supposed-to-be research, so in which way teachers like that can educate active and independent students” (MF1). Hence, despite their efforts, MOF officers that their influence is limited to young lecturers or those that have been educated overseas.
6.2 Control by parent university

As indicated in Methods section, NU-HCM is one of the two national universities that are almost autonomous from MOET. Many of the functions carried out by MOET are instead delegated to the national university (NU), which will impose the regulations, rules, and standards on its member universities, including UEL. For example, NU regulates the level of admission quota of UEL, though the tuition fee bands are still regulated by MOET. In the past, UEL has to gain NU approval for offering a new program, but similarly to universities under MOET supervision, members of NU are now “much more independent in building their own programs” (UM1). The NU also develops a standards system that evaluates training programs, including accounting. There are also a standards system that evaluates all the universities in the countries and international standards. However UEL decides to adopt the NU standards systems as it is very comprehensive and facilitates the inspection of teaching quality by NU (“one of the best methods to evaluate the quality of education and teaching” (SM1)). Though complying with these standards “create more work for the teachers” (LE2), it enables UEL to improve its reputation and prestige. NU also carries out inspection of its member universities. This process involves several steps.

First of all, there is internal evaluation within the school, which is done by experienced staff. They will look the current state of the school and offer their opinions. The school base on these opinions to improve their teaching quality to prepare for a higher level evaluation. NU has an inspection committee that will visit the university for a week to give their evaluation based on their research of the university. All of this evaluation is to help the school see its current state, strengths and weaknesses in order to develop its strengths and work on its weaknesses to improve the overall teaching quality. Once internal evaluation is complete and the documents are ready, the university will invite AUN to come for an inspection. (LE3)

Through this comprehensive process is designed not to find faults or assign blame but mostly helps to improve teaching quality. The positive impacts of this assessment are that the accounting school is ensured that “our syllabus has been recognized by the society” and the exercise pushes lecturers “to improve their knowledge and skills so that students can study one of the best syllabuses” (SM1). Further, NU supports its member universities by providing courses on advanced teaching method for lecturers. Hence, overall, university players including managers and lecturers are very positive about the influence of NU. As a senior administrator puts it “National University only supports us, not control us (SM1).

6.3 External guidance

As highlighted above, external stakeholders play a relatively important role in accounting education, in particular with regards to the development of new programs or modifications of existing ones. This is mostly through the channel of each school’s advisory council. A senior manager explains:

Normally, when there appears any change, we often send information to businesses to get their feedbacks. From their comments, we build the proposal for the change which will be assessed by the advisory council of the Department. The advisory council includes not only the board of management of the Department but also representatives from university and from auditing firms. Moreover, the opinions of lecturers and students, the main objects of the change, are appreciated. Only after the assessment can we implement the change. (SM1)
A representative from MOF asserts that it is critical that accounting education respond to market demands. Firstly, the requirement that companies apply IFRS in their financial reporting means that accountants need to update their knowledge and skills and hence accounting programs need to change accordingly:

*When we join the international stock market, our financial statements must be created in accordance with IFRS. Therefore, from approximately 2020, listed companies and public sectors will have to prepare IFRS standardized financial statements, as it is required by the Ministry. But private sectors can apply lower standards. Though now is not the right time to apply IFRS, the MOF always set out the target is to increase the quality of financial statements to satisfy the new investment environment. In terms of the recruiters, they also require knowledge, skills and ethics of accountants to prepare standardized statements so that they can join international market. In fact, businesses want financial statements created for their sake rather than general purpose. So accountants need to be skilled enough to do that.* (MF1)

External stakeholders also play a role in the assessment of training quality of accounting programs. Each school is reviewed for its strengths and weaknesses by the university, and this review includes “the input of many related parties – students, alumni, employers, labour market, job agencies, etc.” This input from related parties highlights “the areas that we haven’t done well in order to best meet the requirements of employers”, based on which corrective action is undertaken (LE3).

However, other than occasional feedback on assessment or new/existing programs, professional bodies and employers do not have a direct or frequent impact on accounting program or lecturer. Most of the activities are organised to engage with students, or student clubs. For example, accounting firms set up partnerships with accounting clubs and associations within universities “organize regular events and activities, with employees sharing their experiences in terms of knowledge as well as soft skills”, or “competitions for students to improve their knowledge” (EM1). Furthermore, they give students support both in terms of “finance and expertise” (EM2). Employers provide some short course trainings, in which they “teach students how to write CVs, answer interview questions and we can ask senior level employees at our company to come and share with the students” (EM2). Slightly differently, professional bodies including ACCPA and CPA often engage students through competitions where they invite all accounting schools and award prizes such as internships or company tours:

*It’s mainly focused about accounting and auditing knowledge and soft skills. The students would start out by taking a test; if they pass the test then they proceed to the next round where they’ll have to exhibit their presentation, negotiating and problem solving skills based on each individual case study. Sometimes we award prizes in the form of internships or job offers.* (PB1)

Besides, professional bodies and accounting firms not only organise seminars at universities but also in their own premises, with a more selective student audience. Students often find that those conferences at accounting firms are “more exciting” where the attendants are “final year students” (ST1) and “they tell us very specifically about the hiring requirements, for example standard GPA, skills, about the salary, bonuses and activities” (ST2). From these seminars and conferences, students find that there are “a lot opportunities” in the accounting profession and realise the things “that we have to try a lot harder in” to get recruited (ST1). Another student told the experience of a company tour in a Japanese company that makes him want to work for a Japanese firm as “there isn’t distance between the director and his employees, as they all sit in the same room… there also isn’t too much pressure” (ST3). This led him to learn Japanese
and English to improve his language skill to increase his chance of employment. The employers themselves acknowledge that company tours is one of the most effective channels that “give the students a lot of motivation” and have triggered substantial change among students’ efforts and competence:

Most of the students who have participated in the company tours or attended seminars where senior level employees share their experiences are motivated to become these role models. So their academic performance and how they are before and after the interview rounds become very different because they have a lot of motivation. They say that the activities in their final years have a lot of impact on them in terms of career orientation and knowledge accumulation. (EM1)

Accounting schools are generally reluctant in engaging with professional bodies or accounting employers. In particular, the training department at universities, or head of accounting schools, hardly ever approach employers about recruitment, except for “international schools such as RMIT or British University Vietnam” (EM1). Additionally, accounting employers can be involved in accounting education through guest lecturing. However, again this is normally an ad hoc effort by individual lecturer who would “invite us to come and talk about a specific issue, for example, auditing or a particular accounting standard”, rather than a systematic policy at the school or university level. UEL is relatively more proactive than other universities by designing and offering “special subjects for students and in those subjects, we invite Chief of finance, chief of accountants or CEO to discuss with students so that they can compare between theories and practice” (SM1). This suggests that there is opportunity for more involvement by external stakeholders in accounting education, but this depends on the initiative and support from school/university management.

The career seminars organised by the initiative of the accounting employers themselves, are often in the partnership with the school’s union or student accounting clubs. In these seminars, “we give them some role models, but we also point out for them the difficulties that they are to encounter in the future as a professional, and show them the support available to them to help them overcome these challenges” (EM1). These seminars serve multiple purposes: “first is to advertise ourselves, second is to let the students and potential candidates know and consider choosing us… apart from that, it is also a way to develop the profession” (EM2). Overall, these activities suggest that professional bodies and accounting firms seek to increase their influence on accounting education, but their impact has been confined to engagement with accounting students, and ad hoc feedback on assessment results or program development process. This may limit the extent of change in accounting education as initiated by the accounting profession and accounting-related labour market.

6.4 School/ University management

While each university has autonomy in adopting new training programs, the responsibility of monitoring the implementation of regulations related to teaching activities lies with the head of school or each schools’ management committee. However, the one ultimately responsible for this and that the authorities and the public hold accountable is the principal. The ministry monitors these activities periodically by administrative supervision. An officer from MOET clarifies “if this year we plan to inspect this and this school at some predetermined date, then when the date comes they would go about inspecting the schools as planned. They will invite inspectors to come and do this job. Usually, the inspection is strictly based on whether the schools have implemented the regulations correctly” (ME2).

In developing a new program, the school advisory council and University Scientific committee take a most critical role. The rector explains the hierarchical process in building new programs:
First and foremost, the school needs to take the initiative in building its program. It needs to send a proposal to the university council, but before the council can give its approval, it needs to consult the science council of the university. Each school has its own advisory panel as regulated in the university’s constitution. However, the final decision still needs to be made at the university level. The university, based on the framework and number of credits, has to make sure that the training program is appropriate for students and that the program equips students with a firm foundation so that they can extend their study to other majors that are related to the field of accounting if they want to. (UM1)

The scientific council usually includes other head of schools, head of training department and the dean. Similarly, the school’s advisory committee is normally comprised of management staff (LE2). These ones build the programs, while “the teachers only give their suggestions” (LE2). This suggests a managerial focus in curriculum development as the managers, being held accountable to the regulators, will ensure that the regulations are properly followed. This is consistent with the “regulatory autonomy” style suggested by Enders et al. (2013).

While MOET specifies the tuition fees chargeable to different types of classes (normal, high-quality, and talented classes), the university has discretion in how to run or organise the high-quality and talented classes. Previously at UEL, all talented students are put in a separate class. However, in the future, they plan to focus on courses, and hence, these excellent students will be put in a separate class for each of the core subjects. This requires the university to put more investment in these subjects, especially in the choice of teachers (UM1). An area that receives significant managerial attention is courses that are delivered in English. In the accounting school, two courses were offered in English to talented classes: International Accounting and Management Accounting. In the future, the university will offer three other accounting courses taught in English to all the students, not just the talented class. However, “English is used 100% for talented bachelor class while normal classes have both languages. When teaching, we use both English and Vietnamese; however, assessments and materials are 100% English” (SM1). The interviewed students differed widely among themselves in their perception of the effectiveness of these courses in English. Some are concerned that “there are some terminologies that I may not have got correctly. So if they teach 100% in English, I won’t be able to understand” (ST2) while another posits that “learning in English helps you more in working in international environment” (ST1). Besides, the university is seeking to “implement the double major model more aggressively” by “partnering with other universities of the NU network” (UM1). This will give more choices to students as well as extending their skill base.

As discussed above, the university is gaining more autonomy from both MoET and the parent university in a number of areas. First, they will be able to set tuition fees “that is more appropriate for each major and training program”, though “the fees still need to have a ceiling level” specified by MOET (UM1). Independence in setting fees will enable university to offer supporting policies for different types of students. For example, they can “have the students pay back the universities the student loans after they graduate and go to work in case students do not have financial support from their families”. (LE3). Further, the university can determine the enrolment number for each school/program. The admission criteria is based on some basic factors, one of which is the availability of teachers. At the school of accounting, they regulate a student to teacher ratio of 25:1, hence depending on the number of lecturers the school can calculate how many accounting students are admitted each year. Thirdly, the university is independent in determining the number of credits for each course, and for each program. The rector specifies “the number of credits need to be in a certain range, and the university will calculate so that it matches the international standards better” (UM1).
Hence while substantial autonomy is exercised by university management, school management does not have much empowerment. The role of school managers is mostly to implement the regulations, rules and policies imposed by the regulators or top management. Rather than advocating for academics’ interest, they work more like middle managers that embed the managerialist and hierarchical values of top management. This is further confirmed by the promotion and appointment policy of the university. Qualifications are the first criteria, as head of school and course leaders need to have a PhD degree, while other management positions will need at least a Masters degree. This determines the level of expertise required for the position, as course leaders/head of school will be in charge of research and academic staff. More importantly, they will need “experiences in management and always improve his skills in university management and administration. He needs to be dedicated and have a long-term commitment with the university” (UM1). This suggests difficulty and reluctance to appoint academic staff to management position, unless he/she has substantial experience in management, which makes them more oriented towards a managerialist rather than collegial and professional governance style. However, there is a general feeling that this is changing, as in recent years the university has “valued young teachers very highly and gives them a lot of opportunities” and if “young teachers can prove their worth, they will be given a chance to be appointed into one of the management positions to help direct the university’s future operation” (LE3). However, it is recognised that this remains difficult as older teachers with more experience tend to “have a slight advantage over younger ones” and younger ones have to “show their strengths more strongly” if they want to outperform older teachers (LE3).

A major control used by the university to manage teaching quality is teaching evaluation completed by students. Instead of individual lectures conducting the evaluation for their own courses, this is done by a central unit called the Academic Assessment and Quality Control Department (AAQCD). This department process the results and “report the positive and negative points to the university council and the management of the school for them to personally discuss with teachers” (UM1). University administrators consider this one of the most important channels that allow them to “see teachers’ strengths and limitations”, and determine things like “whether they come to class on time, whether they announce the learning objectives to students, and what assessment methods do they apply to the students, etc.” (UM1). Besides looking at the results, the managers also discuss them with course leaders to arrive at more objective evaluation. Top managers posits that the evaluation results will be used to assess teachers’ performance and consider rewards or titles to give to each teacher (UM1), as this forms one of the three criteria (the other two criteria are “whether he participates in the school’s activities or if he contributes to the society or not” and “the teachers’ research progress” (UM1). Ironically, both the school management and academics consider such evaluation to be of little significance. This is particularly true for teachers that receive high evaluation scores: “there is no reward, it is only a channel to assess the quality of education” (SM1), and “the school doesn’t look to these factors to consider promotions and pay raises” (LE2). The only impact is when a teacher receives consistent negative feedback. In that case, “the university and the school management will personally discuss with him on what could be done differently to improve his performance” (LE3). In most cases, this has resulted in better performance. However, management itself acknowledges the lack of sanctions on poor teaching performance. This is part due to the labour law but also the reluctance of dismiss teachers based on teaching performance:

At the moment, in some courses, we don’t have enough teachers, unlike foreign institutions, where teachers can have their contract terminated if they fall short of the requirements. In Vietnam, teaching contract is usually effective for 3 years, and it’s not easy to refuse to sign new contracts with a teacher after the previous one expires. There
are courses not only in this program but also in other programs that do not have enough
teachers. That’s why this is one of the difficulties of the university right now. There are
teachers who have received negative feedback, but they are very resistant to change or
to improve themselves. We know that, but evaluation must constantly be conducted to
see how the teacher changes after we have discussed with him. (UM1)

The academics also do not take teaching evaluation very seriously or positively. Some consider
them objective, some do not. One in particular highlighted that teaching evaluations bring both
negative and positive impacts. Firstly, it highlight the problems that teachers can take into
account to improve their teaching, however, on the negative side, students can “lose their
respect for teachers because they feel like they have the right to judge teachers”, which the
lecturer does not think is “correct thinking in light of the Vietnamese culture” as “Vietnamese
education is social, so it does not place an emphasis on profits”. Further, some teachers may
receive bad evaluations from students because they have given students low marks, which
makes the exercise less objective (LE2). Further, the evaluation may worsen the relationship
between the teachers and the students and reduces the teacher’s passion for the job:

*Sometimes the teachers feel frustrated and no longer are passionate about their job.
Compared to other universities, our teachers are generally passionate about teaching.
As I’ve discussed with you earlier, the university’s financial policies don’t have a lot of
incentives, so most of the teachers’ incentives come from their love for teaching. And if
that is already what teachers have established, they must consider their relationship
with the students of utmost importance.* (LE2)

The university can also manage teaching quality through its HR policies. One sensitive area is
the policy regarding lecturer’s undertaking of private work. According to labour law, a teacher
is not to be directly involved with management of businesses outside the school. However, for
such a practical major as accounting, “there is a need for lecturers to gain experience when
working and teach in university (SM1). Hence, in general, the university and the school
encourage lecturers to gain more practical experience, though there is no official document
issued to that effect. However, when this comes from being involved simultaneously in private
work, it may become a problem if it leads to the teachers ignoring their teaching and research
responsibilities (UM1). Hence, the requirement is lectures need to complete their teaching
objectives first (LE4). Further, there is a newly established accounting law which states that
civil service lecturers cannot sign the financial or audit reports of another firm” (SM1). This
may reduce the extent and incentives for lecturers to be involved in private accounting work.
Overall, the university “unwritten rule” is that teachers are allowed to undertake part-time
private work as long as it does not obstruct their ability to fulfil teaching and research
responsibilities. In the accounting school, this unwritten rule has resulted in a high proportion
of lecturers with practical experience. A recent NU assessment has shown that the accounting
schools education program has “high practicality” as “all lecturers when I recruited had
practical experience and some are working in the business world” (SM1). Simultaneously, the
involvement in multiple work activities (especially when private work pays much better than
the modest salary made by lecturers) has led to some lecturers neglecting their core
responsibilities and teaching quality suffers as a result.

Many interviewees consider that supporting higher education or training for lecturers is a key
strategy to increase education quality. The university gives teaching hour deduction for
teachers currently involved in pursuing higher studies (PhD) of 70 lessons (50% workload
reduction) which equates to about 30 million VND over the course of 3-4 year study. The
lecturers can also take the cash, or the teaching hour reduction. However lectures do not
consider this a strong incentive. Though both administrators and lectures would have consider
overseas study over domestic study (he or she can enhance the language ability, accessibility to the world, and ability to write journal”) (SM1), they find it hard to accomplish due to two reasons. First, they need to find scholarships themselves or seek government scholarships, which are normally not sufficient to cover living costs overseas, and few lecturers have enough personal savings to cater for the difference in the costs. Furthermore, many lecturers cannot arrange family matters to concentrate on study overseas. Domestic study is therefore more popular among UEL lecturers as it allows them to continue teaching hence does not create an HR problem for the university, and the university is able to support by exempt or paying for domestic tuition fees (UM1).

6.5 Market competition

Market competition comes from two sources: competition between universities and competition among schools or lecturers. Our data do not suggest significant competition between universities, especially among state-funded universities, for students. In particular, NU universities, including UEL, enjoys a long tradition and a prestigious status as the centre of teaching and research in the country, and hence are viewed very positively by prospective and existing students. The real competition is between universities for the recognition and ranking by the market and the employers. The external stakeholders agree that international and advanced schools are the most proactive in approaching employers. They do so to set up long term relationships with employers, firstly for the students’ benefits. For example, these partnerships allow the schools to get recruitment opportunities to students in more timely and informed manner. They can also get students to participate in more activities from professional bodies or accounting firms, which in turn increase the exposure to the profession for the students, as well as more recognition of the stakeholders of their students’ competencies.

To enhance their university’s ranking by external stakeholders, UEL offers a lot of courses that let the students apply the theory that they’ve learnt. The practical experience of the accounting lecturers is a key factor: “most of the teachers have had many years of working experiences, and some of the teachers still do some work in the industry and offer consultations to businesses” (LE3). Another lecturer explains, “UEL enables the students to practice accounting and taxes. So in terms of application, UEL students are very quick to adapt after they graduate. However, UEH doesn’t focus too much on these two areas. They focus instead on academics. That’s why, as far as I know, when they start working, UEH students have a slight advantage in terms of application. But in the long run, UEH students have better at arguments, and thus are more likely to be promoted to higher level positions” (LE2). In fact, the accounting school has recently completed an internal evaluation and the feedback from auditing firms and job agencies has confirmed the strengths and ranking of the school’s accounting graduates in the job market. The school also finds out that the proportion of UEL students who are offered a job at Big 4 firms, which mean they satisfy all of the firms’ requirements is about 20%. The ratio of UEL students admitted into Big 4 is “almost the highest out of all the accounting schools in the southern region of Vietnam” (LE3).

Another channel through which the market has an impact on accounting education is through student teaching evaluation. As students are the direct recipients of accounting education, they can be considered the customers who will exert pressures among lecturers to improve their teaching. However, teaching evaluation process as currently designed at UEL has not been very effective in channelling this pressure. An online survey is recently been used whereby students have to complete teaching evaluation before so that they can view their grades. The interviewed students consider that this makes the evaluation less objective and insightful than the paper-and-pencil survey. Further, as the evaluation is done at the end of the semester, the students feel little can be done from the evaluation results, hence this reduces their motivation to
contribute constructive ideas to the evaluation. Thirdly, as the results are only disclosed to the university and the lecturers and not the students, the students cannot determine and compare the teaching performance of different lecturers. The students are aware that besides teaching evaluation, they are able to provide direct feedback to lecturers. However, cultural values can be a barrier here as “because in Vietnamese culture, complaining to someone senior is considered rude. I always give them compliments and have never complained to anybody” (ST1). Hence, though there are mechanisms available for students to have an impact on accounting education, this impact is limited either due to the way the mechanism is designed and used or the cultural perception regarding the appropriate behaviour towards someone of an older age or senior position.

6.6 Academic self-governance

Given the controls conducted by the university in program, academics are given some level of autonomy in designing the accounting courses. Within the curriculum framework prescribed by MOET, other compulsory specialized courses and elective courses are up to the school of accounting to decide. The teachers in the school would first suggest courses to the school, and these suggestions have to be approved by the advisory council of the school which comprises of experienced lecturers and experts from the industry (LE1). Similarly, accounting courses are reviewed every two years, with input and ideas collected from lecturers and students (SM1). Hence, the role of lecturers with regards to course design and modification is limited to advice or feedback, rather than the real decision-maker.

There is also evidence of collegial and professional decision making process at the course and subject level, especially with regards to assessments. A lecturer explains “the curriculum (syllabus) for each course will also be established by all the teachers. In order to ensure that teachers follow the prescribed curriculum, different teachers have to agree on a common exam paper. This way they have to follow the curriculum to ensure fairness in student evaluation across different classes” (LE3). Some other courses have incorporated international accounting and auditing standards in their teaching and require students research these standards, which have improved their argumentative skills (LE2, LE1).

Individual autonomy is exercised through other activities, in particular in determining teaching materials, content and delivery methods. As every teacher because each has his own way of teaching for different classes, it is up to them to decide which textbooks and materials they want to use. A combination of different materials is very common: “usually teachers of UEL write textbooks published by the National University Publishing House. Sometimes teachers use materials written by teachers and experts outside the school” (LE1). Furthermore, as Vietnamese accounting standards are increasingly based on international accounting standards, it is not unusual for lecturers to use “materials from large institutions in the world” (LE3). In some specialized accounting courses of the accounting program, there is already a common textbook which all the teachers must use but lecturers are free to suggest and use additional reference materials. Delivery methods are also totally up to each lecturer to decide: “there are those who like to use slides and those who like to use chalk and blackboard” (LE4).

A key channel for communication of information among lecturers and between lecturers and school managers is school meetings. However lecturers have significant reservations of these meetings as a channel to discuss ideas or contribute to decision making. A lecturer comments “I think it is just a formality, it’s not really sharing. Some people would share about their research progress, but there is no real exchange of information. Teachers rarely discuss with each other about teaching” (LE4). Another lecturer considers the meetings an important venue to learn problems and solutions: “Through these meetings, if I have any problems, I’d ask
teachers that I think are more discerned than me in those problems for advice. I think if I have a problem, I am not the only one who has that problem. So I only need to address the problem once in the school meeting, people with the same problem will also get to know the answer (LE3). However, lecturers consider there are other more effective ways to communicate than the school meetings, such as emails. A lecturer recalls a recent experience where he found an issue of “buying and holding bonds until maturity date” that has not been addressed in accounting regulations: “So I sent an email to all the teachers in the school to ask about the issue. Of course, I don’t simply ask the question but I also offer my own view on how to deal with the issue. Most teachers agree with my view, and when Circular 200 was implemented, the issue was dealt with exactly like how I thought I would (LE3).

Previously the school meetings are combined with seminars to share teaching ideas or practices. However, the school manager when appointed saw little effectiveness of such combination and instead organised separate teaching seminars. He suggests that “through monthly seminars, lecturers can exchange their ideas and expertise” and he wants to do this monthly so that lecturers “develop a habit to exchange knowledge, expertise and methods…and involve more actively” (SM1). However, there is a barrier to sharing due to a generational gap between older teachers, who have a lot of experience and are domestically trained, versus younger teachers with little experience and who are overseas trained. Younger lecturers have little opportunity to contribute to decision making because “they need experiences in order to discuss these (management) matters, and …they’ve just got back from studying abroad” (LE2). Though younger lecturers can contribute to teaching related matters, their ideas are often not highly appreciated as “older teachers grasp the school’s operation a little bit better, because younger teachers do not understand the macro issues of the school very well and only focus on the classes that they teach. Younger teachers who are trained abroad will view things from the perspective of the country where they’ve learnt” (LE1). This perception of the younger lecturers lacking the experience and the wide perspective seems to have limited the sharing of information within the school, despite the availability of mechanisms for such sharing to take place.

Outside the accounting school, there is a potential for lecturers to make a difference through inter-university academic network. However, this network is not formal [“currently in Vietnam, as far as I know, we do not have association of universities or accounting departments” (SM1)]. However, the accounting school has “a close relationship with other accounting departments and universities which own accounting departments through conference, discussion to improve expertise, and clubs”. The discussion is initiated at the university level rather than individual relationships among lecturers, and other universities send their representatives to participate in such discussion. However, “this exchange is not effective or frequent enough” (SM1). Again, despite the mechanism is available, its effectiveness is limited for academics to spread their impacts.

7. Discussion and Conclusion
This study seeks to understand the involvement of stakeholders in Vietnamese accounting education. This is done by interviews with different groups of internal and external stakeholders to accounting education, including the regulators, professional bodies and accounting firms, accounting students, university and school managers, and academics.

Prior literature suggests that increasing tension between the state, faculty and academics as a result of changing state expectations and management of universities. However, our study does not find such tension to be prevalent. The state indeed plays the stewardship where it only
issues a general curriculum framework but leaves the development and approval of new programs or courses to university management. The state manages higher education quality through issuing regulations relating to the process of developing new programs, and conducting selected audits to ascertain the extent that such regulations are followed by universities. Here an interesting dynamics is observed whereby the regulations are written to ensure high involvement of external stakeholders such as accounting firms and professional bodies and external consultants in accounting school’s advisory board who has the authority to approve new programs and courses. Hence, the state reduces their direct influence but instead creates a mechanism to increase the influence of the labour market on accounting education. As a result, accounting programs are becoming more vocationally-oriented and employment-focused. Whether autonomy is increased by reduced state intervention is questioned in some prior research (Deem, 2004; Lapsley & Miller, 2004). However, we find that the trend in Vietnam might in fact enhance institutional autonomy, especially with regards to determining tuition fees or enrolment numbers, though this is more a future development rather than a current fixture. Furthermore, we find that the role of line ministries is being removed or diminishing, in particular the ability of MOF to have a say on accounting programs. Their role is increasingly limited to a consultative one that applies to only a set of universities that are within the direct authority of MOF. As a regulator that issues accounting standards, this limited impact of MOF on accounting schools and programs partly causes the lack of control on accounting education quality and the ability of any university to offer accounting programs disregard of their academic or practical orientation or vision. However, this seems to be a conscious trade-off by the state: institutional autonomy is promoted and granted at the expense of harmonisation of curriculum structure and content and system-wide quality control.

In the case of UEL and NU however, this trade-off is not so obvious. Besides having the power to set enrolment quota and approving new programs proposed by member universities, the parent university also puts in place rigorous evaluation standards and processes. These standards and processes ensure that while member universities have significant autonomy in many of their activities, it is in their best interest to comply with these standards voluntarily to be recognised by the parent university and the public at large, hence increasing the social standing and prestige. This suggests that this may be an effective governance model where the parent university replaces and/or supplement the role of the state in higher education. The parent university does not have to spread their resources to supervise as many institutions as MOET (which may sacrifice the supervisory quality) and can focus their efforts on ensuring consistent high educational quality among a limited number of member institutions.

Our study finds that external guidance is the most apparent through the members of the profession and the labour market present on accounting schools’ advisory council. The fact that a maximum of two lecturers are allowed on this council suggests minimal autonomy of academics to pass the programs or courses that they prefer. Possibly a combination of choice by the academics and significant influence by external stakeholders in the approval process that has led to an increasing practice orientation in accounting program (at least within our case study). However, other than this involvement in the approval process, professional bodies and accounting employers have little direct impact on accounting lecturers. Accreditation of training programs by professional bodies is not yet a common practice in Vietnam. While ACCA starts to exempt some accounting courses for students of selected leading or high-ranking universities, this is often triggered by student initiative rather than a systematic effort or partnership between universities and professional bodies. Furthermore, consistent with Howieson (2003) we find that professional bodies and accounting firms contribute their expertise to accounting education through a variety of activities to engage with accounting students. They range from guest lecturing, career seminars, conferences and workshops,
student competitions, to internships and company tours. Doing this enables them to influence student motivation and learning methods/approaches, but their reach or influence on accounting lecturers or accounting schools’ managers is very limited or ad hoc. For accounting schools that might be reluctant to change they are unlikely to put forward new courses or programs, and in that case, the role of external guidance enabled through regulation will be minimal.

Our study also does not find evidence of direct competition between universities for students or resources. The interviewees from the case study university does not acknowledge competition from private-owned universities or other state-owned ones as a threat that trigger them to change. The prior literature suggests that state owned universities enjoy traditional privilege of state funding and high social standing and reputation. However, this is definitely not a taken-for- granted assumption by the interviewed university managers andacademics. They seek to maintain their reputation and privilege through different strategies, including offering new English-based programs or courses, setting up different class type to fit different students’ academic and financial capabilities, voluntarily adopting evaluation standards to gain recognition by the parent university and the society, and directly partnering with accounting employers to give more access and information to their students. These strategies enable them to engage with the market and increase the market’s perception of their educational quality and competitiveness, which in turn ensures the continuation of important resources such as high-quality students and employers’ support and recognition of the accounting school and university. Despite this, the impact of accounting students as the customer on accounting education is limited. The major mechanism through which they affect accounting education is teaching evaluation. However, this does not increase competition between lecturers in terms of teaching performance as the evaluation results are obtained through an online survey and not disclosed to students. Further, the Vietnamese culture restrains students’ ability or willingness to voice negative feedback directly to lecturers.

Our study also provides evidence of managerial governance by university management. The university management, in particular the rector, is held accountable to the state in compliance with regulation. While the state is yielding more decision areas to university management such as setting tuition fees, number of enrolment and credits for each program/course, the state ultimately exercises its control through accountability by the rector. Our results also do not support that the rectors or university management represent professional or academic interest. Both the university scientific council and each school’s advisory council are comprised of management staff such as head of school, deans, and course leaders. The appointment process confirms that only people with lots of management experience are appointed to managerial positions. Though these people also need suitable postgraduate qualifications hence they are not “professional managers” (Parker, 2011), more involvement in managerial responsibilities than academic ones indicate their orientation towards managerial values rather than academic freedom or authority. Furthermore, the due influence of industry representatives and professional bodies on the advisory council may result in further penetration of managerialist approach in the running of accounting school and programs. We also do not find evidence that university management is reluctant to exercise their autonomy. Indeed, in our case study, university management initiates a number of changes to training programs, such as offering double majors or English-based classes or courses. Teaching evaluation as an internal quality control is compulsory rather than encouraging. It is monitored by an independent body, the university’s Academic Assessment and Quality Control Department. However, not being taken seriously by lecturers themselves as well as not being integrated in promotion or reward structure has hindered the effectiveness of this control in improving teaching quality.
These changes in external and internal governance mechanisms have significant implications for academic authority and autonomy. We find that academics have refined their role into either teaching workers/experts or administrators with distinctive work role responsibilities and expectations. Lecturers focus on their classes or courses and do not participate in decision making process at the school or university level and vice versa, administrators are not involved in academic matters, which are left largely to group of lecturers to decide within each course/subject. However, it is undeniable that academics have very limited impact on the decisions made as school meetings do not provide an effective channel for discussion or information sharing and young lecturers are not considered to have appropriate experience to contribute to management matters. Academic autonomy is retained at subject/course level such as delivery methods, teaching materials and assessments. Though there is course review every two years our data do not suggest that peer review plays an important role as a quality control. Peer review is not utilised in teaching evaluation process. Further, there is a potential for sharing knowledge and experience among academics through staff seminars and inter-university academic network but both of these mechanisms have not been used actively. Our study suggests that academics still retain limited discretion in their teaching activities but there is little evidence of collegial and professional decision-making within accounting schools. Instead, higher education reforms seem to shift power from the state and academics to university management and external stakeholders.

The results presented in this paper are not necessarily representative of the whole Vietnamese higher education system or developing countries, as the case study is among the elite group of universities that are considered by the government to be leading in research and teaching excellence. However, the evidence from this case study suggests significant reservations in the effectiveness of the reform. The reform has led to reduced state control and increased managerial governance within university system, with higher, though limited, role played by external guidance and market competition. This has resulted in less academic authority and autonomy. Increased managerial governance and external guidance have increased the practice orientation in the accounting program, but the impact might be superficial as teaching quality controls implemented by university management and activities undertaken by external stakeholders do not have engage lecturers directly or motivate them to change. The implication for regulators and university administrators is that there needs to be regulations or policies that require system-wide integration of teaching controls into reward and promotion structure, or enable more active engagement of lecturers with external stakeholders. This however simultaneously requires that academics are given more say in the decision making process, or the reinstatement of the collegial governance model. Being detached from the decision making process may lead to negative consequences, e.g. academics buffering themselves from managerial and external influences and resisting change that can improve the quality of accounting education. To examine whether these implications hold true in the case of other Vietnamese universities, or similar developing countries, in comparison with the lessons already from developed countries, is a fruitful area for future research.
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Appendix 1: Sample interview questions

Questions for faculty/school management or subject managers

1. How does MOET regulate and supervise accounting curriculum and accounting education quality of universities?
2. What are the mechanisms for developing and managing the core papers in the accounting curriculum?
3. What are the mechanisms for managing teaching quality at the university, faculty and subject level?
4. In which areas that your university has autonomy?
5. In which areas that accounting lecturers have autonomy?
6. What are the relationships between the university/faculty with Ministry of Finance, professional bodies, and accounting firms, and training cooperation’s with international partners (if any)?
7. What impact do students have, if any, on accounting education?
8. What are the other mechanisms used to encourage the improvement of teaching quality (lecturer training/further education, knowledge sharing, using teaching materials from international universities, ect)?
ABSTRACT

This study shed light the unknown economic effects of the capitalization of goodwill by focusing the relation between goodwill and cost of capital. Prior literature about the economic impact of capitalizing goodwill have focused on the value relevance of goodwill, or the relation between goodwill and shareholder value, and find there is a positive relation between goodwill and shareholder value, which means goodwill is value-relevant. Unlike these prior studies, I focus on the cost of capital, and find that there exists a positive relation between goodwill and cost of capital even after controlling already known risk factors including market beta, book-to-market ratio, firm size, and price momentum. This result implies that larger goodwill amounts lead to higher information asymmetry, and in consequence, higher cost of capital. This paper could have implications for equity investment decision. According to the findings of this research, investors could view accounting goodwill as another risk factor. Therefore, you could be required to take into account for goodwill when you estimate the firm’s cost of capital for corporate valuation.

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1. Introduction

Historically, M&A deals in Japan have not been common. Kester (1991) argue that the characteristics of Japanese enterprises such as the presence of “Keiretsu”, which is characterized by main bank system and cross-shareholding, and the custom of lifetime employment could control the mergers and acquisitions (M&A) activities downward. However, this situation changed in the late 1990s. Many of the M&A deals during this period were caused by temporary factors such as the restructuring of heavy industry in the face of intensified international competition and the restructuring of the financial industry following the collapse of the bubble economy and deregulation (Miyajima, 2007). In the 2000s and later, many M&A deals have regularly occurred to achieve growth in many industries, including the information and communication industry and the pharmaceutical industry (e.g., the 2006 acquisition of Vodafone Japan corporation by Softbank and the 2011 acquisition of Nycomed, a Norwegian pharmaceutical company, by Takeda Pharmaceutical Company Limited).

Along with the growth of M&A activities in Japan, the amounts of accounting goodwill recorded on the balance sheets of Japanese firms have increased drastically in recent years. In Japan, there were only 242 firms have goodwill, the amounts of goodwill is collectively worth ¥ 667.9 billion (approximately US$ 5.5 billion*) in 1990, which increased to 1,185 firms, ¥ 19 trillion (approximately US$ 155.7 billion) in 2013. That is to say, the amounts of accounting goodwill on Japanese firms have risen 30 times in past two decades. Thereby, this data implies that goodwill become one of the important assets for Japanese companies. Based on a long-term perspective, since Japanese enterprises are facing with a shrinking domestic market and expansion in emerging markets, it is expected that they will acquire firms more aggressively for growth, and the amounts of goodwill will increase in the future.

Given this situation, what kind of economic effects are expected from the capitalization of goodwill? Prior literature about the impact of capitalizing goodwill have focused on the value relevance of goodwill, or the relation between goodwill and shareholder value. Shareholder value is the function of income measurement such as cash flow, earnings, or dividends, and discount rate, that is, cost of capital, in common valuation formulas like discounted-cash-flow model, residual income model, or discounted-dividend model. Therefore, it is also needed to analyze the effect of goodwill on the cost of capital when we investigate the economic effects of the capitalization of goodwill. To the best of my knowledge, there are no studies that directly investigate the link between goodwill and the cost of capital. In addition, goodwill seem to be much subject to the influence of information asymmetry since goodwill reflects the future excess profit from this M&A, mainly based on the unobservable information. Hence, goodwill could be related to cost of capital through information asymmetry. In this paper, I shed light the unknown economic effects of the capitalization of goodwill by investigating the relation between goodwill and cost of capital.

This paper reveals that the larger amounts of accounting goodwill is related to higher cost of capital. From additional analysis, I find that the positive relation between goodwill and cost of capital is stronger for firms with lower managerial efficiency. These results support the hypothesis that goodwill push up the firm’s cost of capital through information asymmetry. This paper contribute the literature by revealing the relation between goodwill and cost of capital, which is unknown from prior studies, and shed light the another new economic effects of the capitalization of goodwill.

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* Converted at 122 yen to a dollar.
The remainder of this paper is organized as follows. Section 2 reviews prior literature and develops hypothesis. The research design and the method of estimating the cost of capital is presented in Section 3. Section 4 describes our sampling method and sample data. Results of the main analysis, additional tests and robustness checks are presented in Section 5, followed by a conclusion in Section 6.

2. Prior Literature and Hypothesis Development

A number of prior studies about the economic effects of accounting goodwill have focused on the value relevance of goodwill, and there are, to the best of my knowledge, no studies that directly investigate the relation between goodwill and cost of capital. Accounting goodwill is acquired in M&A, or business combination. When M&A deal is executed, the managers of the acquiring firm estimate the future excess profit, which is expected from this M&A, mainly based on the subjective information that is unobservable from outsiders. And then, they make a pricing decision for the acquired firm. The acquirer recognize goodwill, which is measured as the excess of the purchase price over the net of the amounts of assets acquired and the liabilities assumed in the business combination. Figure 1 shows the relative relation among acquiree’s amounts of assets and liabilities, purchase price, goodwill, and future excess profit which is expected from a business combination. It is clear from Figure 1 that goodwill is recognized as an asset based on the future excess profit from a business combination.

In prior literature, many studies find the evidence that implies goodwill is recognized as an asset reflecting the future excess profit. Li et al. (2011), for example, find that goodwill impairment loss is negatively correlated with the growth rate of sales (or operating income). This result implies the manager recognizes goodwill impairment loss when he thinks that some or all expected future excess profits would be unlikely to be realized. Thereby, it seems that goodwill reflects future excess profit expected from a business combination. In addition, many prior studies find goodwill to be value relevant (e.g., Jennings et al. 1996, McCarthy and Schneider 1995, Henning et al. 2000, Bugeja and Gallery 2006, Nagata 2002, Yamaji 2008, Nakano and Shirabe 2015). If goodwill doesn’t reflect future excess profit, the stock market wouldn’t value goodwill on the firm as an asset because the firm couldn’t achieve future economic profit from goodwill. Hence, these studies imply that investors view goodwill to be based on future excess profit expected from a business combination.

Estimating the future excess profit reflected in goodwill, the manager of acquirer mainly depend on the subjective information that is unobservable from outside investors. So, the difficulty for outside investors to assess the uncertainty of the future excess profit could drive information asymmetry between managers and outside investors. Prior literature about fair value measurement have showed that there is greater information asymmetry between managers and investors as it is difficult for investors to validate the managers’ fair value measurement (e.g., Landsman 2007, Penman 2007). Based on these prior studies, Song et al. (2010) investigate the effect of fair value hierarchy information, which is defined by Statement of Financial Accounting Standards No. 157, *Fair Value Measurements* (SFAS No. 157)\(^4\), on the value relevance of fair value measures. Using quarterly reports of banking firms in 2008, they find that the value relevance of Level 3 (unobservable) fair values is lower than that of Level 1 (most observable) and Level 2 (indirectly observable) fair values. Since Level 3 fair

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\(^4\) SFAS No. 157 require firms to disclose fair value assets and liabilities by levels, which are based on inputs for the measurement: (1) Level 1, observable inputs from quoted prices in active markets, (2) Level 2, indirectly observable inputs from quoted prices of comparable items in active markets, identical items in inactive markets, or other market-related information, and (3) Level 3, unobservable, firm-generated inputs.
values are unobservable and firm-generated inputs, there seems to be greater information asymmetry between managers and investors for Level 3 fair values than higher level fair values. In prior literature, both theoretical and empirical studies show that information asymmetry increase the cost of capital (e.g., Diamond and Verrecchia 1991, Baiman and Verrecchia 1996, Easley and O’Hara 2004, Botosan et al. 2004, Hughes et al. 2007, Armstrong et al. 2011, Lambert et al. 2012). Thereby, the findings of Song et al. (2010) imply that information asymmetry between managers and investors lead to higher cost of capital, and consequently, lower the value relevance of fair values.

I now turn discussion to the future excess profit reflected in goodwill. Since the future excess profit is estimated mainly based on the subjective information, which is unobservable firm-generated inputs, as is the case with Level 3 fair values, it also seem to be subject to the effect of greater information asymmetry. As mentioned above, several studies show that information asymmetry push up the cost of capital. Therefore, since accounting goodwill is recognized as an asset reflecting the future excess profit from business combinations, the larger the amounts of goodwill are recorded on the balance sheet, the greater information asymmetry for acquirer firm is presented. Lambert et al. (2012) show that information asymmetry increase investors’ assessment of uncertainty, thereby raising the risk premium demanded by investors in an imperfect competition setting. Therefore, I develop main hypothesis in this paper:

Hypothesis: The larger the amounts of goodwill are recognized as assets, the higher the cost of capital.

More precisely, whether the larger amounts of goodwill lead to the higher cost of capital or not depends on the relative difference of information asymmetry between goodwill and other assets. If information asymmetry for the former is greater than that for the latter, larger amounts of goodwill will lead to higher cost of capital. If not, larger amounts of goodwill will not necessarily push up the cost of capital. However, other assets include such as cash, cash equivalents, securities, land, building, property, plant, and equipment, which assets seem to be in lower information asymmetry than goodwill, which reflects the future excess profit estimated mainly based on unobservable firm-generated inputs. Thereby, it seems plausible to expect that information asymmetry for goodwill is greater than that of firm’s other assets, and as a result, larger amounts of goodwill lead to higher cost of capital.

3. Research Design

3.1. Estimation of the Cost of Capital

To examine the relation between goodwill amount and the cost of capital, it is needed to calculate the cost of capital for each firm-year observation. In this paper, I estimate the cost of capital that is implied in current stock prices and analysts’ earnings forecasts based on two models introduced by Gode and Mohanram (GM) (2003) and Easton (2004). These models stand on abnormal growth in earnings model proposed by Ohlson and Juettner-Nauroth (2005). Gode and Mohanram (2003) estimate the implied cost of capital (R_{GM}) based on the following equation (1).

\[
R_{GM} : \quad P_t = \frac{EPS_{t+1}}{r} + \frac{EPS_{t+2} + r \times DPS_{t+1} - (1 + r)EPS_{t+1}}{r \times (r - g_p)}
\]
In this equation, \( P_t \) means the share price at the time \( t \). \( EPS_{t+i} \) : expected earnings per share for \( i \) (\( i = 1, 2 \)) years after, \( DPS_{t+1} \) : expected dividend per share for the next year, \( r \) : the cost of capital, \( g_p \) : long-term growth rate. \( P_t, EPS_{t+i}, DPS_{t+1} \) are measured at four months after the fiscal year-end and I assume the future dividend payout ratio to be similar to that of previous year. The implementation of this model requires that \( EPS_{t+1} > 0 \) and \( EPS_{t+2} > 0 \). I use a numerical approximation program to solve for \( r (R_{GM}) \) that equates the right- and left-hand sides of the equation (1). To estimate the implied cost of capital (\( R_{MPEG} \)), Easton (2004) assign 0 to \( g_p \) to transform the equation (1) to the equation (2)\(^6\). The model (2) requires that \( EPS_{t+2} \geq EPS_{t+1} > 0 \). Similarly, I use a numerical approximation program to solve the equation (2) for \( r (R_{MPEG}) \).

\[
R_{MPEG} : P_t = \frac{EPS_{t+2} + r \times DPS_{t+1} - EPS_{t+1}}{r^2}
\] (2)

In addition, the equation (3) is derived by assuming no dividends (that is, \( DPS_{t+1} = 0 \)).

\[
R_{PEG} : P_t = \frac{EPS_{t+2} - EPS_{t+1}}{r^2}
\] (3)

In this paper, I call the implied cost of capital estimated based on the equation (3) \( R_{PEG} \). The model (3) requires that \( EPS_{t+2} \geq EPS_{t+2} \).

There is little consensus in the literature on which models perform best (Gode and Mohanram 2003, Botosan and Plumlee 2005, Botosan et al. 2011, Guay et al. 2011). Therefore, I follow Hail and Leuz (2006, 2009) and Chen et al. (2009, 2011) in using the median (\( R_{median} \)) and mean (\( R_{mean} \)) of the estimates from these three models as our measures of the cost of capital to mitigate the effect of measurement errors and biases associated with one particular model. To control for the risk free rate (\( R_f \) = the yield on 10-year Japanese government bonds), the dependent variables used in this paper are \( RP_{median} (= R_{median} - R_f) \) and \( RP_{mean} (= R_{mean} - R_f) \).

### 3.2. Model Specification

We investigate the effect of goodwill on the cost of capital by estimating the following two regression models that include different control variables:

\[
RP_t = \alpha + \beta_1 NEWGW_i + \beta_2 Beta_i + \beta_3 Log(BM)_i + \beta_4 Log(MV)_i + \sum YearDummy + \sum IndustryDummy + \varepsilon
\] (4)

where \( NEWGW_i \) is the accounting goodwill newly acquired in the current year. Our main interest is the regression coefficient on the \( NEWGW_i \) (i.e., \( \beta_1 \)). Hypothesis predicts \( \beta_1 \) to be

\(^5\) Ohlson and Juettner-Nauroth (2005) said that it is appropriate to use overall economic growth rate as \( g_p \). According to this statement, Gode and Mohanram (2003) set \( g_p = \) risk free rate (the yield on 10-year notes) \(- 3\%\). Considering the risk free rate in Japan remains at very low level, I set \( g_p = 0.01(1\%) \). Even when I set \( g_p = 0.01 \) or \( 0.02 \), the results in this research remain qualitatively unchanged.

\(^6\) The assumption of \( g_p = 0 \) means that the next period's expected abnormal growth in earnings provides an unbiased estimate of all subsequent periods' abnormal growth in earnings (Easton, 2004, p. 80).
positive. In this paper, I focus on the newly acquired goodwill. Under Japanese generally accepted accounting principles (J-GAAP), there were no official regulations about business combination such as the fair value measurement of assets and liabilities acquired in a business combination or the recognition of identifiable intangible assets until Accounting Standard for Business Combinations (Accounting Standards Board of Japan (ASBJ) Statement No.21) were issued from ASBJ in 2003. Hence, the accounting goodwill that had been recorded on the balance sheet before this standard was adopted couldn’t reflect the future excess profit properly. ASBJ Statement No.21 became effective after the beginning of the first annual reporting period beginning on or after April 1, 2006. This is the reason why I set the sample period after April 2007 and focus on the newly acquired goodwill in this paper.

We include several control variables that may be related to the cost of capital. Firstly, I control for the market beta ($\beta_t$). $\beta_t$ is estimated by regressing the previous 52 weekly individual stock returns on the contemporaneous market returns. Tokyo Stock Exchange Stock Price Index (TOPIX) is used as the market return. I expect $\beta_2$ to be positive. Since Fama and French (1992) find that stock returns are positively correlated with book-to-market equity and are negatively correlated with firm size, I control for book-to-market equity ($\log(BM)_t$), which is measured as logarithm of the ratio of the book value of equity to the market value of equity, and firm size ($\log(MV)_t$), calculated as the logarithm of the market value of common equity. I expect that $\beta_3$ is positive and $\beta_4$ is negative.

$$RP_t = \alpha + \beta_1 NEWGW_t + \beta_2 Beta_t + \beta_3 \log(BM)_t + \beta_4 \log(MV)_t,$$
$$+ \beta_5 Return_t + \sum YearDummy + \sum IndustryDummy + \epsilon$$

(5)

In the regression equation (5), I add the proxy variable of price momentum (Return$_t$) to mitigate biases in the cost of capital estimates driven by analysts’ sluggishness regarding to information in past stock returns. Guay et al. (2011) find that since analysts’ earnings forecast couldn’t reflect information embedded in the stock return as soon as stock markets do, the cost of capital estimates are biased, and the bias is negatively correlated with past stock return. I define Return$_t$ as the compounded returns over the previous year. I expect $\beta_5$ to be negative.

In this study, $NEWGW_t$ is scaled by the book value of total asset. To control for year effects and industry effects, year dummy variables and industry dummy variables are included in both regression equations (4) and (5). All $t$-statistics in the regression analysis are corrected for heteroscedasticity, cross-sectional dependence, and time-series dependence of residuals by clustering two-way, that is, at the firm and year levels, as proposed by Petersen (2009).

4. Sampling Procedures and Data

The data used in this study are collected from Nikkei’s “NEEDS-FinancialQUEST” database, which is widely used in the analysis of Japanese companies. I obtain analysts’ earnings forecasts information from Institutional Brokers’ Estimate System (I/B/E/S). Our sample

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7 In addition to the effect of this accounting standard, the time could affect the relation between goodwill and the cost of capital. In this study, I expect larger goodwill amounts will lead to greater information asymmetry, and result in higher cost of capital. As time passes, however, information asymmetry derived from goodwill would weaken because it is expected that more information about goodwill, which was private information at first, would become available for investors. Consequently, the relation between goodwill and cost of capital would be unobservably weak for existing goodwill.
period is from 2007 to 2011. Firm-year observations that meet the following criteria are included in our sample:

(a) the firm should be a nonfinancial company;
(b) the firms’ fiscal year ends on March 31;
(c) the firms should be compliant with J-GAAP,
(d) the value of $NEWGW_t$ should be above zero.
(e) all variables are available;

In order to ensure that the results are not sensitive to outliers, variables in the top and bottom 1 percent have been winsorized. In all, 819 firm-year observations fulfill these criteria.

Table 1 shows descriptive statistics and Table 2 presents the correlation matrix. Every implied cost of capital estimates generate values with a mean and median of approximately 10%, which are somewhat higher than the level of cost of capital supposed conventionally for average Japanese firms, around 4 ~ 6 %. Hence, I refer to Gotoh and Kitagawa (2010) and Shintani (2013) that estimate implied cost of capital based on Ohlson and Juettner-Nauroth’s abnormal growth in earnings model for Japanese companies to ensure that cost of capital estimates used in this paper are not inappropriate. Gotoh and Kitagawa (2010) estimate $R_{GM}$, $R_{MPEG}$, and $R_{PEG}$ from 1987 to 2007. These estimates for 2007 have a median of approximately 10%. Shintani (2013) estimates $R_{MPEG}$ from 2000 to 2012. During our sample period (2007 - 2011), $R_{MPEG}$ produces the lowest average estimate with a mean of 7.25% in 2007, and the highest average estimate with a mean of 11.17% in 2011. Comparing our implied cost of capital estimates to those estimates in the prior studies, there are no considerable difference among them. Thus, our implied cost of capital estimates are considered to be reasonable.

In the next section, I validate our implied cost of capital estimates before the main analysis is conducted.

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8 One possible explanation for these high level of the implied cost of capital estimates is that our estimates could reflect slumping stock market during our sample period. Guay et al. (2011), as stated above, find the implied cost of capital estimates are negatively correlated with recent stock return. Since TOPIX annual return in 2007 and 2008 are -11.11% and -40.62% respectively, these low return could bias upward against our estimates. Actually, mean values of $R_{P,mean}$ are 7.37% in 2007, rising to 10.13% in 2008 and 13.10% in 2009. In addition, table 2 shows that all cost of capital estimates are negatively correlated with past stock return. Consequently, the data also suggests the need to control past stock return with respect to the examination about the implied cost of capital.
5. Results

5.1. Validation of the Implied Cost of Capital Estimates

(Insert Table 3 about here)

To validate the implied cost of capital estimates used in this paper, I regress each of the estimate ($RP_{GM}$, $RP_{MPEG}$, $RP_{PEG}$, $RP_{median}$, $RP_{mean}$) on all control variables ($Beta_t$, $Log(BM)_t$, $Log(MV)_t$, $Return_t$). Table 3 shows the regression results for the validation of the cost of capital estimates. The signs of the coefficients on all of the control variables are consistent with expectations for all estimates. The implied equity risk premium is positively associated with market beta, book-to-market equity, and negatively correlated with firm size, and price momentum.

Thus, this validation test implies that the implied cost of capital estimates used in this paper reflect known risk factors properly and have desirable properties as the proxy variable for the cost of capital.

5.2. Main Results

(Insert Table 4 about here)

Table 4 shows the main results for the hypothesis about the relation between accounting goodwill and cost of capital. Two columns from the left side of Table 4 report the regression results of the equation (4) for $RP_{mean}$ and $RP_{median}$. Two columns from the left side of this table report the regression results of the equation (5) for $RP_{mean}$ and $RP_{median}$. Our main interest is the regression coefficient on $NEWGW_t$. The coefficient on $NEWGW_t$ is positive and statistically significant in every regression model for every implied cost of capital at the 1 or 5 percent level. These results indicate that the amount of goodwill is positively related to the cost of capital. With regard to the control variables, the coefficient on the market beta and book-to-market equity take positive values, and the sign of the coefficients on firm size and price momentum are negative. That is, the signs of the coefficients on these control variables are consistent with my expectations in all of the models.

Totally, the results presented in the Table 4 imply that, ceteris paribus, the larger the amounts of accounting goodwill on the firm, the higher the cost of capital of the firm. Therefore, my hypothesis about the relation between accounting goodwill and cost of capital is supported.

5.3. Additional Tests

In main analysis, I focus on new goodwill recognized in the current year to capture accurately the component of goodwill that properly reflects the future excess profit expected from business combinations under the Accounting Standard for Business Combinations in J-GAAP, and examine the relation between goodwill and cost of capital. However, we don’t know whether the amounts of existing goodwill actually have different characteristics with regard to the relation with the cost of capital. So, I re-estimate the equation (4) and (5) by adding the variable of existing goodwill, that is, $OLDGW_t$. 
Table 5 shows the results of the test for existing goodwill. Column 1 and 2 in Table 5 give the results when equation (4) is estimated for the dependent variable is $RP_{\text{mean}}$ or $RP_{\text{median}}$, respectively, and Column 3 and 4 show the results when equation (5) is regressed in the same manner. With regard to the coefficients on $NEWGW$, I find the consistent results to the main results obtained so far. The variable of interest in Table 5 is $OLDGW$. The coefficients on $OLDGW$ are insignificant for all combinations of regression models and cost of capital estimates. Thus, the results in Table 5 imply that the existing goodwill have different characteristics with regard to the relation with the cost of capital, and are consistent with our \textit{ex ante} expectation.

Results so far indicate that larger amounts of goodwill are related to higher cost of capital. However, if there are any firm-related factors affect the relations among goodwill, information asymmetry, and the cost of capital, the effect of accounting goodwill on the cost of capital may differ across the firms. In this part, I focus on the managerial efficiency. As stated above, since the future excess profits from business combinations reflected in accounting goodwill are estimated mainly based on unobservable firm-generated inputs, larger amounts of goodwill lead to greater information asymmetry. Investors assess (or perceive) higher uncertainty for firms with greater information asymmetry, thereby such firms’ cost of capital are increasing (Lambert et al. 2012). For firms with higher managerial efficiency, however, it is expected that the link between goodwill and cost of capital become weaker because management efficiency decreases the perceived uncertainty derived from information asymmetry. If the acquirer firm has high management efficiency, investors believe that such firm would achieve expected future performance with high possibilities. As a results, the perceived uncertainty arise from information asymmetry are lower for firms with higher managerial efficiency than for firms with lower managerial efficiency, and the lower uncertainty lead to the lower cost of capital. Therefore, I expect that the lower the managerial efficiency, the stronger positive relation between goodwill and cost of capital. Conversely, the positive relation between goodwill and cost of capital will weakens for firms with higher managerial efficiency.

To proxy for managerial efficiency, I use past free cash flow (FCF) performance, which is measured as total of free cash flows for past 3 years divided by average amounts of total asset for the contemporaneous period. Tertile (three groups) dummy variables are made based on the managerial efficiency. The first tertile dummy, $D_{\text{Efficiency Low}}$, equals one for firms in the lowest efficient group, and each of the second tertile dummy, $D_{\text{Efficiency Middle}}$, and the third tertile dummy, $D_{\text{Efficiency High}}$, takes a value of one in a similar way. I examine the effect of managerial efficiency on the relation between goodwill and cost of capital by adding $D_{\text{Efficiency Low}}, D_{\text{Efficiency High}}$ and the interaction terms with $NEWGW$, and these two dummy variables into the equation (4) and (5).

\footnote{I also examine the effect of managerial efficiency on the relation between goodwill and cost of capital by partitioning the whole sample into three subsamples based on the managerial capability and comparing the coefficients on $NEWGW$ of lower group to that of higher group. The results are not tabulated, however, in lower managerial efficiency group, the coefficients on $NEWGW$ are positive and statistically significant (p-value < 0.01) for all combinations of regression models and implied cost of capital estimates. Contrastingly, in higher managerial efficiency group, I find that the coefficients on $NEWGW$ are smaller than that of lower group and statistically insignificant for all combinations of regression models and cost of capital estimates. Therefore, the results from this sample-partitioning approach are consistent with the tabulated results based on dummy-interaction approach.}
Table 6 presents the regression results of the test for managerial efficiency. Column 1 and 2 in Table 6 give the results when equation (4) is estimated, and Column 3 and 4 show the results when equation (5) is regressed. The coefficients on NEWGW$_t$ indicate the relation between goodwill amounts and the cost of capital for firms in the moderately-efficient group. This table shows the results of two linear combination tests for each of these regressions. One is the test for the difference of the goodwill’s effect between the lowest and the highest efficient group. The coefficient of the interaction term of NEWGW$_t$ and D_Efficiency_Low (D_Efficiency_High) indicates the difference of the effect between the lowest (highest) efficient group and the moderately-efficient group. Thereby, the difference of the coefficient values between NEWGW$_t$ * D_Efficiency_Low and NEWGW$_t$ * D_Efficiency_High represent the difference of the effect between the lowest and the highest efficient group. The row labeled as NEWGW$_t$ * D_Efficiency_Low - NEWGW$_t$ * D_Efficiency_High shows the results of the first linear combination test. I find that the difference of the coefficient values between NEWGW$_t$ * D_Efficiency_Low and NEWGW$_t$ * D_Efficiency_High is positive and statistically significant (p-value < 0.01) for each regression. These results imply that managerial efficiency weakens the positive relation between goodwill and cost of capital.

The other linear combination test is conducted to examine whether the positive relation between goodwill and cost of capital is significant for the least efficient group. The row labeled as NEWGW$_t$ + NEWGW$_t$ * D_Efficiency_Low presents the results of the second linear combination test. The sum of the coefficient values of NEWGW$_t$ and NEWGW$_t$ * D_Efficiency_Low is positive and statistically significant for each regression at 0.1 percent level. These results imply that there is a positive relation between goodwill and cost of capital, especially for lower efficient firms. In summary, the results in Table 6 imply that managerial efficiency weakens the positive relation between goodwill and cost of capital, and this positive relation mainly derives from lower efficient firms.

### 5.4. Robustness checks

In this section, I conduct robustness test for the results obtained so far. The main results in Table 4 could be subject to reverse causality between goodwill and cost of capital. It is showed that the larger the amounts of goodwill are recognized as assets, the higher the cost of capital. Since high cost of capital means that investors expect firm to achieve high return, such firm is more likely to conduct high-risk-high-return business combination to meet investors’ high level of expectation. That is to say, higher cost of capital may lead to larger amounts of goodwill. To cope with this issue, I re-estimate the equation (4) and (5) by adding the lagged cost of capital estimates.

Table 7 shows the results of the robustness test for the reverse causality. Even when the lagged cost of capital is added, the coefficients on NEWGW$_t$ remain positive and significant for all combinations of regression models and cost of capital estimates. These results indicate that main results presented in Table 4 is robust and consistent with the hypothesis that larger amounts of goodwill lead to higher cost of capital.
6. Conclusion

This study shed light the unknown economic effects of the capitalization of goodwill by focusing the relation between goodwill and cost of capital. Most of prior research about the impact of capitalizing goodwill have focused on the value relevance of goodwill, or the relation between goodwill and shareholder value, and find there is a positive relation between goodwill and shareholder value, which means goodwill is value-relevant. Unlike these prior studies, I give an eye to the cost of capital, and find the larger the amounts of goodwill, the higher the cost of capital. Even after controlling already known risk factors including market beta, book-to-market ratio, firm size, and price momentum, there is the positive relation between goodwill and cost of capital. This finding implies investors could view accounting goodwill as another risk factor. Therefore, it is required to take into account for goodwill when you estimate the firm’s cost of capital for valuation. Otherwise, you would commit mistakes of under-estimating the cost of capital. This paper contribute the literature by reveal the relation between goodwill and cost of capital, which is unknown from prior studies, and shed light the another new economic effects of the capitalization of goodwill.

In additional tests, I give an eye to the effect of managerial efficiency on the relation between goodwill and cost of capital. From this tests, it is found that the positive relation between goodwill and cost of capital is stronger for lower managerial efficiency firms than higher managerial efficiency firms. This result implies that managerial efficiency weaken the positive relation between accounting goodwill and cost of capital. In addition, I couldn’t find the evidence indicates that existing goodwill is related to the cost of capital like new goodwill. Therefore, the existing goodwill could have different characteristics with regard to the relation with the cost of capital, and be consistent with our prior expectation. These additional findings also consist the contribution of this paper.

This paper has implication for equity investment decision. According to the findings of this research, investors could view accounting goodwill as another risk factor. Therefore, you could be required to take into account for goodwill when you estimate the firm’s cost of capital for corporate valuation.
REFERENCES


1. At first, the managers of the acquiring firm estimate the future excess profit mainly based on the subjective information that is unobservable and firm-generated.

2. And then, they make a pricing decision for the acquired firm.
### Table 1. Descriptive Statistics

<table>
<thead>
<tr>
<th>Stats</th>
<th>Mean</th>
<th>s. d.</th>
<th>Min</th>
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<th>Median</th>
<th>75%</th>
<th>Max</th>
<th>N</th>
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<td>2.38</td>
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<td>31.05</td>
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<td>RP_median</td>
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<td>2.52</td>
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<td>9.89</td>
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<td>819</td>
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</tr>
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<td>0.00</td>
<td>0.03</td>
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<td>0.66</td>
<td>8.56</td>
<td>819</td>
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<td>Beta</td>
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<td>0.94</td>
<td>1.20</td>
<td>1.89</td>
<td>819</td>
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<tr>
<td>Log(BM)</td>
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<td>-1.81</td>
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<td>0.08</td>
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<tr>
<td>Log(MV)</td>
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<td>8.84</td>
<td>10.88</td>
<td>11.81</td>
<td>12.83</td>
<td>14.95</td>
<td>819</td>
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<tr>
<td>Return</td>
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<td>-0.59</td>
<td>-0.24</td>
<td>-0.10</td>
<td>0.07</td>
<td>1.00</td>
<td>819</td>
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</table>

<table>
<thead>
<tr>
<th></th>
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<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
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<tbody>
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<td><strong>1 RP mean</strong></td>
<td>0.996</td>
<td>0.996</td>
<td>0.995</td>
<td>0.981</td>
<td>0.011</td>
<td>0.289</td>
<td>0.365</td>
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<td>-0.250</td>
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<td><strong>2 RP median</strong></td>
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<td>1.000</td>
<td>1.000</td>
<td>0.959</td>
<td>0.011</td>
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<td>0.385</td>
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<td>-0.260</td>
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<td>1.000</td>
<td>0.999</td>
<td>0.961</td>
<td>0.013</td>
<td>0.279</td>
<td>0.381</td>
<td>-0.263</td>
<td>-0.257</td>
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</tr>
<tr>
<td><strong>4 RP MPEG</strong></td>
<td>0.996</td>
<td>1.000</td>
<td>1.000</td>
<td>0.959</td>
<td>0.010</td>
<td>0.282</td>
<td>0.386</td>
<td>-0.272</td>
<td>-0.261</td>
<td></td>
</tr>
<tr>
<td><strong>5 RP PEG</strong></td>
<td>0.986</td>
<td>0.968</td>
<td>0.968</td>
<td>0.967</td>
<td>0.009</td>
<td>0.299</td>
<td>0.316</td>
<td>-0.237</td>
<td>-0.224</td>
<td></td>
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<tr>
<td><strong>6 NEWGW</strong></td>
<td>-0.034</td>
<td>-0.040</td>
<td>-0.039</td>
<td>-0.041</td>
<td>-0.021</td>
<td>-0.052</td>
<td>-0.074</td>
<td>-0.055</td>
<td>-0.026</td>
<td></td>
</tr>
<tr>
<td><strong>7 Beta</strong></td>
<td>0.292</td>
<td>0.285</td>
<td>0.285</td>
<td>0.287</td>
<td>0.297</td>
<td>-0.092</td>
<td>0.078</td>
<td>0.025</td>
<td>-0.151</td>
<td></td>
</tr>
<tr>
<td><strong>8 Log(BM)</strong></td>
<td>0.356</td>
<td>0.374</td>
<td>0.371</td>
<td>0.376</td>
<td>0.313</td>
<td>-0.141</td>
<td>0.068</td>
<td>-0.453</td>
<td>-0.328</td>
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</tr>
<tr>
<td><strong>9 Log(MV)</strong></td>
<td>-0.262</td>
<td>-0.273</td>
<td>-0.268</td>
<td>-0.275</td>
<td>-0.237</td>
<td>-0.074</td>
<td>0.031</td>
<td>-0.461</td>
<td>0.171</td>
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<tr>
<td><strong>10 Return</strong></td>
<td>-0.221</td>
<td>-0.230</td>
<td>-0.228</td>
<td>-0.230</td>
<td>-0.201</td>
<td>0.013</td>
<td>-0.135</td>
<td>-0.372</td>
<td>0.158</td>
<td></td>
</tr>
</tbody>
</table>

Pearson (Spearman) correlations are reported below (above) the diagonal.
### Table 3. Validation of the Implied Cost of Capital Estimates

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>( RP_{GM} )</th>
<th>( RP_{MPEG} )</th>
<th>( RP_{PEG} )</th>
<th>( RP_{mean} )</th>
<th>( RP_{median} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beta</td>
<td>1.1811</td>
<td>1.1646</td>
<td>1.1783</td>
<td>1.1758</td>
<td>1.1668</td>
</tr>
<tr>
<td></td>
<td>(2.81)***</td>
<td>(2.91)***</td>
<td>(2.79)***</td>
<td>(2.91)***</td>
<td>(2.83)***</td>
</tr>
<tr>
<td>Log(BM)</td>
<td>1.6754</td>
<td>1.6755</td>
<td>1.2163</td>
<td>1.5182</td>
<td>1.6818</td>
</tr>
<tr>
<td></td>
<td>(2.65)***</td>
<td>(2.68)***</td>
<td>(2.02)***</td>
<td>(2.47)**</td>
<td>(2.65)***</td>
</tr>
<tr>
<td>Log(MV)</td>
<td>-0.7935</td>
<td>-0.7825</td>
<td>-0.8188</td>
<td>-0.7976</td>
<td>-0.7893</td>
</tr>
<tr>
<td></td>
<td>(-4.02)***</td>
<td>(-4.09)***</td>
<td>(-3.36)***</td>
<td>(-3.80)***</td>
<td>(-4.07)***</td>
</tr>
<tr>
<td>Return</td>
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<td>-1.8011</td>
<td>-1.5603</td>
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<tr>
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<td>(-3.21)***</td>
<td>(-3.18)***</td>
<td>(-2.48)***</td>
<td>(-2.99)***</td>
<td>(-3.17)***</td>
</tr>
<tr>
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<td>11.0617</td>
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<td>11.9511</td>
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<tr>
<td></td>
<td>(5.70)***</td>
<td>(5.63)***</td>
<td>(3.89)***</td>
<td>(4.99)***</td>
<td>(5.61)***</td>
</tr>
</tbody>
</table>

| IndustryDummy     | Yes            | Yes            | Yes            | Yes            | Yes             |
| YearDummy         | Yes            | Yes            | Yes            | Yes            | Yes             |

| R-squared         | 0.4735         | 0.4783         | 0.458          | 0.4734         | 0.4749          |
| Adj-R-squared     | 0.4443         | 0.4493         | 0.4279         | 0.4441         | 0.4458          |
| N                 | 819            | 819            | 819            | 819            | 819             |

*** (**,*) Significant at the 1% (5%, 10%) level, two-tailed.

All \( t \)-statistics in the regression analysis are corrected for heteroscedasticity, cross-sectional dependence, and time-series dependence of residuals by clustering two-way, that is, at the firm and year levels, as proposed by Petersen (2009).
### Table 4. Main Results

<table>
<thead>
<tr>
<th>Model</th>
<th>Dependent variable</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$RP_{\text{mean}}$</td>
<td>$RP_{\text{median}}$</td>
<td>$RP_{\text{mean}}$</td>
</tr>
<tr>
<td></td>
<td><strong>NEWGW</strong></td>
<td>0.0961</td>
<td>0.0805</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[2.71]**</td>
<td>[2.44]**</td>
</tr>
<tr>
<td></td>
<td><strong>Beta</strong></td>
<td>2.759</td>
<td>2.7159</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[5.08]**</td>
<td>[5.12]**</td>
</tr>
<tr>
<td></td>
<td><strong>Log(BM)</strong></td>
<td>1.3997</td>
<td>1.5521</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[2.41]**</td>
<td>[2.57]**</td>
</tr>
<tr>
<td></td>
<td><strong>Log(MV)</strong></td>
<td>-0.6997</td>
<td>-0.6939</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[-3.20]**</td>
<td>[-3.32]**</td>
</tr>
<tr>
<td></td>
<td><strong>Return</strong></td>
<td>-2.2529</td>
<td>-2.3135</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[-2.54]**</td>
<td>[-2.65]**</td>
</tr>
<tr>
<td></td>
<td><strong>_cons</strong></td>
<td>11.3139</td>
<td>11.5851</td>
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<tr>
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<td>[4.00]**</td>
<td>[4.30]**</td>
</tr>
<tr>
<td><strong>IndustryDummy</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>YearDummy</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

| R-squared | 0.3773 | 0.3874 | 0.3855 | 0.3959 |
| Adj-R-squared | 0.3478 | 0.3584 | 0.3555 | 0.3665 |
| N         | 819    | 819    | 819    | 819    |

*** (**,*) Significant at the 1% (5%, 10%) level, two-tailed.

All $t$-statistics in the regression analysis are corrected for heteroscedasticity, cross-sectional dependence, and time-series dependence of residuals by clustering two-way, that is, at the firm and year levels, as proposed by Petersen (2009).
### Table 5. Existing Goodwill Test

<table>
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<tr>
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<td>$RP_{median}$</td>
</tr>
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<td>0.0826</td>
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<tr>
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<td>[2.70]**</td>
</tr>
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<td>0.0595</td>
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<td>[2.60]**</td>
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<td>-0.7055</td>
</tr>
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<td>[-3.28]**</td>
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<td>[4.29]**</td>
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<tr>
<td>YearDummy</td>
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*** (**,*) Significant at the 1% (5%, 10%) level, two-tailed.

All t-statistics in the regression analysis are corrected for heteroscedasticity, cross-sectional dependence, and time-series dependence of residuals by clustering two-way, that is, at the firm and year levels, as proposed by Petersen (2009).
Table 6. Managerial Efficiency Test

<table>
<thead>
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<td>Dependent variable</td>
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<td>$RP_{\text{median}}$</td>
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<tr>
<td>$D_{\text{Efficiency High}}$</td>
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<td>[1.36]</td>
<td>[1.51]</td>
</tr>
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<td>NEWGW*$D_{\text{Efficiency Low}}$</td>
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<td>[1.87]*</td>
<td>[1.89]*</td>
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<td>-0.161</td>
<td>-0.1554</td>
</tr>
<tr>
<td></td>
<td>[-1.20]</td>
<td>[-1.22]</td>
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<tr>
<td>Log(BM)</td>
<td>2.7655</td>
<td>2.7236</td>
</tr>
<tr>
<td></td>
<td>[5.34]**</td>
<td>[5.35]**</td>
</tr>
<tr>
<td>Log(MV)</td>
<td>1.4906</td>
<td>1.6428</td>
</tr>
<tr>
<td></td>
<td>[2.37]**</td>
<td>[2.53]**</td>
</tr>
<tr>
<td>Return</td>
<td>-0.6939</td>
<td>-0.6878</td>
</tr>
<tr>
<td></td>
<td>[-3.01]**</td>
<td>[-3.11]**</td>
</tr>
<tr>
<td>_cons</td>
<td>10.965</td>
<td>11.2369</td>
</tr>
<tr>
<td></td>
<td>[3.75]**</td>
<td>[4.05]**</td>
</tr>
<tr>
<td>IndustryDummy</td>
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<td>YES</td>
</tr>
<tr>
<td>YearDummy</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.3815</td>
<td>0.3914</td>
</tr>
<tr>
<td>Adj-R-squared</td>
<td>0.3489</td>
<td>0.3592</td>
</tr>
<tr>
<td>N</td>
<td>819</td>
<td>819</td>
</tr>
</tbody>
</table>

Linear Combination Test

| NewGW*Beta - NEWGW*Efficiency_Low | 0.4262 | 0.4056 | 0.4032 | 0.3819 |
| **p-value** | 0.002 | 0.0017 | 0.0011 | 0.0008 |
| NEWGW + NEWGW*Efficiency_Low | 0.4142 | 0.3826 | 0.3839 | 0.3514 |
| **p-value** | <0.001 | <0.001 | <0.001 | <0.001 |

***,**,* Significant at the 1% (5%, 10%) level, two-tailed.

All t-statistics in the regression analysis are corrected for heteroscedasticity, cross-sectional dependence, and time-series dependence of residuals by clustering two-way, that is, at the firm and year levels, as proposed by Petersen (2009).
### Table 7. Robustness Test for Reverse Casuality

<table>
<thead>
<tr>
<th>Model</th>
<th>Dependent variable</th>
<th>RP_mean</th>
<th>RP_median</th>
<th>RP_mean</th>
<th>RP_median</th>
</tr>
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<tbody>
<tr>
<td>(4)</td>
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<td>0.1099</td>
<td>0.0928</td>
<td>0.1092</td>
<td>0.0918</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[2.13]**</td>
<td>[1.78]*</td>
<td>[2.33]**</td>
<td>[1.96]*</td>
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<tr>
<td>(5)</td>
<td>LagRP</td>
<td>2.4262</td>
<td>2.6733</td>
<td>1.637</td>
<td>1.8507</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[10.41]***</td>
<td>[11.27]***</td>
<td>[4.26]***</td>
<td>[4.64]***</td>
</tr>
<tr>
<td>(4)</td>
<td>Beta</td>
<td>2.0828</td>
<td>2.0659</td>
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<td>1.6028</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[3.58]***</td>
<td>[3.45]***</td>
<td>[2.93]***</td>
<td>[2.75]***</td>
</tr>
<tr>
<td>(5)</td>
<td>Log(BM)</td>
<td>1.4974</td>
<td>1.5734</td>
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<td>0.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[2.81]***</td>
<td>[3.00]***</td>
<td>[1.49]</td>
<td>[1.61]</td>
</tr>
<tr>
<td>(4)</td>
<td>Log(MV)</td>
<td>-0.4581</td>
<td>-0.4579</td>
<td>-0.4226</td>
<td>-0.421</td>
</tr>
<tr>
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<td></td>
<td>[-2.06]**</td>
<td>[-2.08]**</td>
<td>[-1.81]*</td>
<td>[-1.82]*</td>
</tr>
<tr>
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<td></td>
<td>-2.9921</td>
<td>-3.1321</td>
</tr>
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<td></td>
<td>[-5.02]***</td>
<td>[-5.01]***</td>
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<tr>
<td>(4)</td>
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<td>7.4116</td>
<td>6.8574</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>[2.52]**</td>
<td>[2.62]***</td>
<td>[2.36]**</td>
<td>[2.44]**</td>
</tr>
<tr>
<td>(5)</td>
<td>IndustryDummy</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>(4)</td>
<td>YearDummy</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>(5)</td>
<td>R-squared</td>
<td>0.4507</td>
<td>0.462</td>
<td>0.4651</td>
<td>0.4776</td>
</tr>
<tr>
<td></td>
<td>Adj-R-squared</td>
<td>0.4515</td>
<td>0.4628</td>
<td>0.4658</td>
<td>0.4783</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>695</td>
<td>695</td>
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</tr>
</tbody>
</table>

*** (**, *) Significant at the 1% (5%, 10%) level, two-tailed.

All \( t \)-statistics in the regression analysis are corrected for heteroscedasticity, cross-sectional dependence, and time-series dependence of residuals by clustering two-way, that is, at the firm and year levels, as proposed by Petersen (2009).
ACCOUNTING AND CORPORATE GOVERNANCE IMPACT OF CORPORATE GOVERNANCE ON CAPITAL MARKETS OF LISTED PSUS: A REVIEW

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ABSTRACT

Corporate Governance has been a much debated issue in the western world. In India the Corporate Governance Code has been largely modeled on the lines of the Cadbury Committee (1992) in the United Kingdom. SEBI issued a circular in 2003 revising Clause 49 of the listing agreement and Sarbanes oxley report were considered for new regulations which were the major key in bringing reforms in capital markets in India. The capital market reforms is based on improving two fundamental aspects. First, the improvement in the legal reporting framework and second the improvement in the technology framework which became possible through the strict implementation of corporate governance norms and SEBI regulations. In this paper the studies conducted on impact of CG on capital markets of listed companies in India is reviewed and examined and an attempt is made to understand the problems still persisting in these companies in constituting board, disclosure and transperancy related regulations, and accountability. Even though companies are ready to incorporate CG mainly issue related to constituting the board with true Independent directors there are certain obstacles faced by the board in successfully implementing it. Solving internal problem is the need of the hour to all listed companies to come under a structured corporate governance frame work. Thus in this study a review of few conceptual studies done in india and abroad are studied to arrive at the outline of the internal problems faced by companies in complying with the regulations.

Key words: Corporate Governance, capital markets, Clause 49 and SEBI regulations, Listed companies on Indian stock exchanges.
INTRODUCTION

The need of India’s expanding economy, which includes accessing to investments on foreign stock exchanges, global markets Foreign direct investments has made big industries to think over their governance practices seriously which adds value to their representation. Even though Corporate governance norms existed since from 1996, SEBI in 2000 implemented stricter norms via clause 49, established governance requirements for listed companies regarding constitution of board, disclosure to shareholders, internal control etc, companies are still lagging behind in complete compliance of corporate governance norms. The efforts of the Regulators and the Government to protect the interests of investors in securities and to promote the development of, and to regulate the securities market towards enlightened Governance, has been lauded by all stake holders. There is huge potential and also a requirement for the capital markets growth in India and abroad. The corporate governance norms implemented in countries like USA and Australia are chosen for the study, the studies conducted on the topic in these two countries and in India are reviewed providing a gist of the studies by authors and an attempt is made to understand what are the requirements of a proper corporate governance frame work which can be globally acceptable.

The study is divided into Studies conducted by authors in India and studies conducted Abroad: in USA, Australia and China. This report briefly outlines the process undertaken to reform corporate governance laws in these countries. A review of these gives way to find out which practice is most suitable and compliance practice in these countries. The review of the studies conducted by different Authors in this area of study poses the fact about the practice in specific country and its success.

The regulatory frame work provided by the authorities in these countries is reviewed to check the measures taken by the govt, of respective countries with respect to corporate governance practices. Finally these studies may reveal the practices which can form the best practice identified to be globally suitable.

The objectives of the study:
1. To study and review the CG practices in India and abroad
2. To examine the reasons for non-compliance and or partly Compliance of corporate governance norms by listed companies in India.

Methodology:
The study is completely based on secondary data the articles published online by authors in India and abroad (USA, Australia and China). Two Articles about the topic published are considered for the study from each country for review.

Limitations of the study:
Reviewing the discussions made by the authors on the topic is a difficult task when the conclusions end with leading to further studies.
Some of the limitations of the study are:
- Articles related to same statement are not exactly available
- Corporate governance study can be connected to various areas of the company for study.
- Corporate governance reforms started at different times in different countries
Corporate Governance practices provided by the regulatory bodies of respective countries India, USA, Australia and China:

In India:

Corporate Governance may be defined as “A set of systems, processes and principles which ensure that a company is governed in the best interest of all stakeholders.” It ensures Commitment to values and ethical conduct of business; Transparency in business transactions; Statutory and legal compliance; adequate disclosures and Effective decision-making to achieve corporate objectives. In other words, Corporate Governance is about promoting corporate fairness, transparency and accountability. Good Corporate Governance is simply Good Business.

Clause 49 of the Listing Agreement to the Indian stock exchange came into effect from 31 December 2005. It has been formulated for the improvement of corporate governance in all listed companies. In corporate hierarchy two types of managements are envisaged:

i) companies managed by Board of Directors; and
ii) those by a Managing Director, whole-time director or manager subject to the control and guidance of the Board of Directors.

As per Clause 49, for a company with an Executive Chairman, at least 50 per cent of the board should comprise independent directors. In the case of a company with a non-executive Chairman, at least one-third of the board should be independent directors.

It would be necessary for chief executives and chief financial officers to establish and maintain internal controls and implement remediation and risk mitigation towards deficiencies in internal controls, among others.

Clause VI (ii) of Clause 49 requires all companies to submit a quarterly compliance report to stock exchange in the prescribed form. The clause also requires that there be a separate section on corporate governance in the annual report with a detailed compliance report.

A company is also required to obtain a certificate either from auditors or practicing company secretaries regarding compliance of conditions as stipulated, and annex the same to the director’s report.

The clause mandates composition of an audit committee; one of the directors is required to be "financially literate".

It is mandatory for all listed companies to comply with the clause by 31 December 2005. In India, the government owns or controls interests in key sectors with significant economic impact, including infrastructure, oil, gas, mining, and manufacturing. Over the decades, the Government of India (GoI) has taken a number of steps to improve the performance of Central Public Sector Enterprises (CPSEs), including through better corporate governance.
In USA:
During the first half of the last decade, evidence accumulated that the U.S. capital markets were becoming less competitive relative to their major competitors. The evidence reviewed herein confirms that it was not corporate governance as such that was the problem, but rather corporate governance regulation. In particular, attention focused on such issues as the massive growth in corporate and securities litigation risk and the increasing complexity and cost of the U.S. regulatory scheme. There is less agreement as to the role corporate governance played in the declining competitiveness of U.S. capital markets. On the one hand, the U.S. political establishment blamed the various economic crises of the decade in part on perceived corporate governance flaws. Faced with anti-market, anti-corporate populist backlashes among the polity, Congress responded to the decade’s first crisis by passing the Sarbanes-Oxley Act in 2002. At the end of the decade, yet another populist backlash led to passage of the Dodd-Frank Act in 2010. Proponents of both SOX and Dodd-Frank identified alleged corporate governance deficiencies as causal factors in the respective crises to which they responded. Accordingly, both acts created important new corporate governance regulations at the federal level. Criticism of SOX’s adverse impact on corporate governance and capital market competitiveness. Section 301 mandated that all public corporations must have an audit committee comprised exclusively of independent directors, even though the empirical evidence on the efficacy of director independence in general and audit committee composition in specific was, at best, mixed. Section 201 prohibited accounting firms Over the last decade, the Sarbanes-Oxley Act has emerged as the poster child for burdensome compliance costs.
Key SOX provisions were criticized from the outset for preempting state corporate law and for lacking justification in the empirical literature. To the contrary, that literature suggested that each of the four would prove highly problematic. The government is yet to find a complete solution for corporate governance.

In Australia:
ASX accepted a leadership role in enhancing Australian corporate governance practices by convening the ASX Corporate Governance Council in August 2002. The Council brings together various business, shareholder and industry groups, each offering valuable insights and expertise on governance issues from the perspective of their particular stakeholders. It operates under a charter adopted in November 2012. Since 2003, the Council has developed and released recommendations on the corporate governance practices to be adopted by ASX listed entities designed to promote investor confidence and to assist listed entities to meet stakeholder expectations.

Under Listing Rule 4.10.3, ASX listed entities are required to benchmark their corporate governance practices against the Council’s recommendations and, where they do not conform, to disclose that fact and the reasons. The rule effectively encourages listed entities to adopt the Council’s recommended practices but does not force them to do so. It gives a listed entity the flexibility to adopt alternative corporate governance practices, if its board considers those to be more suitable to its particular circumstances, subject to the requirement for the board to explain its reasons for adopting those alternative practices.

The current version of the Council’s Corporate Governance Principles and Recommendations (Third Edition) was released on 27 March 2014 and takes effect for a listed entity's first full financial year commencing on or after 1 July 2014.
Listed entities may also find the following corporate governance materials helpful:

- Translation tables for the Corporate Governance Council recommendations
- Listing Rules Guidance Note 9 Disclosure of Corporate Governance Practices
- Anything to declare? A report examining disclosures about board reviews
- Handling confidential information: Principles of good practice
- ESG reporting guide for Australian companies
- Guidelines for Notices of Meetings (August 2007)
- Diversity Resources for Listed Entities (materials to assist listed companies in implementing the diversity-based recommendations in the Principles and Recommendations)

All major policy revisions require an accompanying Regulatory Impact Statement (‘RIS’). The RIS is a standard public policy response that defines the problem, sets out objectives, delineates options, evaluates cost and benefit, includes a consultation and recommendation statement, and outlines the strategy for implementation. Despite these restrictions, an independent taskforce charged.

**In China:**

China’s economic reforms, the key concern was the modernisation of China’s enterprise system by introducing competition and modern managerial mechanisms into the state-owned enterprises. In this process, China took a cautious approach, which contrasted with the Russian’s reform strategy. Reforming a planned economy into a market economy was an unprecedented project, since there was not an existing reform model to follow. The goal of the economic reforms was to create a market economy. However, no one could be sure of the best method for achieving the goal. This made the reform an arduous task. The Chinese therefore decided to adopt the approach of trial and error, partial reforms and reinforcing reforms. Western economists describe Chinese reform style as “gradualism”. The Chinese themselves described their reform strategy as “crossing the river by feeling stones under foot and stepping on the stones”.

In the beginning, the Chinese attempted to introduce incentives and competition into the enterprise system without corporatising and privatising the enterprises. However, the various strategies used brought new problems, and had only a limited China’s experience illustrates that corporate governance and securities markets are interactive and interdependent. Therefore, the economic efficiency in China’s companies must be promoted in conjunction with improving corporate governance practice and advancing a transparent and orderly securities market. To build a modern corporate governance system, China needs to make further efforts to rationalise the shareholding structure in its companies. It also needs to continue to develop its securities regulation and reinforce the monitoring function of the securities market.

China is determined to develop a modern corporate economy with its unique characteristics by retaining a significant proportion of state ownership in its industrial and financial sectors, it has endeavoured to establish a US style securities market and regulatory regime. The question is whether China can reconcile the two contradictory systems and thus create a new method of achieving economic efficiency. From what is occurring in China today, it appears that China has made the efforts. The strategy is to divide shares of a joint stock company into state shares, state-owned legal person shares, and individual shares. While state shares are prohibited to be traded on the stock market, state-owned legal person shares can only be transferred among
legal persons. Only individual shares are freely transferable on the market. However, they merely account for thirty per cent of the total shares. This approach has achieved the purpose of retaining substantial state ownership on the one hand, and introducing market mechanisms on the other.

Research has shown that successful corporate economies all seek to provide sufficient remedies to shareholders, particularly small shareholders in their laws. It is important that investors have the option of pursuing a legal remedy. When investors pursue their legal rights, they bring the management of their companies under further scrutiny. Currently Chinese law is silent on what civil remedies share investors may have in the case of market manipulation by corporations. Although amended Company Law has made shareholders’ derivative actions possible, a lack of detailed stipulation makes the implementation difficult. In the meantime, shareholders’ right to class actions is still unclarified. There is a need to improve the Chinese law in order to offer further protection to share investors.

The third step is to gradually reduce state shareholdings and liberalise non-tradable shares. The current price distortion on China’s securities market is mainly caused by a lack of transferable shares. Reduction of state shareholdings may ease the pressure, and therefore diminish bubbles in the market.

General observations about CG and Capital markets in these Countries

<table>
<thead>
<tr>
<th>SL. NO.</th>
<th>COUNTRY</th>
<th>YEAR OF REFORM</th>
<th>BASE OF THE REFORMS</th>
<th>POINTS OF SPECIFIC IMPORTANCE</th>
<th>REMARKS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>INDIA</td>
<td>1990</td>
<td>Birla committee, Naryanmurthy committee, clause 49 of listing agreement of SEBI</td>
<td>Independent directors, Transparency and accountability,</td>
<td>Strict adherence was implemented by SEBI to be complied by companies by 2005 and submit reports.</td>
</tr>
<tr>
<td>2.</td>
<td>USA</td>
<td>2002</td>
<td>Sarbanese oxley Act, Dodd Frank Act</td>
<td>Governance, Accountability, Independent directors,</td>
<td>It was reported that it was more complex and attracted more cost</td>
</tr>
<tr>
<td>3.</td>
<td>AUSTRALIA</td>
<td>2002</td>
<td>ASX Corporate Governance Council</td>
<td>Disclosure and constitution of board</td>
<td>No strict adherence and it is left to the option of the administration council to adopt suitable governance according to the circumstance recommended by council.</td>
</tr>
<tr>
<td>4.</td>
<td>CHINA</td>
<td>2004</td>
<td>Company law</td>
<td>State owned enterprises to retain ownership</td>
<td>The forms of France and Italy governance will be suitable, China yet to make a proper format of</td>
</tr>
</tbody>
</table>
Salient views of the authors:

Indian authors:
2011 International Conference on Humanities, Society and Culture

There is a need for company Boards to increasingly adopt formal governance structures, well defined criteria to evaluate Board performance such as ratings, articulate clear decision making structures and also scientific methods to arbitrate power battles among the stakeholders like executives, management, shareholders and the society at large. The Boards need to develop informed and scientific risk management systems in order to be able to assess the company’s strategic decisions. In an overall manner we may conclude that the issues of corporate governance of the public sector in India revolve around autonomy and the monitoring of that autonomy. The autonomy of the public sector paradoxically does not reduce the role of the government, rather increases it. The role of the government however changes from a supervisor and prime decision maker to that of a custodian of resources.

A Brief Overview of Corporate Governance Reforms in India by Afra Afsharipour
Since the late 1990s, significant efforts have been taken by Indian regulators, as well as by Indian industry representatives and companies, to overhaul Indian corporate governance. Not only have reform measures been put into place prior to discovery of major corporate governance scandals, but both industry groups and government actors have sprung into action following the Satyam scandal. The current corporate governance regime in Indian straddles both voluntary and mandatory requirements. For listed companies, the vast majority of Clause 49 requirements are mandatory. It remains to be seen whether some of the more recent voluntary corporate governance measures will become mandatory for all companies through a comprehensive revision of the Companies Act.

USA

Research Report No. 24/2010
Corporate Governance, Capital Market Regulation and the Challenge of Disembedded Markets
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Follow
We must re-think law and regulation without resorting to traditional distinctions in the belief that they will deliver the same explanatory potential that we have grown accustomed to: instead, we must approach emerging institutional regimes from a transnational regulatory perspective. And it is here that comparative corporate law transforms itself into the study of these increasingly deterritorialised corporate governance regimes as an illustration of transnational legal pluralism. Comparative corporate lawyers must search today for the equivalents of and for compatible institutional settings and actors that allow a new turn of the long-standing debates about the corporation.

AUSTRALIA

Those providing corporate advisory services have long adopted a range of ‘perfectly-legal’ strategies to transact around ‘soft’ compliance obligations, including adherence to internally devised and policed codes of conduct. This approach is often justified by reference to the corporate imperative to maximise profits within ‘the rules of the game’. To be effective across efficiency and integrity vectors, performance indicators need to be amenable to both specific and holistic analysis. They must be capable of evaluation — in isolation and in combination — against the transformative potential of the ex ante and ex post regulatory mechanisms deployed by operational directorates and cross-cutting interand intra-agency taskforces. Moreover, they must be viewed in terms of how performance impacts on the goals of regulation, not simply the processes by which this was achieved. And this requires embedding accountability throughout the regulatory system, not just the regulatory agency itself. Critics of attempts to broaden the debate on corporate governance and purpose from value to values suggest exceeding formal legal requirements diverts the corporation from its core purpose.

Furthermore, if new standards are to be introduced, what should the benchmark be? Who should set it? When core values conflict, which should be privileged and why? Should interpretation of (non-) compliance and censure rest with the corporation itself (through shareholder activism), the market (with variations in share price signalling displeasure), the gatekeeper professions (given delegated authority), the regulator (through enforcement strategies that transcend the existing legal core by mandating particular governance forms) or wider society (through a reinterpretation of the core responsibilities owed The aim is best illustrated through an extended example of the dynamics of a specific regulatory environment. The remainder of the chapter is structured as follows. First, the regulatory architecture in Australia is examined to assess how conceptions of ‘best-practice’ are arrived at and legitimated. As with other developed capital markets, anexus of exogenous forces is buffeting the Australian market, not least of which is the rapid expansion of private equity. Second, the difficulties of enrolling professional groupings in the surveillance apparatus is presented and critiqued. Third, the contours of an alternative approach are delineated based on the interlocking relationship between ethics and compliance.
CHINA

A 2008 RAND report titled *Chinese Corporate Governance: History and Institutional Framework* describes the recent history of corporate governance institutions in China, identifies obstacles to the evolution of best practices in this area, and recommends policies to promote improvement.

China's economic reforms have fueled rapid economic growth in the past three decades. At the same time, the Chinese have developed policies to create Western-style oversight mechanisms and corporate governance, in an effort to improve public confidence in their markets at home and abroad. Despite this progress, however, corporate governance mechanisms in China remain weak. A 2003 study by the World Economic Forum ranked China 44th out of 49 countries surveyed in terms of quality of corporate governance.

To describe the current status of corporate governance in China, the report identifies two sets of institutional entities: those internal to companies and those external to them. The inner circle of governance consists of shareholders' general meetings, boards of directors and boards of supervisors, and management personnel. The outer circle includes regulators (primarily the CSRC), the stock exchanges, the Chinese legal system, the auditing system, and institutional investors. The report describes the roles of each of these entities in shaping corporate governance in modern China.

**Obstacles to Progress**

1. *Overwhelming concentration of state ownership.* Two-thirds of companies listed in the Shanghai Stock Exchange are state enterprises, a legacy of the state-controlled economy. This problem is the source of many of the other obstacles to progress listed here, such as lack of independence of boards of directors and insider trading. It also has the effect of diverting resources away from companies, reducing the liquidity of the capital markets, and discouraging minority investors from engaging in long-term investment. Recent reforms have improved protection of minority shareholders, but it remains difficult for them to disagree with state shareholders.

2. A direct result of ownership concentration is the *lack of independence among boards of directors.* Members of both corporate boards of directors and boards of supervisors are typically selected and removed by the dominant owner of the company, which is often the Chinese government. As a result, directors are likely to be impeded in carrying out fiduciary duties, and supervisors are less likely to be able to exert independence from the board of directors and senior managers.

3. *Rampant insider trading.* Because so many Chinese enterprises are state-owned, with nontradable shares, insiders at many of these companies have made fortunes on stock offerings. This problem is so widespread that one well-known Chinese economist...
once called the stock markets “a casino without rules.”[1] The problem is exacerbated by the absence of a well-defined concept of “fiduciary duty” and by weak enforcement provisions under Chinese law.

4. **Weak mechanisms to control false financial disclosures.** Corporate fabrication of financial reports is a serious problem in China. Although steps are being taken to change a business culture that has long tolerated corruption, weaknesses in the accounting profession, the media, and the courts undermine reform. The accounting profession has little independence from management and suffers from a severe shortage of qualified auditors. Although the media has made progress in exposing corporate fraud, journalists are often hired through a process that is influenced by senior corporate officials. Securities litigation did not appear in China until 2001, when the Supreme People's Court of China developed a framework for investors to sue listed companies for losses caused by false financial disclosures. But even today, the process is slow and cumbersome. About 1,000 suits have been filed against 14 companies, but most remain in legal limbo and none has yet been settled by the court in favor of investors.

5. Finally, China continues to suffer from **immature capital markets**, characterized by the Chinese banks' preferential treatment of state-owned enterprises, difficulties in issuing corporate bonds, and the absence of an over-the-counter securities market and corporate debt market.

Despite these problems, the authors are optimistic about the evolution of corporate governance in China. They point to the increasing globalization of listed companies, such as those listed in Hong Kong, as a trend that has helped align those companies with international standards of governance. They also point to the new government policy allowing mainland Chinese citizens to invest in non-mainland stock markets, a move that will force mainland enterprises to compete with their Hong Kong counterparts for investors. Also, as China's market economy matures, it will stimulate the development of more experienced personnel who are badly needed to serve as company managers, independent directors, and certified public accountants.

To overcome the obstacles to better corporate governance, the authors recommended a number of policy options. These include better defining the functions of supervisory boards, making it easier for investors to sue management, and toughening the punishment for insider trading — all steps that have been recommended by other experts. The authors also suggest reviving the now-banned regional over-the-counter markets, establishing an incentive mechanism to encourage reporting of insider trading, and promulgating the concept of fiduciary responsibility.

**Findings of the review**

1. A scientific risk management system is necessary in India to check the non-compliance factor. India has one of the best CG practices and provision, which needs monitoring system to check its compliance.

2. Non-compliance factor is very less in case of other countries when compared to India

3. CG practice in case of USA companies is mandatory and there is no problem of non-compliance but companies complain about high cost, due to which companies get into practices which are some times unethical and detrimental to public.
4. Australia has a democratic form of CG practice where the council recommendations of different states are followed as allowed by the regulations.

5. China is still infant in implementation of CG practices in their companies, but the reform in CG practices has already started as a beginning for individual owned companies which constitute 30% of share markets.

6. Thus, body of authority should be constituted to check all factors which constitute good CG of companies in India.

Conclusion

No doubt that countries like India USA, Australia and China are implementing and adopting Corporate governance practices to improve market performance of listed companies but, the regulatory framework are different according to the circumstances of those countries. In Australia adherence to logical corporate regulations are optional and companies can follow CG as directed by council of that area. In USA even though there are stricter CG regulations their compliance is high cost and companies complain about complexity and high cost. Where as in China CG policies can be implemented only to those companies whose shares are marketable and state owned companies do not absorb much of the regulations. And in India even though we have strict CG its implementation and compliance is more casual and most of the PSUs companies are yet to comply to the set provisions since from two decades of the emergence of corporate governance practices in India. Thus a CG should be made mandatory to all the companies in a country to get incorporated and approved in the legislatives along with the formations of the companies and penalty for non-compliance should be on the first. Finally the review as provided by authors gives a clear picture about how CG works in each one of these countries and its impact on capital markets which is the need of the hour for strong economy of any country. The study further gives scope for finding what constitutes risk management system, who should be the body of authority to check compliance factor of CG in India. Non-compliance of regulations should absorbs what risk is the decisions about these factors is need of the hour.
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INSTITUTIONAL OWNERSHIP AND EARNINGS OPACITY

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ABSTRACT

The level of earnings opacity in Indonesia is very high. One cause of the high earnings opacity of a country is concentrated ownership (Anderson et al. 2006; Anderson et al. 2009). Most of single majority shareholders in Indonesia are institutions, including government, bank, insurance, pension, and mutual fund, thus, it is assumed that each kind of single majority shareholders has different motivation towards corporate earnings opacity level. Therefore, the purpose of this study is to test the effect of institutional ownership on earnings opacity. Sample of this study consists of all firms listed on Indonesia Stock Exchange in 2009-2013. Regression analysis test hypothesis is used in this study. This study builds an index to measure earnings opacity. The findings suggest that: (1) the higher concentrated ownership by government tends to have greater earnings opacity (2) the higher concentrated ownership by bank tends to have greater earnings opacity (3) firms with concentrated ownership by pension fund tends to have higher earnings opacity (4) firms with concentrated ownership by mutual fund tends to have higher earnings opacity.

Keywords: earnings opacity, institutional ownership, government, bank, insurance, pension fund, mutual fund
Introduction
In open economic era and free trading like now, foreign investors who will be investing in public company will consider the risk of information faced by them. One of the information risks is the high earnings opacity in public company in a country. Opaque earning is the earning that is not transparent, so it might increase the information risks borne by investors. Higher earnings opacity index of companies in a country may detain the flow of investment and foreign funding that may affect on social welfare of the country.

Based on the previous research, it shows that the level of company earnings opacity in Indonesia is very high, which is on the 32nd place from 34 countries (Bhattacharya et al., 2003). Therefore, it is important to conduct a study about factors affecting earnings opacity on public companies in Indonesia, which one of them is the high ownership concentration in Indonesia. Based on the previous research (Anderson et al. 2006; Anderson et al. 2009), family ownership affects on earnings opacity in public companies in America, so this study may broaden researches about the relationship of ownership structure and earnings opacity. Different with the previous research (Anderson et al. 2006; Anderson et al. 2009) this study tests the affect of institutional ownership on earnings opacity. It is because the majority of companies in Indonesia has single majority shareholder that is institution. The previous studies about concentrated ownership in Indonesia among others are: (1) Siregar (2008) used sample of all companies listed on Indonesia Stock Index in 2000 – 2004, with control right cutoff of 50%. The level of public company ownership concentration in Indonesia was high, which was 68% of the sample. (2) Prabowo (2010) used the sample of all companies listed on Indonesia Stock Index (in exception of bank and finance). It found the evidence that companies that had controlling shareholders more than 50% was 70% of the sample. (3) Muazaroh and Lucyanda (2011) used the sample of manufacturing companies listed on Indonesia Stock Index in 2009, with denga majority shareholder cutoff that had share directly was 50% or more. It found the evidence of ownership concentration average that was 65.8%.

This study is an advanced research from (2011) that tests factors affecting on earnings opacity of public company in Indonesia. The result of this study shows that a small company tends to have higher earnings opacity than a large company. It shows that the small company tries to cover corporate information from external parties in order to avoid unprofitable competition because it usually maxmizes its position in competitive environment. The research result also shows that a company with concentrated ownership tends to have low earnings opacity level. It shows that the existence of majority shareholders in the company may add the function of corporate governance. Then, this study suggests that the existence of qualified auditor may also increase the effectivity of corporate governance in the transparency of corporate financial reports. Therefore, the research result is inconsistent with the research result of Anderson et al. in 2006 (Anderson et al. 2009), which is that the higher ownership concentration is, the higher earnings opacity level will be. It is because controlling shareholders will use corporate earnings opacity to get personal profit. Meanwhile, Zuhrohtun (2011) proved the opposite, that the existence of single majority shareholders actually reduces earnings opacity because it will conduct monitoring function, so it can replace the function of financial report transparency. Based on those matters, this study wants to retest the effect of share ownership on earnings opacity by identifying types of majority shareholders that mostly are institutions included in five groups which are government, bank, insurance, pension, and mutual funds. It is because each type of single majority shareholders has a different motivation on financial reporting policy, so it is predicted may affect earnings opacity level. Therefore, it is necessary to have empirical
evidence whether types of institutional shareholders will affect earnings opacity level on public company in Indonesia. The finding suggest that the higher of concentrated ownership by government, bank, pension fund, and mutual fund will increase the level of earnings opacity. This study couldn’t find evidence the effect of insurance company ownership on earnings opacity. The result of this study is expected to give input to Financial Services Authority (FSA) about the regulations regarding the importance of earnings transparency to protect minority shareholder.

Concentrated Ownership and Earnings Opacity

Some previous researches have proven that ownership concentration affects accountancy information quality. Claessens et al. (2000) has proven that most of company’s shares in a country categorized by LaPorta et al. (1999) to have low investor protection level (such as Indonesia, The Phillipines, Korea, Japan, and Taiwan) are owned by family. According to Arping and Sautner (2010), CEO power can facilitate in preventing opaque information environment for personal interest. CEO domination indicates how much the power of decision maker concentrated on the hand of CEO. Finkelstein (1992) identified four sources of CEO power, which are: structural power, ownership power, expert power, and perestige power. Anderson et al. (2006) suggested that family may create corporate opacity or still in the company because they are able to exploit the opacity to produce private profit on cost of majority investors.

Zuhrohtun (2011) tested factors affecting earnings opacity on public companies in Indonesia. The result of this research has proven that small company tends to have higher earnings opacity compared to larger company, that shows that small company tries to cover corporate information from external parties to avoid unprofitable competition because it usually tries to maximize its position in competitive environment. The research result also shows that a company with concentrated ownership tends to have low earnings opacity. It shows that the existence of majority shareholders in the company may add the function of corporate governance, especially in increasing corporate financial reporting transparency. This research then shows that the existence of qualified auditor is also able to increase the effectiveness of corporate governance in corporate financial reporting transparency policy. Single majority shareholders in Indonesia are institutions, including government, bank, insurance, pension, and mutual funds. Therefore, this research predicts that each single majority shareholders has different motivation on the level of corporate earnings opacity.

Cheng and Reitenga (2001) tested the effect of institutional investor size on management performance. The research differentiated between large/small institutional investors and active/passive institutional investors. They estimated that small institutional investors are encouraged to maximize short-term performance and encourage managers to increase current earnings. On the contrary, large institutional investors arrange important resources, collect information, and try to maximize corporate performance in the future. The power of disciplinary from the investors can be reached as long they are able to resist manager’s decision. The research result implies that the existence of large active institutional investors in a company might limit manipulation of discretionary accruals when there is important difference between expected earnings and resulted earnings. Otherwise, they boost the increase of management profit with discretionary accruals when the company is under pressure on short-term earnings. Institutional investors will be neutral when the initial pressure on result is low.
Share Ownership by Government and Earnings Opacity

Government as a single majority shareholder is motivated to monitor company to achieve public purpose, which is social welfare (Shleifer & Visny, 1999; Eng & Mak, 2003) and add the function of corporate governance (Blanchard & Shleifer, 2000), so the existence of government can replace extensive disclosure in the company in order to increase earnings opacity. On the contrary, the existence of government in the company can sacrifice corporate wealth for political benefit (Wang & Sheiler, 2006), and achieve political purposes at the expense of social welfare (Bennedsen, 1999), so the company tends to use earnings opacity to cover its politician’s relationship and interests. Because the legal enforcement in Indonesia is still low, it is predicted that the existence of government as single majority shareholders will increase earnings opacity, so the second hypothesis is as the following:

H1: The higher share ownership by the government will increase the level of earnings opacity

Share Ownership by Bank and Earnings Opacity

Bank will take credit decision based on the information from accountant. Based on this fact, corporate manager will be encouraged to manage result/performance of corporate finance as a signal of corporate quality towards bank. Baralexis (2004) states that company having financial needs, is encouraged to manage corporate financial performance. Somehow, when bank is the owner of the corporate capital, then, it will be more profitable to get relevant information source about corporate financial situation, so that the managers will conduct earnings management as the signal of their corporate capacity towards bank. Therefore, it is predicted that the existence of bank as single majority shareholder will increase earnings opacity, so the third hypothesis is as the following:

H2: The higher share ownership by bank will increase earnings opacity level.

Share Ownership by Insurance Company and Earnings Opacity

Insurance company might want to keep both existing business relation and potential relation with a company, so it is less encouraged to resist management decision. Insurance companies are usually named as grey institutional investors. They deal with high monitoring expenses because they may ruin the relationship with corporate management and lose business potential (Bricley et al., 1988). Therefore, it is suspected that they do not limit management discretion, so it will increase earnings opacity.

H3: The higher share ownership by insurance company will increase the level of earnings opacity

Share Ownership by Pension Fund and Earnings Opacity

Qiu (2004) suggests that pension fund controls corporate manager maneuver to protect their share ownership. Black (1990) states that pension fund is the most active institutional investor because of its importance of containment and independence towards its relationship with corporate manager. Contrary to investment fund that is oriented to the efforts in maximizing short-term earnings, pension fund is more interested in maximizing long-term earnings. Del Guercio and Tkac (2000) stated that pension fund is paid in its responsibility to be able to ensure the pension payment, so they try to encourage corporate manager to limit discretionary accruals management. Pension fund is affected by sponsor companies or state agency, and mutual fund, they do not want to offend their clients’ companies, so it can be said that pension fund is controlled by corporate management. An institution selling product and financial services (such as bank and insurance) has urge to inactively resist a company that will be its potential client (Cox and Thomas, 2006). Therefore, it is predicted that the existence of pension fund as single majority shareholders will increase earnings opacity.
H4: The higher share ownership by pension fund will increase the level of earnings opacity

Share ownership by Mutual Fund and Earnings Opacity
Ramaswamy and Veliyath (2002) classified investment fund among rejections on pressures because this institution does not have business relation with corporate manager, and because of fiduciary responsibility to its customer, investment fund will limit manager discretion. Badrinath and Wahal (2002) stated that investment fund is usually more interested in investment in short-term project. Baysinger et al. (1991) stated that the fund is remunerated by manager based on quarterly performance, so the decrease of present performance is related to the fund cancellation by administrator. The involvement of investment fund in corporate capital will encourage the action of earnings management. Thus, it is predicted that the existence of mutual fund as single majority shareholders will increase earnings opacity.

H5: The higher share ownership by mutual fund will increase the level of earnings opacity

Research Method
The research sample are 548 firms listed on the Indonesian Stock Exchange from 2009-2013 that issued yearly financial reports per 31 December. This research uses data pooling with the total observations are 2,740. This study omitted 367 hence the final observations are 2,373. The yearly financial reports were obtained from the Indonesian Stock Exchange. Meanwhile, trading volume and bid ask spread data were collected from Bloomberg.

Independent variables in this study are government ownership (GovOwn), bank ownership (BankOwn), insurance company ownership (InsuranceOwn), pension fund ownership (PensionOwn), mutual fund ownership (MutualOwn) and firm size (Size). Hence the dependent variable is earnings opacity index (Index_Op). The ownership is measured using the highest percentage of companies share that owned by institutional shareholder. Single majority Ownership is measured using dummy variable, 1 if , 0 otherwise (DsingleOwn). Firm size is proxied with natural log of total asset.

Earnings opacity is the earnings reported by firms that fail to provide information on the real economic earnings distribution (Bhattacharya et al., 2003). The earnings opacity in this study is measured by earnings opacity index established from two main elements of earnings opacity namely internal and external earnings opacity. Internal earnings opacity is measured by earnings aggressiveness and income smoothing. On the other hand, external earnings opacity is measured by bid-ask spread and trading volume. From those four measurement tools, earnings opacity index is established. This study categorizes all earnings opacity proxy into scales. The most opaque firms are graded 10 and the least opaque is graded 1. All four categories are added and scaled by factor 40 (the possible total value) to make index ranging from 0.1 to 1. The higher the index means the higher the earnings opacity. This index gives relatively robust measure from opacity because it calculates all earnings opacity measurement. This measurement is a modification from the opacity index from Anderson et al. (2009) and Bhattacharya et al. (2003).

The followings are the measurements from internal and external earnings opacity. Earnings aggressiveness (Bhattacharya et al., 2003) is calculated using scaled accruals. Scaled accruals are defined as:

\[
ACC_{it} = \frac{(\Delta CA_{it} - \Delta CL_{it} - \Delta CASH_{it} + \Delta STD_{it} + \Delta DEP_{it} + \Delta TP_{it})}{TA_{t-1}}
\]

(1)

Notes:
ACC_{it}: scaled accrual company i period t
\Delta CA_{it}: total change of assets company i period t
Income smoothing, which is calculated using the correlation change in the accrual and cash flow from operation (Leuz et al., 2003), with the following formula:

\[ PL_{it} = \rho [\Delta Acc, \Delta CFO] \]  \hspace{1cm} (2)

Notes:
- \( PL_{it} \): income smoothing of company i period t
- \( \Delta Acc_{it} \): accrual change of company i period t
- \( \Delta CFO_{it} \): change of operational current cash of company i period t
- \( \rho \): correlation level

External earnings opacity is developed from trading volume and bid-ask spread. Volume of share trading, is proxy of asymmetric information and uncertainty (Leuz and Verrecchia, 2000; Anderson et al., 2006), which is calculated by natural log of average volume of daily share trading during the fiscal year. Bid ask spread (Anderson et al., 2006) is the proxy of asymmetric information among investors. Bid ask spread is defined as follows:

\[ \text{Bid Ask Spread} = \frac{(\text{bid price}-\text{ask price})}{\text{average bid and ask price}} \]  \hspace{1cm} (3)

The calculation for bid-ask spread is carried out by counting the average of all trade for each company every Wednesdays of the third week, then the result is calculated to find the mean during the year based on the 12 observations. Due to too many observations related to the share trade data, this research limits the analysis to a typical trade day of each month. The monthly data are then calculated for its mean every year. This study chooses the third Wednesday in each month to eliminate the loss of data because of holidays and to minimize the weekly effects.

This study uses multiple regression analysis with dummy variable as the additional analysis to test hypotheses. The regression model is:

\[ \text{Index}_{OPt} = \beta_0 + \beta_1 \text{GovOwn}_{it} + \beta_2 \text{BankOwn}_{it} + \beta_3 \text{InsuranceOwn}_{it} + \beta_4 \text{PensionOwn}_{it} + \beta_5 \text{MutualOwn}_{it} + \beta_6 \text{DSingleOwn}_{it} + \beta_7 \text{Size}_{it} + e \]  \hspace{1cm} (4)

Notes:
- \( \text{GovOwn}_{it} \): the percentage of share that owned by government of company i period t
- \( \text{BankOwn}_{it} \): the percentage of share that owned by bank of company i period t
- \( \text{InsuranceOwn}_{it} \): the percentage of share that owned by insurance company of company i period t
- \( \text{PensionOwn}_{it} \): the percentage of share that owned by pension fund of company i period t
- \( \text{MutualOwn}_{it} \): the percentage of share that owned by mutual fund of company i period t
- \( \text{DSingleOwn}_{it} \): dummy variable, 1 if the institutional ownership as a single majority ownership and 0 otherwise
- \( \text{Size}_{it} \): total asset of company i period t
Analysis and Discussion

The hypothesis 1, 2, 3, 4, and 5 are tested using multiple regression analysis (equation 4). The result is presented in Table 1.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>t-statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>0.414031</td>
<td>6.092322***</td>
</tr>
<tr>
<td>GovOwn</td>
<td>0.067185</td>
<td>2.200018**</td>
</tr>
<tr>
<td>BankOwn</td>
<td>0.052449</td>
<td>-1.659810*</td>
</tr>
<tr>
<td>InsuranceOwn</td>
<td>-2.87E-05</td>
<td>0.602550</td>
</tr>
<tr>
<td>PensionOwn</td>
<td>0.000129</td>
<td>0.069330*</td>
</tr>
<tr>
<td>MutualOwn</td>
<td>0.000131</td>
<td>0.526715*</td>
</tr>
<tr>
<td>DSInsingleOwn</td>
<td>-0.000255</td>
<td>0.008750*</td>
</tr>
<tr>
<td>Size</td>
<td>-0.022215</td>
<td>-1.667060</td>
</tr>
</tbody>
</table>

N: 2,373
Adj R²: 0.062
F-statistic: 2.105**

This table shows regression results for equation 4. Equation 4 contains 7 independent variables, which are government ownership (GovOwn), bank ownership (BankOwn), insurance company ownership (InsuranceOwn), pension fund ownership (PensionOwn), mutual fund ownership (MutualOwn), dummy variable i if the institutional ownership as single majority ownership, 0 otherwise (DsingleOwn) and firm size (Size). The dependent variable is Index_Op (an index developed by internal and external opacity). ***Statistically significant at the 1 percent level, **Statistically significant at the 5 percent level and *Statistically significant at the 10 percent level

Based on Table 1, GovOwn variable has positive coefficient 0.067185 and significant. It means the first hypothesis is supported. The higher share holder owned by government increase the earnings opacity. BankOwn variable also has a significant positive coefficient, 0.052449. thus the second hypothesis also supported. The higher bank ownership will increase the earnings opacity level of the firm. InsuranceOwn variable has a negative coefficient and not significant. It means that the third hypothesis is not supported. The insurance company become one of financial sector that face a high market competition, thus they have to maintain their relationship with manager to protect their business. This finding consistent with Bricley et al. (1988) that insurance company deal with high monitoring expenses because they may ruin the relationship with corporate management and lose business potential (Bricley et al., 1988). The PensionOwn variable has positive coefficient 0.000129 and significant.it means that hypothesis 4 is supported. The higher shareholder owned by pension fund increase the earnings opacity. The MutualOwn variable has positive coefficient 0.000131 and significant. Thus the last hypothesis is supported. The higher mutual fund ownership increase the earnings opacity level. The size variable has a negative coefficient -0.022215 but not significant. It indicates that size do not matter in earnings transparency decision of the firms. The dummy variable DsingleOwn has the coefficient of 0.116 and significant. This indicates that the earnings opacity level between firms that has institutional ownership as single majority ownership is t different from that of non-single majority.
Conclusions
This study investigates the effect of institutional ownership on earnings opacity. The research result shows that majority share ownership by government will increase earnings opacity. It is because government as a majority shareholder is motivated to monitor the company to obtain public purpose, which is social welfare (Shleiver & Visny, 1999; Eng & Mak, 2003) and to increase the function of corporate governance (Blanchard & Shleiver, 2000), so the existence of government can replace the extensive disclosure in the company to increase earnings opacity. Otherwise, the existence of government in the company may sacrifice the corporate wealth for political benefit (Wang & Sheiler, 2006), and to achieve political purpose at the expense of social welfare (Bennedsen, 1999), so the company tends to use earnings opacity to cover its political relation and interest.

This research result also proves that the higher share ownership by pension fund will increase the level of earnings opacity. It is because pension controls the maneuver of corporate manager to protect its share ownership. Moreover, pension fund is the most active institutional investor because its importance of containment and independence towards its relation with corporate manager. Contrary to investment fund that is oriented towards the efforts to maximize short-term earnings, pension fund is more interested in maximizing long-term earnings (Qiu, 2004; Black, 1990). The higher share ownership by mutual funds is also increase the earnings opacity level. It is in accordance with Badrinath and Wahal (2002) stating that investment fund is usually more interested in short-term project, so they are encouraged to exploit the earnings opacity for their private benefit.

Majority ownership by Bank is also proven will increase earnings opacity. It is in accordance with Baralexis (2004) stating that company having financial needs is motivated to manage the result of corporate financial performance. However, when bank is the owner of corporate capital, it will be more profitable to get relevant information source about corporate financial situation. Therefore, managers will conduct earnings opacity as the signal of their corporate capacity towards bank. This study doesn’t find that insurance company ownership affect the earnings opacity. This finding support Bricley et al. (1988) insurance company might want to keep both existing business relation and potential relation with a company, so it is less encouraged to resist management decision in financial reporting decision. The result also shows that a company with concentrated ownership tends to have low earnings opacity. It is shows that the existence of majority shareholder in the company may increase the function of corporate governance, especially in increasing corporate financial report transparency. This study use dummy variable to control the single majority ownership. The future research should develop sub sample based on the type of institutional ownership, so the relative opacity level that compared to each sub sample can be known. This study also use immediate ownership to measure the institutional ownership structure. Future research could use ultimate ownership to trace the institutional ownership as controlling shareholder.
REFERENCE


THE IMPACT OF DEFERRED TAX CREDIT IN BRAZILIAN BANKS’ EQUITY: A STUDY OF CAUSALITY OF DEFERRED TAX ASSETS VARIATIONS IN SHAREHOLDERS' EQUITY VARIATIONS

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ABSTRACT

This article reveals and brings to discussion the results of an empirical research on materiality and causality of deferred tax credit (DTC) in net equity (NE) of banks in Brazil, based on a sample of the 10 largest banks, according to capita control, from 2009 to 2014 in six-month periods, from the adoption of IFRS (International Financial Reporting Standards) required by Brazilian Corporate Law. The deferred tax asset arises from temporary differences, impacting the current tax liabilities, and negative taxable income, also having an impact on equity. The research investigated how significant is the deferred tax assets in relation to equity, in order to analyze the variations of deferred tax assets related to the changes in equity and the representativeness of the stock of deferred tax assets in equity. A positivist methodology was applied, sustained in specific equations and simple linear regression model with panel data, run by ordinary least squares. Results have shown that, in the case of private banks, with 90% confidence, the relationship among changes in deferred tax assets and changes in equity is reverse causality and the stock materiality DTC in NE is of the order of 35%. As for public banks, it was not found statistically significant, but the materiality of the inventory of deferred tax assets in equity is on the order of 38%. Finally, the results are presented in both the relevant evidence of financial fixed asset of deferred tax assets as a signal of reverse causality, and may subsidize further research. However, since it only addresses 11 semesters, it would be interesting to conduct further research with greater temporal scope so as to compare with the results hereby achieved.

Keywords: Deferred tax asset in Brazil. Impact of deferred tax assets in equity. Reverse causality of deferred tax assets in the equity of banks.
1 INTRODUCTION

This article discusses the findings of empirical research on materiality and causality of deferred tax credit (DTC), assets, in equity (NE) of financial institutions in Brazil. The samples used were the financial statements of the 10 largest, private and government, banks from 2009 to 2014 in six-month periods with the purpose to study the variations of deferred tax assets related to the changes in the banks' own capital from the adoption of IFRS (International Financial Reporting Standards).

Deferred tax assets include deferred tax credits (DTC) arising from temporary differences and deferred tax credit from the negative taxable income (tax loss). Timing differences in a tax broad context are algebraic additions/deletions of expenses/income to the calculated profit in accordance with accounting standards, deferred to future periods and subject to the existence of tax bases of assets and liabilities until the conditions are satisfied as required for calculating the taxable income base for incidence of income tax of legal entities (corporate income tax) and social contribution on net income (CSLL), which in Brazil, are the direct income taxes.

But the timing differences give rise to both deferred tax assets and deferred tax liability. When they give rise to deferred tax assets, they are usually made up out of enforcement of the state and refer to estimated expenses under conditional provisions for not yet meeting the condition of reduction of taxable income. When they give rise to deferred tax liability, they usually depend on state authorization to postpone the tax effects of income.

Thus the postponement of the benefit of tax rights of temporary differences and negative taxable income implies the recognition of deferred tax assets. When the tax credit is derived from temporary differences, including the provision for doubtful accounts (BDP), there is contrast with the current tax liabilities, but when it originates in negative taxable income, the impact of the contrast is on equity, in this case the liquidity indicators are improved (FIELDS, LYS and VINCENT, 2001).

The provision/allowance for doubtful accounts (BDP) can be composed of two parts: one for purging losses based on historical and specific standards (minimum provision); and another made up of expectations of additional losses (discretionary provision). But besides the BDP, other provisions can be established using the discretionary power of firms. However, this discretion has sometimes been understood as earning management for various purposes, such as protecting shareholders or benefitting managers (Schrand and Wong, 2003; Holland and JACKSON, 2004).

The existence of deferred tax assets on a financial statement signals a quantitative gap between book income and taxable income caused by conceptual differences between accounting standards and tax regulations, allowing for the deferral that now impacts the tax current liabilities and also impacts equity, which can produce direct or inverse association with other accounting variables (BEHN; EATON and WILLIAMS, 1998; BASTINCOVA, 2002; CHLUDEK, 2011; BONHAM et al., 2007).

For the effective understanding of the deferral of a tax credit, a deferred tax asset requires adequate information content for the assessment of stakeholders and other users, considering the time required for financial restraint and the impact of deferred tax assets in equity. This requires that the accounting information, as a management tool, satisfies the
attributes of timeliness, reliability, comparability and neutrality and thus fulfills its role of assisting decision making (IUDÍCIBUS et al, 2010).

The rules for recognition of a deferred tax asset, which is based on the calculation of temporal additions and the negative taxable income (tax loss), are inserted into the prescriptive frameworks of tax accounting and financial accounting, governing the way to measure taxable profit (taxable income), which can be different from the income reported by accounting.

The framework of tax accounting, guided by the rules of the specific legislation, allows the state to collect taxes that are used to finance their political-administrative-social functions, to provide the well-being of the community. For this purpose, the state regulates the nature of the adjustments to be made to the income reported by the accounting, adapting it to the tax rules (HENDRIKSEN; VAN BREDA, 1999; DE FRANÇA and NIYAMA, 2001).

These adjustments to net income denominated additions, deletions and compensation are performed in each accounting period, as the discipline of the Income Tax Regulation (RIR) through Decree 3.000/99, according to specific criteria bookkeeping for the measurement of taxable profit. Some of these adjustments are permanent and others have transitory character. The transitory nature of adjustments are the ones that give rise to temporary differences, guarantee the independence in the application of accounting standards in relation to tax regulations, reducing state influence in accounting practices, and are controlled in specific books of tax accounting, as discussed by literature (and SANCHEZ SANCHEZ, 2010).

State influence exerted by the tax laws on accounting, historically marked by conceptual differences, gives it legitimacy for meddling in the practices, methods and accounting rules (IUDÍCIBUS et al, 2010). In relation to temporary differences, this influence has contributed to the awakening of their own normative accounting status that with the enactment of IAS 12 (International Accounting Standard) discipline tax practices to be observed in relation to the determination and recognition of direct income taxes.

The CPC Pronouncement 32 (IAS 12 Income Taxes), approved by Resolution 1.189/09 of the Federal Accounting Council, governs the measurement criteria, recognition and disclosure of deferred tax assets in Brazil. But this standard was not accepted by regulators of the financial industry (CMN and Central Bank) that by means of CMN Resolution 3.059/2002 had established criteria with greater restriction to recognition of deferred tax assets.

Under the National Financial System, the recognition of deferred tax assets is founded on a broad legal framework, in which the National Monetary Council (CMN) has determined the criteria to be met for recognition of deferred tax assets, based on Resolution CMN 3.059/2002, as amended by CMN Resolution 3.355/2006 and Circular BCB 3.171/2002. For the recognition of deferred tax credit, it is essential that the organization prove an earnings history or taxable income and to demonstrate, through technical study, the expectation to generate future positive profits as to ensure the use of its deferred tax assets.

So, as in Kerlinger (1980) and Richardson (1999), we shift the focus to the issue under consideration, from a concern based on the perception of this study, which leads to the formulation of the research problem as a matter with potential to be discussed and investigated. In this context, the research investigates how significant is the deferred tax asset related to the net worth of banks operating in Brazil.
To obtain evidence to enable answer the research problem has to analyze the variations of deferred tax assets related to the changes in equity and the representativeness of the stock of deferred tax assets in the equity of private and public banks, semiannually, in the period of 2009-2014.

The importance of this research is related to the high Brazilian tax burden, which in 2012 reached 36.3% of GDP (Gross Domestic Product) as the highest tax burden among the BRICS (Brazil, Russia, India, China and South Africa), according to the Organization for Economic Cooperation and Development - OECD. This research is also justified by the possible influence of the financial immobilization of the deferred tax credit on the cost of bank credit, whereas the active aggregate data and shareholders' equity of 10 banks in the sample account for more than 85% and 92% of total assets and total net assets of the National Financial System, respectively, according to the Brazilian Central Bank’s report "50 banks and consolidated the National Financial System."

The results of this research are consistent with the model used, which is positivist one, through specific equations and econometric model, analytically described in the methodology section.

2 THEORETICAL FRAMEWORK

The approaches brought in this section discuss the progress of studies and research relating to the deferral of direct taxes on profits, which in the Brazilian tax system stand for the income tax of legal entities (corporate income tax) and social contribution on net income (CSL) and the provisions of the Income Tax Regulation (RIR) issued by Decree 3.000/99 governing the adjustments in the statement of taxable income.

Articles 249 and 250 of the RIR determine the adjustments in the form of adding and deleting accounting profit in order to obtain taxable profit (income). The settings for adding and deleting are segregated into permanent and temporary (transient). In the form of what these dispositions are established, the demonstration of taxable income items should be prepared in vertical format, and the last line must be the positive taxable income (actual profit) or negative taxable income (tax loss), whose analytical deduction is demonstrated in the methodology section.

Being the financial industry a segment that leverages credit and boosts the development of a country, its activity is regulated due to its importance and the potential risk that this segment imposes on the economy. This regulation in Brazil is exercised by the National Monetary Council (CMN), the Central Bank of Brazil (BACEN) and the Brazilian Securities Commission (CVM).

Deferred tax is the result of quantitative and qualitative difference between accounting income and taxable income caused by conceptual differences between accounting standards and tax rules for the verification and calculation of the tax. This conceptual difference gives rise to differences between the two standard fields resulting in deferred tax assets and the deferred tax liability that produce tax estimates payable and receivable in the future (BASTINCOVA, 2002; CHLUDEK, 2011).

Bonham et al. (2007) note that the accounting treatment that generates a deferred tax asset arises from certain characteristics inherent to taxation, which distinguishes it from other...
operating expenses and may justify differential treatment, particularly in relation to the payment of taxes, given that it is not made in exchange for a specific good or service to the entity.

Behn, Eaton and Williams (1998) conducted an empirical study to find out the association between the measurement of provisions for deferred tax assets recognized in the financial statements in accordance with evidence fonts contained in SFAS 109, and other variables. Their findings allow us to observe that in the assessment of these provisions, it is exercised a choice between relevance and objectivity, and they found evidence that there is a strong association between variations in the provisions for deferred tax assets and other variables.

Along the same lines Gomes, Michaelides and Polkovnichenko (2009) estimated a life cycle model with risk profits and liquidity restrictions in the presence of deferred tax in retirement accounts (TDA). Explicitly considered two very different types of families with TDA: direct and indirect shareholders. The latter holds shares only through TDA and consistent with the data, saving considerably less than the first actions that have inside and outside these accounts. Their findings show that TDA promise high accumulation of wealth but only with high net marginal savings.

Holland and Jackson (2004) analyzed the provisions for deferred taxes during a period when the reward for administrators might have been too high particularly in relation to partial disclosures, up and down, the tax provisions. In their analysis they used a sample of 58 firms for the years 1991 and 1992, which accounted for 20% of the maximum potential of deferred tax liabilities and 9% of the profits before taxes. Their findings indicate that firms use a lot of excess costs of legal expenses in order to manage the outcome, rather than focusing on a specific item. Also they found very weak evidence of overstatement and understatement of tax provisions and the level of leverage.

Eberhartinger (1999) shows the relationship between the corporate accounting and tax accounting and concluded that the rules that guide the two segments of accounting do not interfere with each other. Therefore, in theory, the information produced by the corporate accounting are free from the influences of tax accounting, but the basis for calculating taxes quantified by tax accounting depends on the information of corporate accounting.

An important sign of temporal difference is the presence or not of a tax basis of assets and liabilities, for the recognition of deferred tax assets and liabilities can depend on it. Hendriksen and Van Breda (1999) argue that the standards for recognition of taxes on income and different temporal criteria for recognition of revenues and expenses is producing the differences between accounting income and taxable income.

In Brazil, the tax system requires that there is a book for calculation of net income and one for calculation of taxable income. Schanz and Schanz (2010) identified two counting systems of accounting and taxable profits, called One Book System and Two Book System. In the first system, there is only one book for calculation of net income and taxable income. In the second, two log books are required, one for recognition of the entity's economic transactions with the verification of accounting result and another for recognition of adjustments required for calculation of taxable income. This system of two books is more common in countries with higher differences between accounting and taxable income.
Differences between accounting income and taxable income, which generate asset and deferred tax liability through the temporary differences are conceptual in nature and the finalistic aim of the information produced based on principles. In addition, these differences are enhanced by the recognition and measurement criteria adopted by specific rules that necessarily produce different results in a timely manner. Even over successive periods these results can be equalized (HENDRIKSEN, VAN BREDA, 1999; GALLEGRO, 2004).

As a result of this determination of regulators within the financial system in Brazil, the recognition of deferred tax assets is seated in a broad legal framework in which the Central Bank and the CMN express the criteria that must be met so that the deferred tax credit resulting from temporary differences and negative basis of taxable income is recognized. Among the established criteria, according to CMN 3.059/2002 Resolution, as amended by CMN Resolution 3.355/2006, for the recognition of tax credits arising from temporary differences and negative taxable income, it is essential that the entity presents, cumulatively, the following conditions: "(a) history of profits or taxable income for income tax and social contribution purposes, as appropriate, proven by the occurrence of these conditions in at least three of the last five years, a period that should include exercise in reference; (B) be the expectation of generating future taxable income or income for purposes of income tax and social contribution, as appropriate, in subsequent periods, based on a technical study showing the probability of future obligations with taxes and contributions on the realization of tax credits, for a maximum period of ten years and shall be reviewed at least during the preparation of interim and annual financial statements; and (c) deferred tax assets that do not meet the referred conditions or the amounts effectively realized in two consecutive periods are less than fifty percent of the amounts estimated for the same period technical study should be reduced.

Taking into account this determination of the CMN, Lucena et al. (2009) analyzed the adoption of the recoverability of assets by Brazilian banks, through information available in the notes. Their findings report that no evidence was found that banks were applying the criteria disciplined by CMN in its financial statements.

Schrand and Wong (2003) studied the provisions set out in SFAS 109 for firms to use their discretionary powers to arbitrate provisions against deferred tax assets. With its discretion to arbitration firms decide to use "hidden reserves" to manage profits. Their findings also indicate that many banks do not recognize provisions to manage profits, but follow the direction of the said SFAS 109. However, if the bank is sufficiently well capitalized to absorb the impact of the current period in the capital, the total provision increases the bank’s capital.

França and Niyama (2001) conducted a research in order to demonstrate the influence of the negative taxable income or tax loss in the economic value of Brazilian companies. They consider the loss an accidental consequence of the ordinary operations of a continuing business, and emphasize that the influence of negative taxable income can be measured by the increase in economic value of the asset, which causes the variation in the return on assets indicators, on own capital and financial leverage. They conclude, as the main finding of the research, that a company that recognizes the tax effects arising from the negative taxable income has differentiated value of that which does not.

Another consequence of the recognition of deferred tax assets is the relationship with the company's value as shown by Fields, Lys and Vincent (2001) in which the company can afford this practice to present a more favorable situation with regard to solvency, as also
found Huang (2008): that in order to get ideal exposure risk, companies with high taxes are used for tax assets to adjust their liability portfolios through the maximization of the collected tax benefit.

It is important to note that previous studies with the aim to assess the impact of the recognition of deferred tax assets in equity have not been found. However, there are studies which analyze the impact of the recognition of deferred tax assets in companies, such as the study by Kronbauer and Alves (2013). Their research concluded that the main motivation for its recognition includes the impact on the debt ratio, total asset size, profitability index and size of the companies listed Ibovespa and IBEX-35.

But result management as one of tax deferral uses has been discussed by researchers for some time. Phillips; Pincus; Rego and Wan (2004) investigated evidence of types of accounts that show result management activity. They established a marginal utility of change in net deferred tax liabilities for detecting and managing declining profits and it decomposed the total change in the net deferred tax liability in eight elements that allow them to detect that this type of accounting is associated with profit management activity. They investigated the relationship between annual profits and components of deferred tax assets and liabilities in the notes to the income tax reported by firms annually. They followed the arguments of Mills and Newberry (2001) and PPR (2003), that managers typically have more care with the financial information than with tax information and can use such care so as not to affect taxable income. This management generates differences that increase the net deferred tax liability and consequently increase the cost of income tax. Their findings indicate that net deferred tax liability is related to income provisions, expenses, reserves and other provisions that can be used to detect earning management and prevent profits from being reduced.

3 METHODOLOGY

The methodology used in the research is a positivist one, sustained in specific equations in simple linear regression model with panel data, round by ordinary least squares (OLS), complemented by descriptive statistics and correlation analysis. The specific equations model the size of the temporary differences of taxable income obtained from the equation and the size of the deferred tax credit due to the direct tax rate applied to the temporal and negative taxable income differences. The linear regression model explains the influence or association of variations of deferred tax assets on variations in equity showing causality exerted by the deferred tax assets in equity of banks, according to significance (α) test. Descriptive statistics allow us to analyze the average behavior of the variables obtained from the sample and their dispersions, and the correlation analysis indicates the linear relationship between the variables of the model captured from the sample data.

3.1 Theoretical Model of Estimation

The modeling research is composed of six equations. The models described in equations (1) and (2) allow you to obtain the value of the time difference (time addition) and the value of the deferred tax credit (DTC) on this addition respectively. Equation (1) is an algebraic manipulation of the equation of positive or negative taxable income (taxable income or tax loss). The model described in (3) gives the value of deferred tax assets (DTC) by adding the deferred tax credit of temporal differences in deferred tax credit from negative taxable income. The model described in (4) allows us to explain the influence or causality of variations of deferred tax assets in the changes in net worth (NE). The model described in (5)
translates, in constant currency capability, the price of each variable accounting for the last financial statement date. Finally the model described in (6) is the general equation of taxable income obtained from Decree 3.000 /99 (RIR).

a) temporal addition or temporal difference \( (T_A) \)

The temporal addition or time difference is one of the items of the additions of the statement of taxable income. The additions are made by the temporary additions and permanent additions. Permanent additions are final and do not constitute tax credit. The result of this function is the relationship with the research problem as it is the basis of the deferred tax credit.

\[
T_A = \pi_T - \pi_C - P_A + (P_E + T_E + TL_{t-1}) \tag{1}
\]

where \( \pi_T \) is the taxable profit (taxable income); \( \pi_C \) is the accounting profit; \( P_A \) is the permanent addition; \( P_E \) is the permanent exclusion; \( T_E \) is the temporary exclusion; \( TL_{t-1} \) is the negative taxable income compensation (tax loss);

b) Tax credit of temporary differences \( (DTC_{dt}) \)

The tax credit of temporary differences corresponds to the income tax of legal entities (corporate income tax) and social contribution on net income (CSL), generated by temporal additions, and is directly related to the problem and research objectives:

\[
DTC_{dt} = 100^{-1} \delta \cdot T_A \tag{2}
\]

where \( \delta \) is the sum the rates of direct taxes on profits (IRPJ+CSLL).

The same equation is used to calculate the deferred tax credit from negative taxable income, replacing \( T_A \) by \( -TP_{t-1} \) of equation 6.

c) Deferred tax assets (DTC)

Deferred tax assets are the sum of deferred tax credit of all temporal additions to the deferred tax credit from negative taxable income, which will show the research object of causality:

\[
DTC = DTC_{dt} + DCT_o \tag{3}
\]

where \( DCT_{dt} \) is the deferred tax credit of temporary differences \( DTC_o \) is the deferred tax credit from negative taxable income.

d) Linear regression of changes in equity \( (\Delta NE) \) against the variations of deferred tax assets \( (\Delta DTC) \)

The estimator of this regression indicates the impact, influence or association of causality of variations of deferred tax assets on changes in the equity satisfying the primary motivation of the research.

\[
\Delta NE_{ij} = \alpha + \beta \cdot \Delta DTC_{ij} + \epsilon_{ij} \tag{4}
\]

where \( \alpha \) is the estimator of the constant; \( \beta \) is the estimator of variations of \( DTC \); \( \Delta DTC \) are the variations of deferred tax assets; \( i \) is the semester; \( j \) is the bank, and \( \epsilon \) is the term of error.
Accounting variables at constant prices \((VK_t)\)

This function translates the monetary value of each accounting variable prices since the last balance sheet of the series (June / 2014).

\[
VK_t = \left( \frac{IGPDI_t - IGPDI_{t-1}}{IGPDI_{t-1}} + 1 \right) . VC_{t-1} 
\]

(5)

where IGPDI is the general price index of domestic availability; VC is the accounting variable (DTC\text{dt}, DTC\text{0}, NE) at current prices on the balance sheet date; t is the last balance sheet date of the series; and t-1 is the date of the previous balance sheet.

Analytical demonstration of the positive \((TP_t)\) or negative \((-TL_{t-1})\) taxable income

This function describes in a linear fashion how taxable income (positive or negative) is determined and originates all of the functions, from 'a" to "d" above.

\[
TP_t = AP_t + PA_t + (TA_t - TE_{t-1}) - PE_t - (TE_t - TE_{t-1}) - TL_{t-1}
\]

(6)

where \(AP_t\) is the net income during the assessment period (accounting profit); \(PA_t\) is the permanent addition during the assessment period; \((TA_t - TE_{t-1})\) is the difference between the temporary differences addition in the period of assessment and write-off of the previous period; \((TE_t - TE_{t-1})\) is the difference between temporary exclusions during the period of assessment and write-off of the previous period; and \(TL_{t-1}\) previous loss (-TP\text{t-1} )

3.2 Sample

The sample data shown in Table 1 below were obtained directly from the financial statements of the 10 largest financial institutions (banks) operating in Brazil, ranked by the criterion of higher average shareholders' equity, according to the Central Bank report "50 banks and consolidated National Financial System" from June 2014, including the notes, the first half of 2009 to the first half of 2014. The amount shown in the "net equity (NE - R$)" is the simple arithmetic mean of the value of shareholders' equity of 11 semesters current value.

Table 1 - Ranking of the ten largest financial institutions (banks) in Brazil sorted by the average shareholders' equity/ net worth (NE) in cash - 1st Half 2009 1st Half 2014 (R $ 103)

<table>
<thead>
<tr>
<th>Ranking</th>
<th>Financial Inst.</th>
<th>Average NE (R$)</th>
<th>Ranking</th>
<th>Financial Inst.</th>
<th>Average NE (R$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Itaú</td>
<td>71,239,217</td>
<td>6</td>
<td>CEF</td>
<td>20,166,047</td>
</tr>
<tr>
<td>2</td>
<td>Santander</td>
<td>63,405,379</td>
<td>7</td>
<td>HSBC</td>
<td>8,589,546</td>
</tr>
<tr>
<td>3</td>
<td>Bradesco</td>
<td>57,249,944</td>
<td>8</td>
<td>Votorantim</td>
<td>7,835,573</td>
</tr>
<tr>
<td>4</td>
<td>BB</td>
<td>55,004,899</td>
<td>9</td>
<td>BTG Pactual</td>
<td>7,628,429</td>
</tr>
<tr>
<td>5</td>
<td>BNDES</td>
<td>46,611,581</td>
<td>10</td>
<td>Safra</td>
<td>6,229,054</td>
</tr>
</tbody>
</table>

Source: Bacen (Brazilian Central Bank) – Relatório 50 maiores instituições financeira e o consolidado do Sistema Financeiro Nacional – June 2014

The data in Table 1 show that, on average, that the tenth largest financial institution operating in Brazil is more than 11 times smaller than the first, and the fifth institution is around 35% smaller than the first. The data also show that the joint capital of the three major banks is 126% higher than the sum of the remaining banks’ capital ranked from 4\textsuperscript{th} to 10\textsuperscript{th} in the ranking.

Table 2 displays the sample data of the seven largest private banks, ranked 1\textsuperscript{st} to 3\textsuperscript{rd} and 7\textsuperscript{th} to 10\textsuperscript{th}, and the three largest public banks ranked at 4\textsuperscript{th}, 5\textsuperscript{th} and 6\textsuperscript{th}, all identified in Table 1,
in periods of six months, from 2009 to 2014, a total of 77 observations of private banks with private control and 33 of public banks. The basic variables are deferred tax assets (DTC), the minimum required deferred tax credit (DTC_M) and discretionary tax credit (DTC_D) both of temporary differences in the bad debt provision (BDP) and net equity (NE), all with constant value in June 2014, reflecting the IGP-DI / FGV. The 10 banks represent more than 85% of assets and 92% of the equity of the financial system in Brazil, according to the Central Bank report of 50 banks in June 2014.

Deferred tax assets of the largest private banks are, on average, approximately 35% of total shareholders' equity of these seven banks, while deferred tax assets deriving from BDP, minimum and discretionary, account for about 1/3 of the deferred tax assets of these same banks.

For the three largest public banks, the deferred tax asset is approximately 38% of net assets, and the tax credits of BDP, minimum and discretionary, are around 35% of the deferred tax asset of this set of three banks.

This participation of deferred tax assets in equity of private and public banks, 35% and 38%, respectively, represents the stock of financial immobilization of equity, deferred tax credit of medium and long term that, by the Brazilian law, can only be used to offset current tax liabilities arising from taxable income being evaluated only for its cost.

The stock of deferred tax credit is tested on an ongoing basis as required by the accounting standards and assessment in which it is not verified the recoverability of its entirety; the excess part is complies with the rules of impairment, as in Lucena et there. (2009), which should be recognized as loss, reducing equity (CMN Resolution 3.059 / 2002), the loss may be unrecognized when the restrictions that motivated its recognition are removed, arising from this procedure a hidden reserve (deferred tax credit not recognized in the accounting records) to be disclosed only in the notes of financial statements.

Table 2-Sample data of the 7 largest private banks and the three largest public banks in Brazil at constant value - from 2009 to 2014 (R $ 103)

<table>
<thead>
<tr>
<th>Sem.</th>
<th>Private Banks</th>
<th>Public Banks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DTC</td>
<td>DTC_BDP</td>
</tr>
<tr>
<td>S1/09</td>
<td>84,480,551</td>
<td>21,511,116</td>
</tr>
<tr>
<td>S2/09</td>
<td>82,622,077</td>
<td>24,537,223</td>
</tr>
<tr>
<td>S1/10</td>
<td>84,593,633</td>
<td>21,863,902</td>
</tr>
<tr>
<td>S2/10</td>
<td>76,439,567</td>
<td>21,012,005</td>
</tr>
<tr>
<td>S1/11</td>
<td>78,430,385</td>
<td>22,870,396</td>
</tr>
<tr>
<td>S2/11</td>
<td>83,871,309</td>
<td>25,608,375</td>
</tr>
<tr>
<td>S1/12</td>
<td>91,563,128</td>
<td>27,444,543</td>
</tr>
<tr>
<td>S2/12</td>
<td>97,331,193</td>
<td>27,362,192</td>
</tr>
<tr>
<td>S1/13</td>
<td>107,622,253</td>
<td>26,091,380</td>
</tr>
<tr>
<td>S2/13</td>
<td>104,813,595</td>
<td>25,551,531</td>
</tr>
<tr>
<td>S1/14</td>
<td>98,631,863</td>
<td>25,124,617</td>
</tr>
</tbody>
</table>

DTC's deferred tax assets (or credit); DTC_BDP_M is the minimum required deferred tax credit of BDP; DTC_BDP_D is the discretionary deferred tax credit of BDP; NE is equity/ net worth.

Source: prepared by the authors of this paper.
As is common knowledge that money is the main asset of a bank, a financial fixed asset higher than 1/3 (35% and 38%) of the equity of the financial system can contribute significantly to burden bank credit, considering that this money in form of tax credit cannot be used to leverage the bank’s business.

4 ANALYSIS OF RESULTS

The analysis of the sample data was generated from the application of analytical modeling described in the preceding section 3 using gretl and StatPlus statistical packages. Tests were run with a significance of 10%.

Table 3 shows the main results of the descriptive statistics of the three variables of the model, \( \Delta DTC \), \( \Delta DTC_{BDP} \) (minimum and discretionary) and \( \Delta NE \), for the sample of seven private banks and three public banks, considering the variations and not the stocks, totaling 100 observations for each variable.

In Table 3, the set of private banks has an average growth of approximately 12% (0.11989) in the deferred tax assets, 34% (0.34444) in the deferred tax credit arising from the BDP and 23% (0.22865) in equity. In the set of public banks, deferred tax assets increased by 28% (0.27604), the tax credit arising from the allowance for loan losses grew 32% (0.32195) and equity grew 16% (0.15907). These data show that private banks stockpile significantly less deferred tax assets than banks with government control, although they recognize more risk for BDP. What these data show can mean that public banks consume more assets in expenses with limited deductibility than private banks. In relation to changes in equity, the growth of all private banks combined (23%) is significantly higher than that of public banks (16%).

Evaluating the dispersion of data, based on the coefficient of variation, it was observed that the scattering of the DTC variations of all the private banks is more than 7 times the average standard deviation, while in the group of public banks, this accounts for 1.31 times. Regarding the dispersion of deferred tax credits in the BDP, private banks (2.31) present figures than public banks (2.78), but when the comparison is about changes in equity, the table shows that the spread of all public banks (2.65) to be higher than that of private banks (1.43). These variations are also explained by extremes of each variable, minimum and maximum, that have large intervals, which may be interpreted depending on the size of the banks.

The sample data also shows (not visible in the table) that three of the ten banks, classified in 5th, 7th, and 10th places in the rankings, have tax credit values of temporary differences higher than provisioned, which signals the existence of credits not recognized in the financial statements of “hidden reserves”, as signaled in the analysis of sample data, due to the failure to meet targets required by regulators so that the deferred tax assets are fully recognized (CMN Resolution 3.059 / 2002).
Table 3: Descriptive statistics of the semi-annual variations of the sample data of the seven largest private banks and the three largest public banks in Brazil from 2009 to 2014

<table>
<thead>
<tr>
<th>Estimators</th>
<th>Private Banks</th>
<th>Public Banks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Δ DTC</td>
<td>ΔDTC_BDP</td>
</tr>
<tr>
<td>Mean</td>
<td>0.11989</td>
<td>0.34444</td>
</tr>
<tr>
<td>Median</td>
<td>0.05244</td>
<td>0.42879</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>0.88524</td>
<td>0.79796</td>
</tr>
<tr>
<td>Coeff. Variation</td>
<td>7.38381</td>
<td>2.31673</td>
</tr>
<tr>
<td>Minimum</td>
<td>-1.28573</td>
<td>-0.86188</td>
</tr>
<tr>
<td>Maximum</td>
<td>1.45304</td>
<td>1.89671</td>
</tr>
</tbody>
</table>

Table 4 shows the coefficients of correlation matrix of the three main variables in the model, for all banks, private and public. The sample size in this analysis is of 70 six month period observations for private banks and 30 for public banks. A reduction of 10 semiannual observations is due to the loss of a note on the initial variation of each bank.

For private banks, the magnitude of the coefficients indicates that variations in shareholders' equity (ΔNE) relate inversely with changes in deferred tax assets (ΔDTC) on average (-0.5768) and directly with the changes in deferred tax credits of temporal differences of BDP (ΔCTD_BDP) at (0.1147). When the relationship is among the changes in deferred tax assets (ΔDTC) and variations in deferred tax credits of temporal differences of BDP (ΔCTD_BDP), this occurs directly in 0.2624, showing that the oscillations of these temporary differences are prevalent in relation to others.

For public banks, as it was for private banks, changes in shareholders' equity (ΔNE) relate inversely with changes in deferred tax assets (ΔDTC) on average (-0.2748), but inversely with changes in deferred tax credits of temporal differences of BDP (ΔDTC_BDP) in (-0.2737). When the relationship is among the changes in deferred tax assets (ΔDTC) and variations in deferred tax credits from temporary differences of BDP (ΔCTD_BDP), contrary to the case of private banks, the direction is reversed on (-0, 3193).

The relationship of changes in equity/net worth with the changes in deferred tax asset for private and public banks is compatible with the behavioral dynamics of economic phenomena recognized in these variables representing accounts disclosed in the financial statements. This behavioral dynamics shows that (a) the reduction of deferred tax assets by current liabilities offset against tax is indirectly explained by the increase in equity due to positive profit generation; (B) the increase of deferred tax assets due to temporary differences corresponds to a decrease in equity by the absorption of expenses conditioning tax credit; and (c) the increase of deferred tax assets on negative taxable profit function corresponds to an increase in equity. The benefits of (b) and (c) can only be enjoyed in periods after the removal of generated temporal constraints and the positive profit generation differences.

But private banks show that variations in shareholders’ equity were related directly to the variations of deferred tax credits of BDP. Effectively this relationship occurs when reducing the DTC is due to lower impairment, the loss is taken in income, which was captured in reading the notes of the banks rated at 70 and 100 as shown in sample analysis. But contrary to the behavioral dynamics between these variables, public banks have an
inverse relationship between changes of deferred tax assets and changes in deferred tax credit of BDP. Such signs are contrary to the functionality of the two variables, for the increase would mean an increase of another, such behavior not being perceived by the sample data.

Table 4: Correlation coefficients between the model variables of the 10 semi-annual observations of the seven largest private banks and the three largest public banks in Brazil, from 2009 to 2014

<table>
<thead>
<tr>
<th>Private Banks</th>
<th>Public Banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Δ DTC</td>
<td>Δ DTC_BDP</td>
</tr>
<tr>
<td>1.0000</td>
<td>0.2624</td>
</tr>
<tr>
<td>1.0000</td>
<td>0.1147</td>
</tr>
<tr>
<td>1.0000</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

Δ DTC is the variation of deferred tax assets; ΔCTD_PCLD is the variation of tax credits of time, minimum and discretionary differences, of the PCLD; ΔPL is the change in shareholders' equity.

Table 5 shows the results of linear regression of changes in shareholders' equity (ΔNE) against the variations of deferred tax assets (ΔDTC), run by ordinary least squares (OLS) with panel data, of the 100 observations for 10 semesters for each group of private and public banks, from 2009 to 2014. The regression only used these two variables as they were of the greatest interest for the research. The result of the regression of the private banks is shown to be statistically significant with 90% confidence, suggesting an inverse causal association between variations of deferred tax assets (ΔDTC) and changes in equity (ΔNE) in line with Behn’s findings; Eaton and Williams (1998), confirming what had already been signaled in the analysis of the correlation matrix of coefficients (Table 4). But in relation to public banks, results, although also signaling reverse causality, are not statistically significant.

For private banks, whereas regression has no predictive purpose, the test result is robust comfortably with an explanatory power of the order of (R^2=0.3327) changes in net assets for changes in deferred tax assets, corroborated by the results of the statistical test F(1,8) = 3.989 higher than the critical value F_(1,8) = 3.36, confirming what had already been flagged by the analysis of the sample on average, the stock of deferred tax assets is 35% of equity.

These results suggest, as the estimator of ΔDTC, that for every increase of 1% in the deferred tax assets, equity decreases in approximately 21.41% (-0.21407), as modeled by the equation 3.1.d. Since the sample consists only with the seven largest private banks, among the fifty largest in Brazil, in 11 semesters, having a reduced size, homoscedasticity hypothesis is tested based on White's statistics, which does not require normality data. The coefficient of this statistic to the 10 semiannual observations, based on R = no set square regression of waste (0.051039) that is compared with the chi-squared critical value (X^2_1,10 = 9.236), allowing us to conclude for the non-rejection of the null hypothesis of homoscedasticity, suggesting that the variances of the errors are constant. To test autocorrelation, we applied Breusch- Goldrey statistics (BG) to replace Durbin-Watson (DW), given that DW is not tabled with 10% significance. BG statistics is not significant at 10%, which indicates that residues of the explanatory variable ΔDTC are not correlated. The normal distribution was tested using Kolmogorov-Smirnov/ Lilliefor and Shapiro-Wilk (W). The test results of these statistics, compared with their respective critical values at 10% significance, suggest the non-rejection of the null hypothesis that the sample data came from a normal distribution. Thus, once the context has been presented, it statistically satisfies the assumptions of ordinary least squares model (OLS), ensuring the validity of results.
With regards to public banks, the result of the regression is not statistically significant, according to the theoretical model \( 3.1.d \), not showing, therefore, a comfortable explanatory power of the variations/changes in equity for changes in deferred tax assets, due to \( R^2 \) present coefficient 0.0755, supported by statistical test \( F_{1,8} \) with 0.653 coefficient lower than the critical value parameter \( F_{1,8} \) equal to 3.36 with 10% significance, yet pointing to inverse causality. However, White's statistical (1.1645) used to test the statistical heteroscedasticity is lower than the critical chi-square \( \chi^2_{1.10} \) of 9.236, signaling the non-rejection of the null hypothesis homoscedasticity that the variances of the errors are constant. Regarding the autocorrelation test, due to limitations of the Durbin-Watson used to test Breusch- Godfrey (BG) and private banks, and the results indicate the presence of an auto-autocorrelation order (1). In an attempt to remove the autocorrelation regression, regression was run with a delay difference and weighted with a weight of wastes \( \hat{\rho} \) (\( \hat{\rho} \) calculated by the model DW \( \hat{\rho} = 1 - \frac{D_W}{2} \)), but, still, the residues remained autocorrelated. The results of normality tests Kolmogorov-Smirnov / Lilliefor and Shapiro-Wilk (W) signal to reject the hypothesis that the sample data came from a normal distribution. Thus, statistically, the assumptions required by the ordinary least squares model are not met, suggesting the unreliability of the results of the tests with public banks.

Table 5: Results of regression by least squares ("Pooled OLS") from changes in the NE against DTCT variations of 10 semi-annual observations of the seven largest private banks and the three largest public banks, from 2009 to 2014

<table>
<thead>
<tr>
<th>Estimators (BG)</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>Statistic-t</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>( p_{\epsilon_{t-1}} )</td>
<td>11.55228</td>
<td>6.54880E-13</td>
<td>1.76403E+13</td>
<td>0.00000E+0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Estimators</th>
<th>Statistic-test</th>
<th>p-figure</th>
<th>Conclusion: (10%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kolmogorov-Smirnov/Lilliefor</td>
<td>0.32431</td>
<td>0.00698</td>
<td>Strong evidence against normality</td>
</tr>
<tr>
<td>Shapiro-Wilk W</td>
<td>0.68146</td>
<td>0.0086</td>
<td>Reject normality</td>
</tr>
</tbody>
</table>
ΔDTC is the variation of deferred tax asset; $\varepsilon_{t-1}$ is the residue of the previous regression period. 
Source: the authors

The results obtained through the correlation matrix coefficients and regressions show that there is an association and reverse causality among changes in deferred tax assets and changes in equity. The tests rotated with sample data of private banks are statistically significant with 90% confidence, and suggest that for every increase of 1% in the deferred tax assets, everything else being constant, shareholders' equity decreased by 21.4 %, with an explanatory power of the order of 33.27%. The tests rotated with the sample data of public banks also indicate causality and inverse association, but no statistical significance and do not meet all the assumptions required by the ordinary least squares model (OLS), thus presenting not fully reliable results.

Although the sample has been reduced in size, 11 semesters, due to the short time of application of IFRS standard in Brazil, the results are strong and indicate significant differences between the managements of private banks and public banks. This difference is visible in the average growth in shareholders' equity of private banks - 22.8% against 15.9% of public banks. Private banks produced an increase in the stock of deferred tax assets of nearly 12%, while this growth in public banks was 27.6%.

The average growth of the stock of deferred tax assets of private banks (12%), revealed by descriptive statistics, represents more than half of the equity growth (22.8%) and when the relationship is with public banks, this growth is more than 173% order. These results indicate the weight of the financial fixed asset taxes in the Brazilian banking system that may impact the credit supply by raising the cost of money.

5 CONCLUSION

The research had as its main purpose to analyze the relationship of variations of deferred tax assets with the changes in equity of the banks operating in Brazil, from the adoption of IFRS, through the CPC pronouncements approved by the Federal Accounting Council. In this sense, the research was conducted through non stochastic sample of data from the financial statements of the seven largest private banks and the three largest public banks in semiannual periods, from 2009 to 2014. The 10 banks together account for more than 85% of assets, and 92% of the national financial system equity, according to the Central Bank report of the top 50 banks in June 2014.

Starting from a positivist methodology, we investigated how significant would be the deferred tax assets in relation to equity. To conduct research aimed to analyze the variations of deferred tax assets related to changes in net assets of each bank and the representativeness of the stock of deferred tax assets in equity capital, according to control, every six months from 2009 to 2014.

The results of the research, sustained in the analysis of primary data sample, descriptive statistics, the correlation matrix and the linear regressions, run with panel data by means of ordinary least squares (OLS) showed that:

a) the increase in deferred tax assets as a result of temporary differences corresponds to a decrease in equity by the absorption of expenses for tax credits conditioning; and when due to negative taxable profit, it corresponds to an increase in equity;
b) Private banks have a stock of deferred tax assets (DTC), on average, around 35% of equity (NE) and deferred tax assets arising from temporary differences of BDP around 1/3 deferred tax assets. In the case of public banks, this ratio is 38% and 35%, respectively, and the deferred tax asset materially relevant in relation to the banks’ own capital, under private and government control, following the sample analysis of descriptive statistics;

c) For private banks, the correlation coefficients and the results of the econometric test revealed an inverse association between variations of deferred tax assets and changes in shareholders' equity, with 90% confidence, of the order of 21.4%. This result shows that, on average, when the deferred tax asset varies positively by 1%, shareholders' equity decreased by 21.4%, following the theoretical model 3.1.d;

d) For public banks, there is also a signaling towards reverse causality, but there was no statistical significance and not all the assumptions required by the ordinary least squares model (OLS) were met, which does not provide reliable results in terms significance of the research.

Finally, the results of this research are robust and relevant both in the evidence of financial fixed asset of deferred tax assets and of reverse causality signaling. These results can support further research, but since it only addresses 11 semesters, it is highly encouraged that further research with a broader time scope to be conducted, so that it can be compared with the results presented here.
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FORENSIC ACCOUNTING: FACTORS EMPLOYED IN SELECTING AND RETAINING FORENSIC ACCOUNTANTS AS COURT SPECIALISTS, IN THE OPINION OF MAGISTRATES IN THE STATE OF RIO DE JANEIRO

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FORENSIC ACCOUNTING: FACTORS EMPLOYED IN SELECTING AND RETAINING FORENSIC ACCOUNTANTS AS COURT SPECIALISTS, IN THE OPINION OF MAGISTRATES IN THE STATE OF RIO DE JANEIRO

ABSTRACT

Expert investigations within the judicial authority play an extremely relevant role, as their use is required when called on to resolve conflicts involving topics of a technical or specific nature, and to this end magistrates will need to retain a forensic accountant in order to serve as assistant to the court. Selecting these professionals aims at providing magistrates with an assurance of the truth of facts, as they are experienced in and endowed with specific knowledge on the topic under consideration. This article seeks to cast a light on the factors employed by magistrates when selecting and retaining forensic accountants as court specialists. Other articles published exploited approaches on knowledge, skills, qualities and results that sought to place such professionals in the labor market. Field surveys were applied to this end in a number of Civil Courts in the State of Rio de Janeiro, covering the state’s metropolitan, northern and mountain regions. Samples were in the form of interviews with 27 magistrates. The results obtained pointed to the items that follow as chief selection factors: specialists’ resumes in the Rio de Janeiro judicial authority’s website with 77.77% and quality in the submission of previous assignments with 62.96%, with reference also to particulars, track record and several specific criteria. With regard to retaining forensic accountants in the courts of law to serve as court specialists, 100% of the magistrates interviewed mentioned the appraisal’s efficiency as the chief reason for such. Furthermore, it may be concluded that 92.59% of magistrates render sentences on proceedings based on appraisals submitted by court specialists.

A forensic accountant’s main function is to assist in a magistrate’s work, providing technical/scientific support for the court’s ruling by means of a specialist accounting appraisal, in order to prove the truth of the facts in a lawsuit filed in any activities for which his/her services were required, as this is the professional – the forensic accountant – who has knowledge of the most recent technological and accounting procedures related to the “Universe of Accounting Sciences”, and who enjoys legal standing to attest the causes and facts in the proposed lawsuit in connection with issues related to assets.

Caldeira (2006, pg. 6) points out that “specialists exist owing to the need for conveying a technique to the awareness of judges. These professionals have the ability of reporting and clearly transcribing matters that a judge is unable to grasp.” Borrowed directly from Brazilian Accounting Standards, special chapter that regulates forensic accounting and defines rules on procedures followed by forensic accountants – NBC TP 01, the same that provides:

Forensic accounting consists in a set of technical and scientific procedures intended to submit to the decision-making body the means of evidence required for a fair solution, by means of an accounting appraisal and/or technical/accounting opinion, in compliance with legal and professional standards and specific legislation as applicable.

It is appropriate to bear in mind the judicial authority’s view, more specifically being aware how magistrates proceed in selecting a specialist and retaining him/her in the function over an extended period, considering a number of factors such as technical qualifications, excellence, clearness and efficiency in services that are likely to contribute in preparing elucidating technical evidence for a magistrate’s rulings in proceedings that require expert investigations.

Surveys published and that deal with selecting forensic accountants by magistrates, as well as retaining and quality of the technical evidence submitted by them lead the way to a few principles included in this process, according to Neves Junior and Rivas (2007); Cestare, Peleias and Ornelas (2007); Melo and Neves Júnior (2010):

a) The court records are exceedingly complex and objective;
b) A differential for placing these specialists in the labor market is their broad knowledge of technical standards published by the local Federal Accounting Council;
c) Disclosure of resumes and participation in specialists’ associations are widely used practices, and when adopted jointly they become more effective.

In this regard, this paper seeks to submit the selection criteria employed by judges when appointing a specialist. It is expected that this choice will place a good forensic accountant in the labor market, as owing to his/her expertise and skills, which when more specific will serve to attest the technical evidence found in the forensic accounting appraisal that enjoys creditworthiness.

Under such circumstances, the survey’s issue may be defined as: Which are the factors employed by magistrates in Rio de Janeiro in selecting and retaining forensic accountants as court specialists?
Placing a specialist in the labor market may be viewed under two aspects: by the specialist or from the magistrate’s viewpoint, as this article will evidence.

And from a specialist’s own viewpoint, in their article both Neves Júnior and Mello (2010) go on to describe how specialists act in order to see themselves in the labor market. A summary of replies obtained by this survey brought to light the following considerations:

Consequently, practices by specialists were detected that were more effective when employed simultaneously, such as disclosure of resumes and participating in specialists’ associations. Other practices were also detected: working with experienced specialists, interviewing judges, submitting quality assignments when acting as assistant specialist, referring to friends, visiting courts of law, etc.

From the viewpoint of magistrates, the survey’s overall focus seeks to investigate the weight of their decision in a circumstantial and globalized present-day world when appointing their technical assistants, i.e. forensic accountants.

Hence, the specifically mentioned survey intends to evidence factors employed by magistrates in Rio de Janeiro when selecting and retaining forensic accountants as court specialists.

2 THEORETICAL REFERENCES

2.1 ESSENTIALS OF FORENSIC ACCOUNTING

Expert investigations are invaluable in the intelligible judicial world. Use of this instrument is widespread in assisting magistrates, to provide light in issues involving science and technology in the lawsuits under consideration, in areas that require technical and scientific expertise.

Expert investigations form the professional instrument that proves the truth of facts in all areas of human knowledge that require proof of relevant data with a basically scientific edge.

In this regard, forensic accounting aims at attesting technical and scientific information detected and listed in a Forensic Accounting Appraisal. Moreover, attesting the truth of the facts by means of the Appraisal’s creditworthiness, assisting the key customer – or magistrate – in fairly making a technical and scientific decision based on real data, in view of the disputes under consideration and in compliance with the social purpose of the law.

Expert investigations appear to be as long-lived as the development of accounting. The latter arose owing to the existence of business, economic and social activities, and the former owing to the needs by judges for improved meting out of justice, who required reports including technical analyses on topics not mastered by them. (CALDEIRA, 2000).

Sá (2007, pg. 14), a milestone in accounting literature, stated that “Forensic Accounting is the verification of facts related to individual assets with a view to providing an opinion by means of an issue proposed. To this end, examinations, inspections, queries, investigations, assessments, arbitrations are held, in short all and any procedures required for an opinion.”
The Brazilian Accounting Standards (NBC TP 01) define forensic accounting as highlighted in this paper’s preamble.

Hoog (2012, pg. 5), when listing the foundations of forensic accounting, stated that:

> The essentials of forensic accounting, based on accounting sciences, are one of the means of proof employed to discover the real truth, aimed at detecting aspects of lawsuits essential to formulate a ruling, a sentence. These are: commitment with justice; method; science and technology; objectiveness; conciseness; support for a specialist’s opinion; the investigation’s accuracy; its clearness and precision with limits.

All of the above aspects employed with excellence render good results to the efforts by a specialist who employs technical evidence in the forensic appraisal, one of the most important or perhaps the investigation’s key instrument, as it is by such means that a magistrate may mete out justice – “give to each man his due” one of the maxims in Roman Law.

Considering the essentials of Forensic Accounting as set out in this paper, convergence, similarity and complementary conceptualizing, definition and recognition of the worth in such bases will be noted among the authors mentioned, including Brazilian Forensic Accounting Standards, in seeking to define support based on technical and scientific expertise, that leads to defining the real truth and therefore assisting magistrates in providing a technical and fair ruling.

### 2.2 EXPERTISE REQUIRED BY FORENSIC ACCOUNTANTS

The term specialist refers to a person who knows based on experience, who has expertise. The specialist is a judge’s assistant and should not be deemed as a witness. He/she should therefore be a person of the judge’s extreme confidence. It is this professional who will supplement the insufficiency of specific knowledge on the subject of evidence.

According to Hoog (2011), a forensic accountant is a “higher education professional specialized in fiscal and accounting sciences and familiar with actions and facts related to assets. He/she enlightens non-professionals and is appointed by a judge.” Hence, it may be concluded that “the specialist is the magistrate’s technological and scientific eye, the hand of justice, in summary the scientific support to the honorable head of the courtroom.”

Also, according to Hoog (2012, pg. 95), specialists should have:

> Theoretical and practical expertise. In the quality of specialist, it is vitally important to master the subject under investigation. As mastering state-of-the-art technological standards and procedures applied to the subject are basic conditions, he/she must be a self-learner and must be constantly updated, as recycling is ongoing and mandatory, with care for perceptiveness and precision in every stage of an investigation. In addition to being in touch with technological and accounting knowledge, he/she should also acquire knowledge of procedural practices; specialization
courses; master’s and doctor’s degrees and post-doctor activities are also recommended.

Rui Juliano (2009) believes that an expert’s incursion in legal proceedings is indispensable, as this will be the person appointed to enlighten attorneys, the parties, the public prosecutor and the judge on issues unfamiliar to them.

Hoog (2012) asserted that specialists have been appointed by a judge in Brazil since 1882 (Decree 8821, article 104, dated 1882). He added that:

There was mention of expert investigations in the 1939 Code of Civil Procedures, as on enacting Decree-Law 1608 dated September 18, 1939, these were admitted as factual evidence depending on special knowledge, and with the explanatory memorandum prepared by the then Minister of Justice Dr. Francisco Campos (...).

This legal instrument, the Code of Civil Procedures (CPC), in its chapter V that covers the role of expert in the judicial universe, lists in article 145 et seq the legal provisions and requisites for compliance by the specialist. A transcript follows:

The Specialist
Art. 145. When proof actually depends on technical or scientific expertise, the judge shall be assisted by a specialist as provided for in article 421.
§ 1. Specialists shall be selected among higher education professionals duly enrolled in their respective professional associations, subject to this Code’s provisions in chapter VI, section VII.
§ 2. Specialists shall provide evidence of their expertise in the topic on which they shall opine by means of a certificate from the professional association in which they are enrolled.
§ 3. In locations where there are no qualified professionals to complete the preceding paragraphs’ requisites, selecting specialists shall be at the judge’s discretion.
Art. 146. Specialists shall be bound to carry out their assignment within the term prescribed by law, employing their entire diligence; however, they may decline the responsibility due to a genuine reason.
Sole paragraph. The justification shall be submitted within 5 (five) days as of receiving notice or of the subsequent deterrent, under penalty of yielding the right to such an allegation (article 423).
Art. 147. Specialists who owing to malice or negligence provide false information shall be accountable for any losses caused to the party, shall be restricted for 2 (two) years from participating in other investigations and shall incur in sanctions as provided under penal law.

Santana (1999, pg. 71) lists other abilities such as: overall and accounting culture, knowledge of correlated areas (financial mathematics, statistics, business techniques and practices, among others), legal expertise and instrumental Portuguese).

In the light of the above, it may be concluded that the professional conduct of forensic accountants should be based between accounting sciences and the Code of Civil Procedure’s prerogatives, always in compliance with the precepts of forensic accounting.
2.3 THE LEGAL LABOR MARKET FOR FORENSIC ACCOUNTANTS

As recorded by Hoog (2012 pg. 11), “the Market is a set of legal entities or individuals that affect or require certain services or goods.”

The scope of activities for forensic accountants is vast. They are able to serve in the Federal and State courts of law, in civil and criminal courts of law, bankruptcies and reorganizations, probate and family courts, letters rogatory, tax foreclosure and labor proceedings. They are also able to act in arbitration courts as well as the out-of-court market, which is relevant in cases of mergers and acquisitions, spin-offs and the revaluation of assets.

In all of these areas there are always multiple situations that constantly produce controversies and give rise to lawsuits in need of specialized guidance, i.e. the appropriate technical and scientific expertise.

The importance of an expert’s appraisal is more and more present for his/her insertion in the forensic accounting market. The work performed by specialists requires criteria and techniques that in certain cases reflect so much competence that they are capable of revealing large-scale plots, fraudulent systems in companies or entities, with the use of specific accounting and auxiliary systems that allow specialists to prepare very well grounded appraisals.

Nonetheless, it is also important to stress that in a number of cases the need arises for a magistrate and the opposing parties’ attorneys to be able to absorb the specialists’ findings and their opinion. Similarly, it must be realized that in the absence of a technical assistant – the specialist – magistrates and attorneys would be unable on their own to detect controversial aspects or to find errors, if any.

Furthermore, a forensic accountant’s attributions are not directly connected to these two professionals, who are not in possession of the required and specific expertise for the lawsuits in question. It is difficult for attorneys to seek justice in connection with a topic with which they are unfamiliar, as it is not easy for magistrates to apply the law without technical support on the topic. In these circumstances, the forensic accounting profession’s importance arises with its consequent insertion in the legal labor market.

Still in this regard, another reference is the contribution by the overseas literature published by Linda Bressler from the Houston-Downtown University, in which the author concludes:

Fraud investigators often spend weeks working on a case in order to confirm a fraud. Forensic accountants should be well trained in evidence rules, financial data, AIS software and communications skills, and should be able to convince judges that they should be deemed specialists in their field of activities. As a majority of fraudulent cases employs evidence, it is up to the investigators to trace accounting data and specifically to recover them based on an AIS system. Hence, not only should these investigators be conversant with AIS, but also with all kinds of fraud and data, conveying to attorneys and magistrates involved the contents under investigation. At times the depositions by experts will be similar to those by specialized witnesses, their validness being decided on a case-by-case basis and the judge appointing an expert at the time of judgment. It would be devastating enough for the prosecution if the crucial testimonial by an expert should be discarded.
owing to issues of specialized competency or a jury’s unrealistic expectations, or further, because of the CSI’s effect. A still worse situation could arise when the deposition by the specialist is set aside because the judge selects to conduct the lawsuit based on assumptions without entirely understanding the AIS evidence, which is incorrect (HEITGER and CRUMBLEY, 2005).

2.4 INSERTION FACTORS AND RETAINING THE FORENSIC SPECIALIST IN THE LABOR MARKET

Activities by experts in the labor market dates back a long while, from the start of civilization in ancient India, where records are known to exist on the selection of an arbiter by the parties. In Brazil, as already stated in item 2.2, this professional has been appointed by the judge since 1882, as witnessed by Decree 8821, article 104.

The modern world is progressively more globalized, with human beings more enlightened and consequently with greater awareness of their rights, which fact gives rise to an accelerated growth of conflicts of interest raised in or out of the courts of law.

This was the cause of new factors being created, determining the criteria for placing forensic specialists in the labor market. This gave rise to organizing specialists in professional associations. Among all the areas covered by this universe, accounting is of great importance as it created a historical milestone, with forensic accountants as the first professionals in expressive numbers to actually organize themselves as a professional class in specialist activities. This also involves the aspect of handing out resumes.

Owing to this complexity in a globalized and ever more competitive world, marketing rules become necessary, which according to Hoog (2012, pg. 201) “has the sense of a set of strategies and actions to conquer and retain customers and clients; it seeks development, launching and the sustainable retention of goods or services in the market (…)”

According to Parasuraman, Zeithami and Berry (1990), authors of several studies on this area, there are ten commandments that determine service quality: fidelity, response ability, competency, access, courtesy, communications, credibility, safety, understanding and knowledge of tangible factors.

As stated by Hoog (2012, pg. 197), “our marketing’s flagship is safety and honesty in establishing the facts. And this is the differential to be employed in publicity.”

Going back to Hoog (2012, pg. 197):

No other form of actions and facts that impart greater value to professionals through marketing, exceed the efficiency and scientific effectiveness applied to solving the controversial point. What actually prevails is faultless behavior, commitment with the truth, scientific expertise, safety, zeal and behavioral factors such as: professional etiquette, ethical relations with colleagues, ongoing education, willingness to always serve justice or assist customers.
In connection with insertion factors and retaining forensic accountants in the labor market, it may be deduced from the authors mentioned on this topic that this position is linked with honesty, response ability by forensic accountants, as well as the technical and scientific efficacy employed in preparing the opinion.

**2.5 SIMILAR STUDIES**

This paper addresses a complex and comprehensive subject that has been already covered by similar reports and articles, with the following summary of results obtained by the respective surveys.

In the article published by Neves Junior and Rivas (2007) on the quality of a forensic accounting appraisal and its influence in the decision by the magistrates of the judicial districts of Brasilia and Fortaleza, the conclusion was that the issues raised in the court records are highly complex and objective, and specialists should necessarily be extremely qualified professionals, as his/her approach and study and analysis methodology will influence emphatically the expert opinion’s quality. Hence, their professional qualities will impart the essential assurance of quality to the appraisal. The authors assert:

> Utmost quality of any service is achieved solely by means of overall expertise in the area under consideration. In accordance with Santos and Mello (2004), accountants with interest in the several fields related to their area should consider professional training, ongoing education and technical expertise (NEVES JUNIOR; RIVAS, 2007)

In this regard, in the survey held in 2007 that dealt with how forensic accountants prepare their appraisals and detect any expressive differences between the precepts of doctrine from the Federal Accounting Council and current practice, Cestare, Peleias and Ornelas provide significant support to the requirement of conformity by forensic appraisals with technical standards, and specialists should not only have the necessary qualifications to analyze and study the matter, but must also enjoy ample expertise in the technical standards disclosed by the Federal Accounting Council. This is a qualifying differential for the labor market, as the appraisal report not only reflects the issues required for a ruling by the judge, but also the technical requisites that effectively and competently address the real and true situation.

On the other hand, in the survey prepared by Melo and Neves Júnior (2010) and intended as an exploratory effort on placing forensic accountants in the labor market, this was clearly achieved by listing all the features and forms that give rise to this inclusion as well as non-recommended practices. The authors assert:

> It may be considered that this article’s proposal was achieved, in view of the description of practices employed by forensic accountants to place themselves in the forensic accounting market.
> It was confirmed that among practices most adopted by specialists there was a predominance of disclosing resumes and participation in specialists’ associations, which increased their effectiveness when undertaken jointly. Other practices such as work as assistant specialist, referral by friends, constant visits to courts of law, publications, inquiries at specialists’
associations, ongoing education (resumes) and internships in forensic accounting firms are also valid means. Moreover, there are non-recommended practices by specialists such as demeaning fees, taking on work without technical competency, offering advantages and gifts and accepting work free of charge in order to win over magistrates, which in addition to being anti-ethical provide no benefits to forensic accountants (MELO; NEVES JUNIOR, 2010).

Hence, their insertion in the labor market does not consist only in merely preparing appraisals or handing out resumes, or participating in specialists’ associations. None of this is relevant on its own, as opposed to the complex professional activities that are directly related to the quality of the service provided, as it is an expert’s responsibility to use an analytical approach to the subject, with all the required techniques and adoption of the best means of investigation.

Hence, quality in preparing forensic appraisals is the professional passport to qualify for the labor market, as well as for actual assurance in the acquired function.

3 SURVEY METHODOLOGY

3.1 SURVEY QUALIFICATION

This article seeks to gather information by means of a field survey put in place, whereby during the first quarter of 2015 magistrates from the lower courts of law in the State of Rio de Janeiro’s Judicial Authority were interviewed, bearing in mind their activities in a number of Civil Courts in that state, covering the metropolitan, northern and mountain regions.

The field survey took place by handing out a survey questionnaire based on quality and quantity aspects.

This survey may be considered exploratory, descriptive, methodological and bibliographical, as it was performed in an area on which accrued and systematic knowledge is scarce or non-existent (VERGARA, 2000).

3.2 THE UNIVERSE SURVEYED

The survey was applied in the State of Rio de Janeiro and covered the metropolitan, northern and mountain regions, with sampling visits to 15 (fifteen) towns and including 27 magistrates in charge of the Civil Courts in those regions.

Visits were made to Civil Court judges in the judicial districts of the state’s towns as listed below: Duque de Caxias, Guapimirim, Inhomirim, Itaborai, Itaipava, Macaé, Magé, Niterói, Nova Friburgo, Paraíba do Sul, Petrópolis, São Gonçalo, São José do Vale do Rio Preto, Teresópolis and Três Rios.

These towns were selected owing to their geographical location in the regions under analysis, and coverage also considered that the method adopted was a personal interview with each magistrate in order to obtain concise answers to the survey.
Considering the allocation of magistrates by the state’s judicial authority, which evidenced that currently they are generally in charge of as many as three courts of law at the same time, the number of towns visited had to be increased, and even then it became clear that among the 27 persons interviewed in the different courts of law, judges were found that had already been visited.

Owing to this circumstance, the applicable survey questionnaires were returned once only by each judge, with those in charge of more than one court of law having chosen to respond to one questionnaire only, which fact did not adversely affect the survey as a magistrate’s opinion was applied to one or more judicial districts and did not change the specialists’ selection and retaining criteria. This resulted in a number of courts included in excess of the number of judges in activity.

In conclusion, having received 27 completed questionnaires, the sample may be considered free from any intention or programmed probabilities.

3.3 SURVEY QUESTIONNAIRES AS INSTRUMENTS FOR GATHERING DATA

The questionnaire was initially prepared with the intention of introducing respondents, with descriptive aspects of each magistrate and a statistical vision by the latter relevant to the survey.

The survey’s second part was composed of six multiple choice questions, with subdivisions for the questions in order to supplement the results obtained. Some of these contained spaces for explanations on the affirmative options. The answers were designed to detect and qualify criteria used by these magistrates in choosing their experts, retaining them in their functions and measuring the efficacy of proof and its adequacy in judging lawsuits by the courts of law.

As a standard for responses, interviewees were allowed to reply to more than one aspect for selecting experts, possibly required in case of employing specific criteria and/or those created by a magistrate for his/her selection.

Other variables employed in the questionnaire dealt with checking quality of the evidence produced, if the complete appraisal or any part thereof was used by magistrates to decide on a lawsuit and whether retaining specialists in their function influenced submission of these opinions.

3.4 SURVEY STEP-BY-STEP AND RESULTS ANALYSIS

It was initially decided to restrict and select the work area covered by the survey, and to this end a roster of magistrates was employed with each one’s area of activities in the State of Rio de Janeiro Courts of Law – TJRJ, including a list of magistrates, physical and structural composition of the Civil Courts in the entire state, with the names of judges and the nature of their courts, the exact number of Civil Courts in existence in each judicial district and each one’s location.

The second step was handing out the survey questionnaires, delivered personally in all the judicial districts selected and existing courts of law within the survey’s defined area, with none of the districts or courts failing to receive a survey questionnaire.
The judicial districts were thus entirely included in the survey as follows: Judicial districts of Duque de Caxias composed of 7 (seven) courts, Guapimirin 1 (one) court, Inhomirim 1 (one) court, Itaboraí 3 (three) courts, Itaipava 2 (two) courts, Macaé 3 (three) courts, Magé 1 (one) court, Niterói 10 (ten) courts, Nova Friburgo 3 (three) courts, Paraíba do Sul 2 (two) courts, Petrópolis 3 (three) courts, São Gonçalo 8 (eight) courts, São José do Vale do Rio Preto 1 (one) court, Teresópolis 3 (three) courts, Três Rios 2 (two) courts.

Returning the questionnaires, whether or not completed by the magistrates, complied with the time each one deemed necessary for the task. Following this period, a further visit took place to the judge in order to retrieve the survey questionnaire.

Having retrieved all the forms, the respective data were analyzed and an Excel spreadsheet created reflecting such data. With all the percentages calculated, graphs were prepared to demonstrate the results obtained that will serve as a base to describe the outcome.

4 RESULTS

In the light of the inquiries and results found by the survey, the data obtained were organized in such a way as to reflect the selection and retaining criteria for specialists, in addition to the quality of the evidence produced by them and the latter's influence in retaining the respective function in the court of law.

4.1 NATURE OF RESPONDENTS

Among the magistrates who responded to the survey questionnaires in the State of Rio de Janeiro judicial districts, the universe covered by the field investigation, the following features stand out: 62.06% of magistrates are male and 37.93% are female.

Average age stood at 42 years. The youngest magistrate was 29 and the oldest among the interviewees was 51 years old. Professional experience under consideration stood at an average of 13 years of activities in the function. The shortest period of experience was one year as a magistrate and the most extensive was 20 years.

With regard to academic background among the interviewees (graduation, specialization, master’s and doctor’s degree), 41.37% reported specialized courses and 13.79% with a master’s degree, with no mention of doctor’s degrees.

Concerning the number of respondents per specific geographic region, 37.93% of respondents were from the mountain region, 48.27% from the metropolitan region and 13.79% from the state’s northern region.
Table 1 reflects the features of questionnaire respondents.

<table>
<thead>
<tr>
<th>Table 1 Statistics of respondent features</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
</tr>
<tr>
<td>Sample</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>27</td>
</tr>
<tr>
<td>62.06%</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>37.93%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
</tr>
<tr>
<td>Sample</td>
</tr>
<tr>
<td>Youngest</td>
</tr>
<tr>
<td>27</td>
</tr>
<tr>
<td>29 Years</td>
</tr>
<tr>
<td>Oldest</td>
</tr>
<tr>
<td>51 Years</td>
</tr>
<tr>
<td><strong>Professional Experience</strong></td>
</tr>
<tr>
<td>Sample</td>
</tr>
<tr>
<td>Shortest Period</td>
</tr>
<tr>
<td>27</td>
</tr>
<tr>
<td>01 Year</td>
</tr>
<tr>
<td>Longest Period</td>
</tr>
<tr>
<td>20 Years</td>
</tr>
<tr>
<td><strong>Academic Background</strong></td>
</tr>
<tr>
<td>Sample</td>
</tr>
<tr>
<td>Specialized Courses</td>
</tr>
<tr>
<td>27</td>
</tr>
<tr>
<td>41.37%</td>
</tr>
<tr>
<td>Master’s Degree</td>
</tr>
<tr>
<td>13.79%</td>
</tr>
<tr>
<td>Doctor’s Degree</td>
</tr>
<tr>
<td>0.00%</td>
</tr>
<tr>
<td><strong>State’s Geographical Region</strong></td>
</tr>
<tr>
<td>Sample</td>
</tr>
<tr>
<td>Mountain Region</td>
</tr>
<tr>
<td>27</td>
</tr>
<tr>
<td>37.93%</td>
</tr>
<tr>
<td>Metropolitan Region</td>
</tr>
<tr>
<td>48.27%</td>
</tr>
<tr>
<td>Northern Region</td>
</tr>
<tr>
<td>13.79%</td>
</tr>
</tbody>
</table>

Sources: Prepared by the authors based on survey data.

4.2 ANALYSIS OF RESULTS

When inquired on the selection criteria employed when admitting specialists in the Civil Courts in Rio de Janeiro’s judicial districts, they replied in the order of criteria submitted to them and numbered 77.77% in a decreasing scale for the selection of specialists based on a roster of professionals provided in the TJRJ system’s website; 62.96% related quality in the submission of previous assignments by the specialists; 48.14% specified the topic under consideration and 37.03% stressed the specialist’s resume.

Tables 2 and 3 reflect the factors used by the questionnaire’s respondents in selecting and retaining specialists as court assistants.

Table 2 Factors employed in selecting specialists as court assistants

<table>
<thead>
<tr>
<th>Factors employed in selecting specialists</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enrolled in the TJRJ system’s roster of specialists</td>
<td>77.77%</td>
</tr>
<tr>
<td>Quality in the submission previous assignments</td>
<td>62.96%</td>
</tr>
<tr>
<td>Specifics of the topic under consideration</td>
<td>48.14%</td>
</tr>
<tr>
<td>Specialist’s resume</td>
<td>37.03%</td>
</tr>
<tr>
<td>Selection based on specific criteria created by the magistrates</td>
<td>22.22%</td>
</tr>
</tbody>
</table>

Sources: Prepared by the authors based on survey data.
<table>
<thead>
<tr>
<th>Variables</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Efficiency of the Appraisal Submitted</td>
<td>100.00%</td>
</tr>
<tr>
<td>Technical ability and mastery of subject</td>
<td>81.48%</td>
</tr>
<tr>
<td>Confidence bond and fulfillment of a magistrate’s expectations with regard to submission of technical evidence</td>
<td>17.00%</td>
</tr>
<tr>
<td>Punctuality in submitting services</td>
<td>16.00%</td>
</tr>
</tbody>
</table>

Sources: Prepared by the authors based on survey data.

The above data were placed in a manner for interviewees to list more than one item, i.e. a combination of choice with set of criteria, making it possible to find percentages in a scale of criteria.

As a form of specific criteria, magistrates could individually use them differently than listed, and they were able to reply whether or not to employ other criteria. Should the reply be positive, provide a description.

Statistically, 77.77% denied the use of different criteria and 22.22% mentioned the use of specific criteria, among which the following: referral by experts allotted in other courts and also known to the magistrates. Some magistrates seek to alternate specialists, others consider those who work with free legal aid, they also choose specialists that are not limited solely to reply to questions but submit substantial conclusions, reliability features and a good professional relationship were also reported.

With regard to variables that contribute in choosing criteria, the efficiency of the service submitted was considered, punctuality in service provision, technical ability and mastery of subject, loyalty by virtue of opinions that always meet the court’s expectations, meeting a magistrate’s expectations with the submission of technical evidence that contributes to decide lawsuits. Among the results found, 100% of magistrates responded and emphatically stressed the efficiency of appraisals submitted by a specialist, as clear and effective in deciding on lawsuits.

Still on this topic, 81.48% of magistrates mentioned technical ability and mastery of the subject; 17% also opined that a confidence bond and meeting magistrates’ expectations were also as important as submitting technical evidence and the latter’s contribution in deciding on lawsuits, and in conclusion 16% stressed punctuality in submitting opinions as one of the variables to be considered.

It remained therefore clear and undeniable that when inquired on the use of opinions submitted by specialists for such reports to put an end to proceedings that require appraisals, 92.59% of magistrates informed that their efficacy level ranges from 67% to 100%, i.e. an appraisal’s quality is directly related to decisions on lawsuits, and as a result specialists will be strongly linked to magistrates, which fact has been always evidenced in the material under consideration.

Regarding the appraisals, the language employed in them was assessed, whether the latter was of a technical nature, specific, clear, simple or difficult to understand, the report’s good appearance and organization. In general, all of these items were grouped in several scales.
with a view to obtaining the best possible vision in the eyes of the magistrates, and 59.25% of these reported that the appraisals use a technical language, specific, clear, simple, good appearance and organization; 37.03% reported technical language, specific, clear and simple to understand, and 3.70% mentioned technical and specific language only.

Still considering the appraisals’ presentation within the percentages reported, it may be concluded that once again the guidance and possibly the bond created between a good quality opinion and retaining specialists in their functions is once more reflected in our universe under consideration.

There is no doubt that almost 60% of magistrates qualified appraisals within a set of items that form the appraisal / specialist / magistrate relation as if they were one only, and the investigation’s specific purpose is justified as a very useful tool for the judicial authority, as when of good quality it is entirely suited for its intended purpose. Another point considered was including a new specialist in the world of investigations, as a number of aspects were assessed within the paper’s chief objective, manner of admission and retaining the specialist in the court, yet under this viewpoint we will be bound to inquire, seeing that the appraisal’s quality and its efficacy gives rise to retaining the specialist in the function, how will this be demonstrated to judges based on a first assignment?

Please also note that new professionals should pay a good deal of attention to these items under consideration in order to enter into the activity and continue in the path selected. At first sight it would seem to these professionals that a difficulty has appeared, but in practice and in the field under survey it is evident that magistrates are indeed searching for new professionals in this field; and when inquired on this kind of admission 59.25% of magistrates encourage hiring new specialists in order to assess the their work and professional attitude.

Furthermore, as whenever the replies were positive a justification was requested, we may list the following criteria as forms for new admitting and inserting new specialists: submission and quality of resume, information on the required training for participating in the process, interest in working in that court of law as well as in investigations involving free legal aid.

As for specialists who have already assisted in other courts, the quality of their assignments and previous appraisals in other courts, as well as referrals by other responsible judges who know the magistrates who will recommend the new specialist, besides also being listed in the court of law’s roster of specialists.

In an assessment of trends for appointing specialists known to the court in which the judges work and who have normally provided services there, it was found that 88.88% of judges appointed the same specialist more than once for work in his/her court, with only a 11.11% minority who tend not to repeat appointments for more than one lawsuit, which leads us to believe that some magistrates tend to acquire loyalty for a specialist and that all the criteria considered under this survey will influence magistrates to retain that specialist in his/her function.

And in order to evidence more and more which criteria were more important, magistrates were given a few options seeking to bring such criteria to our knowledge, which were listed as below: service quality during the period worked for that specific court, confidence in the specialist’s name due to his/her activities in investigations, the specialist’s branch of expertise
and efficacy in submitting evidence for decisions on lawsuits. Therefore they could list among the four options above the reason for repeating appointments of specialists in their courts.

The following percentages were obtained: 81.48% opted for the most voted choice of service quality and period of time working for their courts of law; second place was equal to 51.85% of votes with the option efficacy of evidence submitted for deciding on lawsuits; 44.44% were ranked third in the specialist’s expertise on the topic under consideration and to conclude, 40.74% of interviewees opted for confidence in the specialist's name owing to his/her market experience.

In conclusion, one last issue brought to the magistrates suggested optionally a voluntary contribution in order to reduce by not more than four basic requisites in the view of magistrates, what specialists will require to be placed in the labor market and/or remain in the activity.

Bearing in mind the reasons behind a magistrate’s choice, this contribution was made in a descriptive and not qualitative manner, and as the limit for options was four, many magistrates listed different requisites.

Below we quote all those that were suggested by every magistrate who provided contributions, listing them as follows: honesty, confidence, trustworthiness, competency, posture and ethics, mainly impartiality, commitment, efficiency, objectiveness, availability, punctuality, flexibility in time and responsibility, good technical expertise, in-depth knowledge of the subject, ability to understand facts based on a proceeding’s dynamics, clear and objective language and mastery of the Portuguese language, perfection in preparing appraisals, clearness and precision in conclusions of appraisals and compliance with deadlines.

5 FINAL CONSIDERATIONS

This paper sought to throw a light on the vision of magistrates in the State of Rio de Janeiro, with a view to detecting the selection criteria for retaining specialists and retaining them as forensic accountants.

Success in the proposed effort was evidenced, as the results demonstrated positively which are the chief selection criteria for specialists and what induces them to preserve their respective functions.

The key finding was that to be retained as a specialist by the State of Rio de Janeiro Courts of Law, it is indispensable to be included in the Court’s existing roster, as it has been recorded that 77.77% of magistrates appointed specialists based on this roster.

Furthermore, quality in the submission of assignments by specialists is the second best manner for admitting specialists, accounting for 62.96% of the universe surveyed.

Both of these aspects in combination with other factors considered and demonstrated here, led substantially to the fact that retaining specialists will depend very much on the appraisals submitted by them. This is the true instrument in a specialist’s possession in order to continue being a specialist and also in percentage terms, magistrates were unanimous, i.e. 100% of
those interviewed reported that in an efficacy scale of appraisals involved in rulings over lawsuits, they conclude their proceedings in 67% to 100% of cases.

This comparative study and previous studies may be considered as ratifying others already held, such as the one on the Perception of Lower Labor Court Judges of the quality and relevance of an expert’s role, both of which credit a forensic appraisal with importance in a final ruling by magistrates.

It should be born in mind that the survey has limitations owing to the dimensions of the sample employed, yet it is of a contributive and relevant nature as it complements the collection of studies on the topic, with few others existing that cover the matter.

Nonetheless, it must be recorded that there is much research to be undertaken on the subject in order to seek results for classifying this array of knowledge thus far little exploited in literature.
REFERENCE


(11) NEVES JÚNIOR, I. J.; RIVAS, I. I.V. A qualidade do laudo pericial contábil e sua influência na decisão de magistrados nas comarcas localizadas no Distrito Federal e


ACCOUNTING EXPERTISE AT GRADUATION: CONTRIBUTION TO THE TRAINING OF EXPERTS COUNTERS IN THE CITY OF RIO DE JANEIRO, FROM THE APPLICATION OF THE CONTINGENCY MODEL VROOM MOTIVATION

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ACCOUNTING EXPERTISE AT GRADUATION: CONTRIBUTION TO THE TRAINING OF EXPERTS COUNTERS IN THE CITY OF RIO DE JANEIRO, FROM THE APPLICATION OF THE CONTINGENCY MODEL VROOM MOTIVATION

ABSTRACT

The subject of Forensic Accounting one does protagonist on the motivation of learners. Vroom conceives that the strength of the particular person motivating corresponds to the product of the value predicted by themselves to an assigned probability of achieving the goal. This study aimed to assessing how the subject can exert influence in the choice of Skill activity. Your sample is limited to hundred and twenty counters in the whose motivation analysis follows the contingential model of Vroom. The data collection aims at analyzing the profile of the respondent while the second comes to the motivation. As collection instrument, is used made available via Internet questionnaires and as a way of tabulation and analysis, the importation of data obtained into Excel. Together with returns identifies himself in emphasized form the main result of this research, with the low motivation influences that subject has been exercising for expert activity. Lastly, this study intends, from the analysis of motivating factors, evaluating the motivation influence teaching the Forensic Accounting at graduation in the city of Rio de Janeiro has to the formation of accountant expert. The conclusion signals to the degree of positive motivation, but low frequency For the remaining subjects vocational training center.

1 INTRODUCTION

The Forensic Accounting contributes differently to solving judicial and extrajudicial demands and this difference is the importance proclaimed to the counter, since many cases their figure holds the first prerogative among the remaining professionals. So when one talks about professionalism, one can not deprive of the graduation studies, as well as continuing education in view that the academic formation is the gateway to any professional activity and accounting expertise Subject brings with it the duty to motivate the students at this specialization.

Enter This course ceased to be for a long time in vocational training means of accountants, compulsory subject only coming back across the issuance of Resolution No. 3 of the Federal Council of Education - CFE, dated 05 October 1992. This shortage linked to the lack of specialist professors in this area provokes a delay in the specialization of the trainees.

Corroborating the preceding paragraph, Santana (1999) in their study says that the academic interest in such area of expertise, especially as a specialized activity of the Accounting Sciences branch, showed to be more accentuated from 1992.

Reinforcing this way, the view that the motivation of students is directly linked to what your teachers may pass on to them, in terms of benefits and value of the expected reward,

In consequence have the possibility of little bit interest of people undergoing training by the expertise activity as a factor that motivates this research for which response to this lack of interest may be less by a lack of motivation on the part of the student to his students and can be directly related to the model that is being applied in the subject of accounting expertise.

With regard to motivation studies, they have:

Frame 01:

<table>
<thead>
<tr>
<th>Year</th>
<th>Author</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1900</td>
<td>Taylor</td>
<td>Pecuniary punishments and rewards</td>
</tr>
<tr>
<td>1954</td>
<td>Maslow</td>
<td>Prospect of satisfaction of the dominant necessity</td>
</tr>
<tr>
<td>1959</td>
<td>Herzberg</td>
<td>Job enrichment</td>
</tr>
<tr>
<td>1960</td>
<td>McGregor</td>
<td>Autonomy, challenges</td>
</tr>
<tr>
<td>1964</td>
<td>Vroom</td>
<td>Expectation, instrumentality of and valence.</td>
</tr>
<tr>
<td>1950</td>
<td>Frankl</td>
<td>Pursuit of realization of a sense.</td>
</tr>
<tr>
<td>1975</td>
<td>Bandler&amp;Grindler</td>
<td>Communication without vices, positive attitude</td>
</tr>
<tr>
<td>1990</td>
<td>Coaching Founies</td>
<td>Positive reinforcements.</td>
</tr>
<tr>
<td></td>
<td>Byhan</td>
<td>Participation, effective communications, autonomy and recognition.</td>
</tr>
</tbody>
</table>

Source: Main Historic Chains Motivation (BUENO, 2002) modified by the authors.

The Expectancy theory was chosen because it is one among the contemporary models of motivation shown in the description 01, which among the most widely accepted and tested by: (Arnald, 1981; GILES 1977; Mitchell, 1974; Allen, VAN NORMAN. 1997; Parker, Dyer, 1976; REGIS, 2000).

According Bueno (2002) the Contingency Model Vroom highlights the observation that the process are not depend of individual goals and leverage with the contexts in which individuals are inserted. It seems to us that best reflects the differences of each individual in the presentation of motivational force, considering both internal factors and external factors.
In this sense, the motivation of the trainees may be related to intellectual ability and interpersonal skills of teachers to convey the importance of the expert report, the benefits and the expected reward for that profession.

Face of this problem situation, which raises discussion about the motivation of individuals, outlined to the following research question:

The teaching of Forensic Accounting in the city of Rio de Janeiro is motivational vector for the formation of forensic accountants? Thus it seeks to answer to the gap between graduation and interest in expert activity counter, which is probably linked to lack of professionals willing to transfer their knowledge to new generations, dealing with subject only in its technical aspect, not seeking motivate the student to specialize.

Therefore the main objective of the research is to evaluate how the Accounting Skill subject can exert influence on the choice of Judge Expert activity and Technical Assistant. However, it is necessary deepening in the study of motivation that the subject of Forensic Accounting has exerted in the choice of expert activity and assistant of the trainees in Accounting Course in the municipality of Rio de Janeiro.

To this end, data collection was conducted through survey questionnaire of 66 (sixty-six respondents) City counters of Rio de Janeiro who have studied specialization in Forensic Accounting. To whom applies the contingency model of motivation Vroom, whose questions are formulated in item result of this study.

This research seeks degree of reflection influence of intrinsic and extrinsic rewards relative to your expectation and perception and the influence, positive or negative, in the choice of expert and assistant coach of activity, bringing issues not discussed in previous studies focused on teacher and institutional set-seeking with this the study the personal motivation of student.

2 LITERATURE REVIEW

The accounting among the various chairs of Social Sciences, has among its areas of scientific studies the subject of accounting expertise, which since 1992 has received attention in academia and the professional market. In this way it seeks to bring into focus publications in renowned scientific media in order to present the frontiers of knowledge in this field.

According Bueno (2002, p.18), "The Vroom theory raises a question hitherto unheard: it is necessary that the worker Feel yourself able to achieve personal goals set for you to feel motivated.” In this context the research brings robustness to understanding the link between Expectancy of the student; instruments provided by the subject and Valencia presented by the teacher. The product of these three variables reinforces a positive or negative way, the path to be followed by the student.

a) Expectation, which is the sum of the individual's expectations, ie their individual goals, and the perception that the individual has of himself, of his ability to achieve these goals. These two aspects determine the efforts that each is ready to do a work situation. If a person aims, for example, job promotion, and knows that to achieve this need to increase the productivity of your industry, but it is thought unable to achieve such a feat, his motivation to
work will be weak. (B) instrumentality, which is the sum of the rewards that the individual can get in exchange for their performance. It is not just the relationship between quantity / quality of work and salary, working conditions, social benefits. Vroom emphasizes that the instrumentality is a subjective factor that varies with the person. For many it may mean autonomy, the possibility of initiative and creativity expansion. (C) Valencia, which means the real value that the individual gives to the perceived instrumentality. Not just the individual realize the rewards that can achieve through their performance. It is necessary that these rewards have a real value for it that meet your expectations. The current reward system may have no importance for a person, you do not feel motivated, and, on the contrary, be very important to someone else, who will have a strong motivation. Vroom (1964) and quote (BUENO, 2002, p. 18)

In the study by Lopes et al. (2004), conducted on Contingency Theory applied to accounting science through teaching-learning process, presented at the IV International Conference on University of Management in South America, in which, it was evidenced that only 8% of science course teachers accounting are masters and doctors with adherence to the course, causing great inertia, through theoretical models that do not awaken in students the possibilities that the course offers. With this converged to this study on the vision that the accounting expertise of subject is being applied by teachers or doctors with little experience in this activity.

As a result of what was said in the previous paragraph, can be cited Soares et al. (2012). Whose study sought to answer: What are the characteristics of education in Forensic Accounting Courses Accounting of Federal Universities Brazilian? In order to identify and discuss what the curricular characteristics of Forensic Accounting subject in terms of menu, semester study load of instruction. The results show that the main topics covered in the course are the expert report, the legislation about the expertise and expert, the holding of expertise procedures, concepts and coverage areas of Forensic Accounting. With this, there is a clear divergence of principles necessary for motivation of learners.

In a survey conducted by Junior Neves and Silva (2007), which aimed to evaluate the teaching of Forensic Accounting in the Federal District, it concludes that the eyes of the teachers of the subject of Accounting Expertise, there is a need to stimulate the continuing education and improvements in the techniques expertise. The points that had higher weakness on the part of teachers, were the hours of subject accompanied by the difficulty of students in preparation of reports and technical advice. With this, adds the aim of analyzing the motivating nature what this course has shown to continued education and specialization in skill.

Another recent study presented by Carmen Miranda and Leal (2012), whose objective was to evaluate the level of motivation of graduate students in Accounting from a Brazilian public university in relation to the subjects that make up the professional nuclei, essential theoretical and practical of national curriculum proposal of the Federal Accounting Council, presented evidence that students feel more motivated to enrollment into the professional nuclei This convergence comes in reinforcing the students during the course develop through the motivation of its teachers, the Expectancy of professional achievement.

In comparative studies, Tostes (2005) present the differences in the formation of the accounting professional in Brazil; France and the United States. These two studies require a
strong and rigorous training with the exercise of professional activities contrary to Brazil, is not limited to diplomation and proficiency exam, but the various market entities.

Confirming Tostes, Peleias et al. (2011) when analyzing the educational conditions of Forensic Accounting subject of Accounting courses in the metropolitan area of São Paulo, noted that the offer of content related subjects in North America is stimulated by society and the labor market, unlike Brazil, whose command complies with the limits of the law. Note the divergence as the requirements for Brazilian professional negligence resulting in the curricula of subjects of professional nucleus of expertise which is part. Gives full freedom the higher education institutions as to syllabus.

The change with the aim of democratize higher education contributes to the teaching of Accounting Science, to break through the barriers of classroom and it is initiating using new technologies to mass education through the internet. At this contesto, the study presented by Neves Jr., and Dias Oliveira (2012), which presents the effectiveness of the teaching of Accounting Expertise subject of the Catholic University of Brasilia - UCB Virtual. It concludes that: The expertise that performed better were the work plan and the choice of techniques to be applied. Converges with what is being perceived in all analyzed studies, a rigid maintenance of paradigms oriented techniques without involving the student in emotional subjectivity and professional fulfillment.

The Supervised Internship is not a compulsory subject for the course in accounting sciences. Always possessed the status of practical activity options that second Frey and Frey (2002), share understanding that the difference between the internship toward others course conclusion work is put forward trainees forward with market needs. How difficult, This study presents testimonials from students at the University of Santa Cruz do Sul - UNISC, which state the lack of practical experience as the main difficulty faced early in his professional life. Point that in view of this study reinforces the lack of motivation for choosing activities.

One of the great difficulties in the initiation of trainees in Forensic Accounting activity and technical assistance come from the lack of internship in this area. In this sense the study carried out by Neves Jr. and Felix (2009) in which served implantation proposal of Forensic Accounting Practice Center - UCB. Propose this partnership with the Nucleus Practices Law. This vein that the synergy proposal certainly is believed will supply the lack and motivate learners in Accounting Science and Law, as well as their integration.

This manner, when evaluating the motivational influence the teaching of Forensic Accounting at graduation of Rio Janeiro has for the formation of counter expert and to specify according to the contingency model of motivation: The result between expectations and perceptions that the individual has of himself; provide the rewards that the individual can get in exchange for their choices by measuring the real value that the subject gives the forms of instruments perceived.

3 METHODOLOGY

Regarding the types it is field research with a questionnaire survey and qualitative research approach aimed at dynamic relationship between the object world and the subjectivity of the subject and the point of view of its goal. And in an exploratory manner, descriptive, methodology, documentation and literature. Which aims to demonstrate the characteristics of
a given phenomenon, involving the use of standardized techniques of data collection through a questionnaire. (SILVA AND MENESES, 2001)

Its population is limited to 120 (hundred twenty) students of the Judicial Skill specialization course and Actuarial Practice of Teaching in Higher Education - ITCP of which, 66 (sixty-six) are the respondent sample. The choice was due to current intentions to improve their expertise in this activity reinforced by the condition of trained and aware of the responsibilities. The responses have contributed to the study of the possible weaknesses identified in the subject of Forensic Accounting motivating when the Financial Experts.

As a collection instrument a questionnaire was used, made through Google Doc application, which shows the layout with three levels of assessment, the first deals with the profile of respondents, consisting of seven items. The second measure aims through probability (unlikely or likely) the perception that the respondent has of himself, as his ability to achieve what is expected of the professional in this activity. This level consists of ten questions to point his belief in the performance of expert activity or assistant coach. Finally we have the instrumentality, which is measured by the rewards perceived expected verse composed ten rewards which had measured the responses of (1 to 10) their level of perception and anticipation,

During the analysis, it appears that Resolution 03/92, becomes the object of research as a watershed concerning the presentation of the students of Judge Expert activity and technical assistant. By making compulsory the subject of Forensic Accounting in counters Training Sciences courses in Brazil. This requirement highlighted two distinct classes of respondents Experts: the first, counters motivated by professional expertises and the second, driven by expertise, regardless of time experience.

As for the pre-test made of 01/27/2015 to 01/29/2015 with the students of 05RJ class, and obtained its approval, was then subjected to other classes of Rio de Janeiro in the period 02/19/2015 to 20/03/2015, reaching a universe, as stated earlier, 66 students out of 120 (one hundred twenty) experts in Forensic Accounting and Actuarial Practice, with the form of tabulation and analysis: the importation of data to Excel, in which , applied the ordering of data and statistics functions for frequency distribution and Gauss curve.

The choice of the Technological Institute of Science and Research - ITCP is motivated by the offer of specialization course in Accounting and Actuarial Practice Expertise, gathering this way, professionals from various fields and those linked to accounting expertise. As well, students motivated to this activity, regardless of their academic experiences, the subject of forensic accounting, providing an overview of the reasons that lead them to researched activity. As for the model Motivational, according to Freire authors; Freitas (2007) Helder (2000) the formula for the multiplicative model of the three variables valence; instrumentality and Expectancy - VIE's Expectancy Theory Vroom is $Fm = Vi \times \left[ \sum_{i=1}^{10} (Pi \times Ei) \right]$ where: Strength Motivational = Fm; Valencia to reach the target = Vi; Perception for each motivational reward each respondent = Pi; Expectation for each motivational reward each respondent = Hey; Questionnaire identification in numerical order n = (1 ± 120) and numbers of rewards evaluated = 10.

According Newstron (2008), there are three factors to measure the motivational force according to the theory of expectation Vroom. The first called "Valencia" seeks to meet the
desired the individual factors to achieve certain goal and it’s conditioned to experience "expertise" and can vary over a period for filling of old and emergence of new needs with positive or negative variation, ie (-1 to +1). The second called "Perception" focuses on the view that the applied stress results in obtaining the expected reward varies (0-1) always positive and connected to the auto efficiency. Finally we have the "expectation" that is the belief that the reward will be received once the job done, varies (0-1) and always positive.

In this way, we will measure the motivational force for each respondent by multiplying the valence through the instrumentality of each reward. Which according to Lawler (1989, quoted by Silva, 2008) is divided into: extrinsic can be the wages, benefits, incentives and the status symbol; intrinsic it is dealing with recognition arrangements; involvement; the organizational climate and management style; The functional design; professional development opportunities, autonomy and responsibility. Then we will add that this result is multiplied by the respective Expectancy, generating the motivational force of each respondent.

After we make this procedure for each completed questionnaire, distributed the results in 10 equal interval classes, starting with the minimum and closed by the difference of the maximum value divided by number of classes and so on until the last open class for the maximum value in this way we set up the frequency distribution to calculate the probability anchored in unlikely and likely.

Hopefully, with this methodology an answer to the issue in question, as well as contribute to the frontier of knowledge with new values that will collaborate with the training of Accounting Course students.

4 RESULTS

We began to analyze the data presented in answers to questionnaires focused on their first time, the profile of the respondents and secondly, by Vroom's motivation theory, seek answers to the purpose of this study as well as contribute to the reduction of time between academic training and the confidence to perform the expert activity in a safe and professional manner.

Tables 01 and 02 respectively show the activities developed by respondents in response to the questions: Register your status that identifies predominant form of his performance; Record the time of experience in the professional area indicated above.

Table 01-Statistics of the activities developed by the respondents

<table>
<thead>
<tr>
<th>Agency</th>
<th>Resolution 03/92 Federal Education Council</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>sample</td>
</tr>
<tr>
<td>Answers</td>
<td>66</td>
</tr>
<tr>
<td>Accountant</td>
<td>68%</td>
</tr>
<tr>
<td>Expert Judge Accountant</td>
<td>20%</td>
</tr>
<tr>
<td>Expert Assistant Accountant</td>
<td>11%</td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
</tr>
</tbody>
</table>

Sources: Made by the authors based on data collected by the survey
In interpreting the results in Table 01, one can see that only 20% and 11% of respondents, respectively perform expert activity or assistant coach. Is noticed also that the previous resolution 03/92 CFE, which made mandatory the subject of Accounting Skill for the Course of Accounting, there was interest from professionals to assistant coach of activity, however, from this, he performed one interest of 16%, pointing to a new trend of recent graduates motivated by subject.

Table 02-Statistics of the activities developed by the respondents

<table>
<thead>
<tr>
<th>Interval in years</th>
<th>-1</th>
<th>3</th>
<th>8</th>
<th>12</th>
<th>16</th>
<th>21</th>
<th>25</th>
<th>29</th>
<th>34</th>
<th>38</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>23%</td>
<td>12%</td>
<td>11%</td>
<td>15%</td>
<td>9%</td>
<td>6%</td>
<td>11%</td>
<td>11%</td>
<td>0%</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>23%</td>
<td>35%</td>
<td>45%</td>
<td>61%</td>
<td>70%</td>
<td>76%</td>
<td>86%</td>
<td>97%</td>
<td>97%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Sources: Made by the authors based on data collected by the survey

For the analysis of Table 02, it appears that in the past five years (1999-2014) there is great demand for the activity of experts and technical assistants among recent graduates, around 33% of respondents overall. And a stagnation of the most experienced who have fallen from 26% to 16% as shown in Table 01. This fact adds the assertion that the subject now focused has achieved the goals it was created.

Table 03 presents the activities carried out by respondents in response to the question: What is your gender?

Table 03-Statistics of the activities developed by the respondents

<table>
<thead>
<tr>
<th>Gender</th>
<th>Sample</th>
<th>Masculine</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>66</td>
<td>50%</td>
<td>50%</td>
</tr>
</tbody>
</table>

Resolution 03/92 Federal Education Council

<table>
<thead>
<tr>
<th></th>
<th>Previous</th>
<th>Rear</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>23</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>70%</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td>30%</td>
<td>60%</td>
</tr>
</tbody>
</table>

Sources: Made by the authors based on data collected by the survey

The MEC - Ministry of Education presents statistical data for the 2012 Census in which higher education in Brazil presented a balanced percentage of gender. Ie 54.6% of tickets; enrolled and graduating 55.5% 59.6% female. Similarly, the sample shows that the percentage of those interested in majoring in accounting expertise confirms the gender balance. However notes a growing quest for females from Resolution 03, rising from 30% to 60% on Accounting Skill experts.

Tables 04 and 05 respectively present the activities developed by respondents in response to the questions: Enumerate the degree of motivation, 1 to 10 (the higher, the greater the motivation) of the subject Forensic Accounting in your career choice; If you have completed another course of specialization or extension, before the Accounting Skill, inform which one?
Table 04—Statistics of the activities developed by the respondents

<table>
<thead>
<tr>
<th>Interval</th>
<th>-1</th>
<th>-0.8</th>
<th>-0.6</th>
<th>-0.4</th>
<th>-0.2</th>
<th>0.2</th>
<th>0.4</th>
<th>0.6</th>
<th>0.8</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>%</td>
<td>8%</td>
<td>2%</td>
<td>9%</td>
<td>6%</td>
<td>8%</td>
<td>3%</td>
<td>9%</td>
<td>20%</td>
<td>9%</td>
<td>27%</td>
</tr>
</tbody>
</table>

Resolution 03/92 Federal Education Council

<table>
<thead>
<tr>
<th>Previous</th>
<th>22%</th>
<th>4%</th>
<th>13%</th>
<th>9%</th>
<th>0%</th>
<th>9%</th>
<th>0%</th>
<th>9%</th>
<th>17%</th>
<th>9%</th>
<th>9%</th>
<th>26%</th>
<th>26%</th>
<th>26%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rear</td>
<td>0%</td>
<td>0%</td>
<td>7%</td>
<td>5%</td>
<td>12%</td>
<td>0%</td>
<td>14%</td>
<td>26%</td>
<td>9%</td>
<td>28%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Sources: Made by the authors based on data collected by the survey

It has been found in Table 04. That due to lack of mandatory accounting expertise of subject for students until 1991, the professionals of the confidence level formed until this date, has 48% of lack of confidence in the performance of the activity and 52% of high trust. Whereas, since 1992 exposes major change, with 23% of distrust and 77% of high trust. With this data reinforces the need for subject as a source of professional motivation.

Table 05—Statistics of the activities developed by the respondents

<table>
<thead>
<tr>
<th>Activities</th>
<th>financial</th>
<th>auditing</th>
<th>tributary</th>
<th>government</th>
<th>business</th>
<th>production</th>
<th>commercial</th>
<th>servicing</th>
<th>other</th>
<th>none</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>8%</td>
<td>17%</td>
<td>12%</td>
<td>2%</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>9%</td>
<td>52%</td>
</tr>
</tbody>
</table>

Resolution 03/92 Federal Education Council

<table>
<thead>
<tr>
<th>Previous</th>
<th>9%</th>
<th>26%</th>
<th>30%</th>
<th>0%</th>
<th>0%</th>
<th>0%</th>
<th>0%</th>
<th>13%</th>
<th>22%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rear</td>
<td>7%</td>
<td>12%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>7%</td>
</tr>
</tbody>
</table>

Sources: Made by the authors based on data collected by the survey

With a view to the activities performed by the respondents, evidenced in the table 05 that 52% are first getting expertise in forensic activity. Fact that refers to a reaction that was not occurring before the presentation of the subject. Is noticed that previously had a distribution in which 22% chose the first specialization while the subsequent Resolution 03, the percentage rose to 67%.

Tables 06 and 07 respectively present the activities developed by respondents in response to the questions: What is your age? How old you are registered with the CRC?

Table 06—Statistics of the activities developed by the respondents

<table>
<thead>
<tr>
<th>Interval</th>
<th>24</th>
<th>29</th>
<th>34</th>
<th>39</th>
<th>44</th>
<th>50</th>
<th>55</th>
<th>60</th>
<th>65</th>
<th>70</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>2%</td>
<td>20%</td>
<td>17%</td>
<td>15%</td>
<td>14%</td>
<td>9%</td>
<td>9%</td>
<td>6%</td>
<td>5%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Resolution 03/92 Federal Education Council

<table>
<thead>
<tr>
<th>Previous</th>
<th>0%</th>
<th>0%</th>
<th>0%</th>
<th>9%</th>
<th>13%</th>
<th>17%</th>
<th>22%</th>
<th>13%</th>
<th>13%</th>
<th>13%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rear</td>
<td>2%</td>
<td>30%</td>
<td>26%</td>
<td>19%</td>
<td>14%</td>
<td>5%</td>
<td>2%</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Sources: Made by the authors based on data collected by the survey
The age range of respondents indicated in Table 06, shows a minimum age of 24 years and maximum 75 years. It is noticed that from 1992 there was a reversal in the direction of age, previously the percentages remained stable in the range 44 to 75 years, while after that the highest percentages are in the range 29 to 39 years. Thus, it opens the possibility that: the professionals who had no contact with subject, only after great time experiencing the financial activities believe in the acquired expertise and create confidence to perform expertise as a new activity.

Table 07 - Statistics of the activities developed by the respondents

<table>
<thead>
<tr>
<th>Interval</th>
<th>0</th>
<th>5</th>
<th>10</th>
<th>15</th>
<th>20</th>
<th>25</th>
<th>30</th>
<th>35</th>
<th>40</th>
<th>45</th>
<th>50</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>14%</td>
<td>20%</td>
<td>17%</td>
<td>12%</td>
<td>8%</td>
<td>12%</td>
<td>14%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
<td></td>
</tr>
</tbody>
</table>

Resolution 03/92 Federal Education Council

<table>
<thead>
<tr>
<th></th>
<th>Previous</th>
<th>0%</th>
<th>0%</th>
<th>0%</th>
<th>0%</th>
<th>13%</th>
<th>35%</th>
<th>39%</th>
<th>4%</th>
<th>4%</th>
<th>4%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rear</td>
<td>21%</td>
<td>30%</td>
<td>26%</td>
<td>19%</td>
<td>5%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Sources: Made by the authors based on data collected by the survey.

Table 07 points in years professional experience as an accountant, with a minimum of 0 for no counters and a maximum of 50 years work record. It is noteworthy that the awakening of the graduates of the previous phase took place from 20 years of experience, while later in the first years began their specialization motivated by the subject of Forensic Accounting. Jumping up in the temporal gap.

Tables 08 and 09 respectively present the activities developed by respondents in response to the questions: Demonstrates the individual's desire to achieve goals. Conditioning the experience and anchored in this interval (-1 and +1) that determines the asymmetry of the curve whose probable or improbable probability. Whose Motivational Factor (Ftm) = Weighted average Valences; It shows the average perceptions and instrumentality with their (GAP). Work stress and the belief of reward received and this anchored positively in the range (1 to 10).

Table 08 - Statistics of the activities developed by the respondents

<table>
<thead>
<tr>
<th>Valency</th>
<th>V1 The Forensic Accounting Course offers theoretical and practical foundation sufficient to carry out the activities for Forensic Accounting?</th>
<th>V2 The Forensic Accounting Activity enables practical application of knowledge acquired at the Department of Forensic Accounting?</th>
<th>V3 The activities are related to their training area?</th>
<th>V4 The Accounting Skill Subject awakened in you expectations that: The Forensic Accounting Course provides opportunities to help define his career (helped confirm or reconsider the professional choice)?</th>
<th>V5 The guidelines / information provided by the Forensic Accounting Course are suitable for the realization of Forensic Accounting Activity?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21 45 0.36                                                                                                                                 12 54 0.64                                                                 16 50 0.52                                                                 29 37 0.12                                                                 22 44 0.33</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Forensic Accounting Activity allowed to know the organization of the judiciary, conveying useful experience for the future professional practice?

Regarding the activities developed, the higher education institution is fulfilling what has been proposed for Forensic Accounting Activity?

The higher education institution provides conditions for the development and utilization of Forensic Accounting Activity?

Would you recommend this institution to other students conduct studies on Forensic Accounting Activity?

The market adequately remunerate this activity?

Sources: Made by the authors based on data collected by the survey

Table 08 highlights the average composition of the first variable that makes up the motivational force. It presents an intrinsic tendency of respondents as a positive or negative weighted influence the subject of accounting expertise, training the personal desire of the respondents. The weighting is based on the multiplication of frequencies by unlikely or likely factor respectively [-1, +1], creating by multiplying the factors, a positive or negative asymmetry that points to the motivation of the activity studied. The individual weights of each item did not show lower results than zero, so all questions indicate to a negative asymmetric probability, that is, the subject of Forensic Accounting exercises motivational force, but with little effect, with an average motivational factor near 0.38, close to (1) and distant from one (-1) minus one.

Table 09-Statistics of the activities developed by the respondents

<table>
<thead>
<tr>
<th>Instrumentality</th>
<th>Average perception</th>
<th>Average expected</th>
<th>GAP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional development opportunity.</td>
<td>7,80</td>
<td>7,77</td>
<td>-0.03</td>
</tr>
<tr>
<td>Special recognition by society.</td>
<td>7,05</td>
<td>7,28</td>
<td>0.23</td>
</tr>
<tr>
<td>Greatest opportunity for growth as a person.</td>
<td>7,56</td>
<td>7,68</td>
<td>0.12</td>
</tr>
<tr>
<td>Use and development of new skills.</td>
<td>7,89</td>
<td>8,14</td>
<td>0.24</td>
</tr>
<tr>
<td>Opportunity to improve professional training.</td>
<td>8,35</td>
<td>8,12</td>
<td>-0.23</td>
</tr>
<tr>
<td>Possibility of increasing the quality of personal life.</td>
<td>7,71</td>
<td>7,91</td>
<td>0.20</td>
</tr>
<tr>
<td>Opportunity to improve remuneration.</td>
<td>8,05</td>
<td>7,88</td>
<td>-0.17</td>
</tr>
<tr>
<td>Strong feelings of pride and self-esteem (their perception of their own value).</td>
<td>8,00</td>
<td>7,89</td>
<td>-0.11</td>
</tr>
<tr>
<td>Financial security.</td>
<td>7,27</td>
<td>7,52</td>
<td>0.24</td>
</tr>
<tr>
<td>Opportunity to expand the network of relationships.</td>
<td>8,33</td>
<td>8,29</td>
<td>-0.05</td>
</tr>
</tbody>
</table>

Sources: Made by the authors based on data collected by the survey
Table 09 presents the rewards. According to Camara (2011), for a reward system to be effective and that can achieve the key objectives is that it is aligned to the desires of each individual, with this, it analyzes the average of perceptions and expectations and the difference of the sum of each element produce the difference between what is expected and what was perceived. Thus, it appears that five rewards feature GAP less than zero, that is, the perception is greater than expected, indicating a low motivation this regard, requiring more work in the subject with regard to these values.

5 FINAL CONSIDERATIONS

The activity of Forensic Accounting, among other professional core, reserve the particular characteristic of joining the others for his faithful development. It has supporting role to the judiciary, the constitution of procedural evidence, its operative directly assume the responsibilities not having a way to share them with others. This rigidity requires the total job security as the processes developed.

The activity came longstanding serving privilege to select groups of professionals with years of experience in accounting, slowing the integration of graduates who even found in HIGHER EDUCATION INSTITUTION or labor market their right to intern in the activity.

The research reveals the breakdown of the paradigm that had been presented by the community of experts and technical assistants, prior to resolution 03/92 CFE, what a change marks the profile of Experts and Technical Assistants, who, only if they do this with the acquired security after big time experience in the market, in their expertise. From 1992 opens up new horizons for graduates who want to acquire such trust through specialization motivated by the subject of Forensic Accounting.

Another aspect that has marked the search to higher demand by the activity of Technical Assistant for graduates from 1992 where it was identified for that formed before, which only showed the activity of expert Judge counter. As to gender, the survey confirms the balance presented by the Ministry of Education Census 2012, for Accounting course students, but found that before the resolution 03/92, there was the dominance of males by 70% while later this situation is reversed rising to 60% female.

As for trust to perform the activity of Expert Accountant and Assistant Coach, this research shows that previously the mandatory subject of Accounting Skill, there is a balance unlikely 48% and 52% probable, while later there is the imbalance being 23% of unlikely and 77% probable.

The survey also identifies that before the mandatory subject, 22% of respondents have interest in specializing in the activity while later came to 67%, demonstrating the importance of the subject for the education of future experts and Technical Assistants.

In response to the time gap presented between graduation and the beginning of the activity of Expert Accountant and or Technical Assistant, this study identifies that: after the resolution 03/92 was reduced from 40 to 20 years, but still has a large gap between intervals, which in accordance with previous studies can open the hypothesis stage to the lack of the practical activity of the trainees.
Factors that appeared in previous research, reinforce the lack of students with experience in the activity offered; focused curricula and subjects in theory over the practice and even in this sense, the absence of stage to pay up the theory to practice.

It stands out as an aspect of great relevance in previous studies, the need for academic practice with the synergy of the courses: Law and Accounting, opening the door for the expertise, underpinned by shared stage in model offices, whose demands on the free justice would serve as raw material for both courses.

The analysis of questionnaires anchored in the Contingency model offers degree of positive motivation, however, with little influence on the choice of activity Expert Technical Assistant Accountant or due to other opportunities that stand out by advertising the availability of stages and with lower levels of personality professional, in order that the expert's responsibility or assistant, lies directly on the individual than counter as the legal entity can be shared.

This activity has a greater demand from the Accounting Sciences course graduates from the obligation imposed by Resolution 03/1992 to put a new lens in the eyes of even inexperienced trainees, about the possible activity partners, brings possibility of specialization in this area, which was for a long time, operated by professionals only dazzled the activity after great experiences in the market, which explains the displayed time span.

It concludes that the subject of accounting expertise meets within the theoretical view, the requisites necessary for the activity of Judge Expert and Technical Assistant. However, due to lack of practical activities that can be met through the course of completion stage, few graduates seek expertise, motivated by the experience then gained in practice.

The result of this research, does not exhaust the matter which in its nature is unprecedented. Limited to the size of the sample that meets the security requisites reached level responses, 47% of questionnaires sent. Providing results that will allow managers of HIGHER EDUCATION INSTITUTION offer for future graduates and society, better academic results.

Seeks to contribute to a reflection, in the form and not in the curriculum, where this subject of Accounting Skill is being given, especially regarding the synergy with the right course, that because of its nature, is linked to legal activities of Forensic Accounting.

For future research, it is proposed to study at the higher education institutions in the municipality of Rio de Janeiro facing the integrated stage to law schools and Accounting aimed latter: to investigate the possible synergy in model office practice classes for making of expert testimony in collaboration of free justice.
REFERENCE


SRI FUND FIRMS AND EARNINGS QUALITY

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ABSTRACT

As socially-responsible investing (SRI) funds have attracted interests of the capital market participants, the SRI funds or the firms that issued the stocks included in the funds have been found to show good financial performances. This study examined the “earnings information quality” of the firms (namely, SRI firms) whose stocks have been selected into the SRI funds. CSR (corporate social responsibility) activities are socially desirable, and the SRI firms are expected to carry out their social responsibility. Therefore, this study investigates whether the managers of a company, who are seeking to enlist their company stock in SRI funds, would have a strong motivation for earnings management (thus, low information quality) when CSR firms are performing well in the capital market and when the corporate earnings are an important factor to be considered in selecting the company as an SRI firm. In order to answer these questions, the study empirically tested a formulated hypothesis based on a sample of more than two thousand year-firms, whose stocks were included in SRI funds during the years from 2007 to 2011 (SRI funds were launched in the Korean market, mainly from the year), and the discretionary accruals, the measurement for earnings information quality, was estimated by applying with the modified Jones and Kothari models. This study found that SRI firms showed higher information quality, compared to the non-SRI fund firms. The evidence implies that SRI firms appear to be interested in a long-term profitability rather than the short-term managed earnings level.

Keywords: Corporate Social Responsibility (CSR), Social Responsibility Investing (SRI), Earnings Management, Earnings Information Quality, Discretionary Accruals
1. Introduction

As corporate social responsibility (CSR) becomes increasingly emphasized recently, socially-responsible investing (SRI) funds have attracted capital market participants’ interests. The study examines the earnings quality (or earnings management behavior) of the firms whose stocks are selected into the SRI funds. An SRI fund is the one that screens the companies whose stock investors buy on a list of socially-responsible criteria. So, the firms whose stocks are included in SRI fund (i.e., SRI firms) are meant to carry out well their social responsibility.

While CSR activities are socially desirable, the study raises a question: If CSR firms perform well in the capital market, would the management of a company have a strong motivation to try to make their company stock be included in SRI fund and make earnings management when corporate earnings are an important factor to be selected as an SRI firm?

The remainder of this research is constructed as follows. Part II discusses the background and the research hypothesis. Part III describes the model of the research and the criteria and procedure of the sample selection. Part IV presents the empirical results of this study, and Part V concludes with the summary and limitations of this study.

2. Previous Researches and the Hypothesis

Since mutual benefits from CSR activities are anticipated among companies and the society, the managers and investors have become increasingly aware of the importance of SCR, and numerous studies have been conducted on CSR. Carroll (1999), Adams and McNicholas (2007), Magness (2006), Orij (2010), Dhaliwal et al. (2012), and Kim et al. (2012) have discussed about the theoretical background for the ethical behaviors of firms. Bentham (1996), Carroll (1999), Freeman (2010), and Garriga and Mele (2004) have posited that firms’ decisions over ethical behaviors, such as monetary donations, are heavily influenced by the interest or overall philanthropic view of their stakeholders. Lev et al. (2010) argued that firms may conduct CSR activities to develop their reputations leading to increased sales. Johnson (1966) reported that firms in a monopolistically competitive market use charitable contributions as the means of gaining a strategic advantage over their competitors.

In addition, many studies have focused on the association between the level of CSR activities and the financial performances. Over the last two decades in OECD countries, the results were ambiguous and did not show a consistent relationship (Ko and Kim, 2015). However, relatively recent studies have reported that CSR firms showed better performances in the long-run (Poddì, 2009, using a CSR index), or that CSR disclosures affected analysts’ behavior in a more favorable way (Dhaliwal et al., 2012). Meanwhile, most research conducted in Korea revealed that CSR activities lead to higher financial performance (Kim, 2009; Shin, 2011).

However, fewer studies have examined the managerial choices and the signals on financial performances with CSR activities, particularly the role of CSR on earnings quality. Jones (1995) presented that firms demonstrate their philanthropic and ethical behavior when they run their business with integrity. Such firms are more likely to participate in CSR activities and to provide reliable financial statements. This finding seems to be consistent with Paine (1994), who suggested that ethical and philanthropic managers tend to be actively involved in CSR as an exemplary conduct. Furthermore, these firms are encouraged to display more ethical conduct to prevent behaviors that may damage the firm’s value. If this is the case, the managers would provide more accurate and reliable financial reports, which disclose the high quality
earnings.

However, Hobson and Kachelmeier (2005) suggested that managers may have a motive to misuse CSR disclosures, to compensate for poor quality of earnings. Prior et al. (2008) examined whether firms strategically use CSR in financial reports. Using 593 sample firms, they found a positive relationship between the discretionary accruals computed based on the performance-matched model (Kothari et al., 2005) and a CSR score computed based on non-financial qualitative factors. Kim et al. (2012) found a negative relationship between earnings management and CSR scores in the U.S., by using the CSR index. However, Chih et al. (2008) found inconsistent evidence regarding the earnings management of CSR firms.

Unlike the prior studies, Pyo et al. (2013) employed donation expenditures and the voluntary filing of CSR reports with GRI, to test whether CSR activities are driven by the integrity or opportunistic motivation. They examined the association between earnings quality and two voluntary CSR activities, namely the level of corporate donations (a direct measure of managers’ willingness to conduct CSR activities) (Card et al., 2010) and/or the voluntary issuance of CSR reports filed with the Global Reporting Initiative (GRI) as proxies for CSR activities (a direct signal of managers’ willingness to conduct CSR activities) (Dhaliwal et al., 2011). They provided evidence that the firms active in CSR are likely to report earnings with a higher quality. Specifically, after controlling for firm-specific factors, the firms with more corporate donations have lower discretionary accruals and greater accounting conservatism. Furthermore, this negative relationship between donation and discretionary accruals is more pronounced, when firms voluntarily issue CSR reports.

Consequently, CSR qualification seems to have an unclear net effect on earnings quality. Therefore, conducting additional empirical tests would be of great interest to shareholders and policy makers. The above arguments lead to a hypothesis in null form, as follows:

H: Ceteris paribus, an SRI firm does not increase the level of earnings quality.

3 Research Model and Sample Construction

3.1 Research Model

This study uses discretionary accruals (DAs) as a proxy for the quality of financial reporting or earnings management. The modified-Jones DAs (MJDA) model is used as suggested by Dechow et al. (1995), since DAs are subjected to estimation errors. DAs are computed by using the equations (2) and (3).

\[
DA_{it} = \alpha_0 + \beta_1 SRID_{it} + \beta_2 ROE_{it} + \beta_3 OCFS_{it} + \beta_4 SIZE_{it} + \beta_5 GRS_{it} + \beta_6 LEV_{it} \\
+ \beta_7 BIG_{it} + \beta_8 MSH_{it} + \beta_9 FSH_{it} + \sum_{s=1}^{4} \beta_s YD_{it} + \sum_{k=1}^{11} \beta_{13+k} IND_{ik} + \epsilon_{it}
\]  

(1)

where

\(DA_{it}\) : Discretionary accruals of firm i in year t;

\(SRID_{it}\) : 1 if firm i is an SRI fund firm in year t, and 0 if otherwise;

\(ROE_{it}\) : Return on equity (net income/average equity) of firm i in year t;

\(OCFS_{it}\) : Net operating cash flows/beginning total assets of firm i in year t;

\(SIZE_{it}\) : Natural log of total assets of firm i at the end of year t;
GRS$_{it}$ : Sales growth rate of firm i in year t;
LEV$_{it}$: Leverage ratio (total liabilities/total assets) of firm i at the end of year t;
BIG$_{it}$ : 1 if Big 4 auditor audited firm i’s financial statements for year t, and 0 if otherwise;
MSH$_{it}$: Share of major stockholders and their related party of firm i in year t;
FSHit: Share of foreign stockholders of firm i in year t;
YD$_{it}$ : Dummy variable for year control, 0 or 1;
IND$_{ik}$ : Dummy variable for industry control, 0 or 1.

The dependent variable $DA$ is total accruals less non-discretionary accruals. Therefore, it is first computed by estimating discretionary accruals ($\varepsilon_t$) using equation (2). This equation is based on Modified Jones Model, which was suggested by Dechow et. al. (1995).

$$\frac{TA_t}{ASSET_{t-1}} = \frac{\alpha_0}{ASSET_{t-1}} + \alpha_1 (SALES_t - AR_t) / ASSET_{t-1} + \alpha_2 PPE_t / ASSET_{t-1} + \varepsilon_t$$ (2)

where

- $TA_t$: Total accruals/(net income - net operating cash flows) in year t;
- $ASSET_{t-1}$: Total assets at the beginning of year t;
- $\Delta SALES_t$: Sales increase in year t ($= SALES_t - SALES_{t-1}$);
- $\Delta AR_t$: Accounts receivable change in year t ($= AR_t - AR_{t-1}$);
- $PPE_t$: Net depreciable property, plant, and equipment (depreciable tangible assets) in year t;
- $\varepsilon_t$: Error term (Proxy for discretionary accrual)

Kothari et al (2005) examined the specification and power of tests, based on performance-matched discretionary accruals, and made comparisons with test statistics by using traditional discretionary accrual measures (e.g., Jones and modified-Jones models). They suggested that the performance-matched discretionary accrual measures would enhance the reliability of inferences from earnings management (quality) research, when the hypothesis being tested does not imply that earnings management (quality) will vary with performance or where the control firms are not expected to have engaged in earnings management (quality). This suggested model is as follows, where the performance matching based on ROA (return on assets) controls for the effect of performance on measured discretionary accruals.

$$\frac{TA_t}{ASSET_{t-1}} = a_0 + a_1 / ASSET_{t-1} + a_2 (\Delta SALES_t - \Delta AR_t) / ASSET_{t-1} + a_3 PPE_t / ASSET_{t-1} + a_4 ROA_{t(or t-1)} + \varepsilon_t$$ (3)

where $ROA_{t(or t-1)}$: Return on asset, which is net income divided by $ASSET_{t-1}$ in year t.

Based on the prior research, several control variables are added in equation (1). It is expected that ROE and GRS are positively related to discretionary accruals. Ahmed et al. (2002) reported a negative relationship between accruals and GRW or ROA. SIZE may reflect the effects from the omitted variables on earnings quality (Becker et al. 1998). LEV may capture the managers’ opportunistic behaviors pertaining to earnings quality, as managers may manage earnings to avoid violations of debt covenants (DeFond and Jiambalvo, 1994). As in DeFond and Subramanyam (1998), auditors who are concerned with litigation risk may decrease discretionary accruals. BIG is expected to increase an auditor’s litigation exposure, and
therefore, it is negatively related to discretionary accruals.

According to the prior studies (DeFond and Jiambalvo, 1993, 1994; Francis et al., 1999; Reynolds and Francis, 2001; Simunic, 1980), it is expected that firms with a smaller size, greater leverage, lower growth rate, and higher returns are likely to manage earnings through discretionary accruals. Firms with non-Big 4 auditors may engage in earnings management (Palmrose, 1988; DeFond and Subramanyam, 1998; Reynolds and Francis, 2001; Francis, 2004).

3.2 Sample Construction

The sample data for this study was acquired from a well-known Korean fund valuation firm that specializes in analyzing SRI fund data. SRI funds were launched most recently in Korea, mainly from the year 2007. Therefore, the sample initially consisted of the firms whose common stocks were listed in Korea Securities Market, and these firms were included in SRI funds for the four-year period from 2007 to 2011. The sample was further screened to satisfy the following criteria:

1) The firm does not belong to the financial industry.
2) The firm does not have capital stock impaired.
3) The firm’s fiscal year-end is December.
4) The firm’s financial statements are available from TS-2000, a database of Korea Listed Companies Association.

The first criterion is employed, because the operating characteristics, financial statement forms, and accounts of financial companies are very different from non-financial ordinary companies. The second criterion is necessary, because management of the companies with capital stock impairment is likely to make extraordinary decisions, which is quite different from those of the companies with normal financial condition. The third criterion is applied in order to secure equivalence among the sample firms, as much as possible. As seen in Tables 1 and 2, final 391 firms in 89 SRI funds were selected for the period of years 2007~2011, after they passed through all the selection criteria. This produced a sample size of 2,468 year-firms.

<table>
<thead>
<tr>
<th>Selection Steps for Sample</th>
<th>Year-Firm</th>
</tr>
</thead>
<tbody>
<tr>
<td>All year-firm observations from the Korea Securities Market (KSM)</td>
<td>3,678</td>
</tr>
<tr>
<td>excluding financial companies during 2007~2011</td>
<td>(592)</td>
</tr>
<tr>
<td>(Less) Capital-Impaired or Non-December Fiscal Year-End Firms</td>
<td>3,086</td>
</tr>
<tr>
<td>Net</td>
<td>(618)</td>
</tr>
<tr>
<td>(Less) Firms without Available Financial Statements (or Data)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2,468</td>
</tr>
</tbody>
</table>

The distribution of sample by year is presented in Panel A of Table 2. The number of SRI firms was the highest with 109 in 2011 and the lowest with 93 in 2008, but this does not appear to be very different from year to year. The distribution of sample by industry, based on Korea Standard Industrial Classification, is presented in Panel B of Table 2. “Medical Materials and Medicine; Rubber and Plastic Product; Chemical Products” industry firms took the highest proportion, which was more than one fifth of the total sample.
Table 2: Sample Firm Distribution

(Panel A) Sample Distribution by Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Sample Size</th>
<th>No. of SRI Firms</th>
<th>No. of SRI Firms for Three Years in a Row*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>528</td>
<td>100</td>
<td>-</td>
</tr>
<tr>
<td>2008</td>
<td>486</td>
<td>93</td>
<td>-</td>
</tr>
<tr>
<td>2009</td>
<td>489</td>
<td>94</td>
<td>69</td>
</tr>
<tr>
<td>2010</td>
<td>520</td>
<td>107</td>
<td>75</td>
</tr>
<tr>
<td>2011</td>
<td>445</td>
<td>109</td>
<td>67</td>
</tr>
<tr>
<td>Total</td>
<td>2,468</td>
<td>503</td>
<td>211</td>
</tr>
</tbody>
</table>

* No. of year-firms included in this category is 539 for 2009 ~ 2011.

(Panel B) Sample Distribution by Industry

<table>
<thead>
<tr>
<th>Industries</th>
<th>No. of Year-Firms</th>
<th>Proportion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing Beverages and Food Products</td>
<td>161</td>
<td>6.5</td>
</tr>
<tr>
<td>Manufacturing Textiles, Leather, Bags, and Shoes</td>
<td>109</td>
<td>4.4</td>
</tr>
<tr>
<td>Manufacturing Pulp, Paper, Paper Product, and Furniture</td>
<td>96</td>
<td>3.9</td>
</tr>
<tr>
<td>Medical materials and Medicine; Rubber and Plastic Product; Chemical Products</td>
<td>554</td>
<td>22.4</td>
</tr>
<tr>
<td>Manufacturing Primary Metal Products</td>
<td>188</td>
<td>7.6</td>
</tr>
<tr>
<td>Manufacturing Equipment, Machinery, Electronic Component, Computer, Image &amp; Communication Instruments</td>
<td>342</td>
<td>13.9</td>
</tr>
<tr>
<td>Manufacturing Motor Vehicles (Automobile, Trailer, and Transportation Equipment)</td>
<td>178</td>
<td>7.2</td>
</tr>
<tr>
<td>Manufacturing Briquette and Refined Petroleum Product; Providing Gas, Steam, and Air Conditioning</td>
<td>53</td>
<td>2.1</td>
</tr>
<tr>
<td>General Construction</td>
<td>129</td>
<td>5.2</td>
</tr>
<tr>
<td>Wholesale Trade and Commodities Brokerage; Sales of Motor Vehicles and Parts; Sales of Automobiles and Components</td>
<td>200</td>
<td>8.1</td>
</tr>
<tr>
<td>Land, Water (Maritime), and Air Transportation</td>
<td>74</td>
<td>3.0</td>
</tr>
<tr>
<td>Specialized Services, Computer Programming, System Integration &amp; Management, Educational Services (Information and Communications)</td>
<td>384</td>
<td>15.6</td>
</tr>
<tr>
<td>Total</td>
<td>2,468</td>
<td>100%</td>
</tr>
</tbody>
</table>
4. Empirical Results: Descriptive Statistics and Correlation Analysis

The descriptive statistics such as mean, standard deviation, minimum, and maximum values for each of the dependent, independent, and control variables used in the model are shown in Table 3. The mean value of a dependent variable, DA-MJ (DA estimated by Modified Jones model), appears about four times as much as another dependent variable, DA-KO (DA estimated by Kothari model). The mean value of the independent variable, SRID, is 0.2038. This indicates that SRI year-firms are more than 20% of the entire sample. It is also noted that the mean value of the control variable, BIG, is 0.7196. This implies that more than 70% of the sample firms are being audited by Big 4 auditors. It is also interesting to see that average (or median value) of ROE and ROA are 7.15% (8.37%) and 5.11% (4.92%), respectively, and that ROA and OCFS are very close with respect to the mean (5~6%) or median value (around 5%) and the maximum value (50~60%). The minimum values are greater than negative 100% of the average equity amount or the asset value, and the maximum values are about 40% of the average equity and 60% of the asset.

Table 3: Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard Dev.</th>
<th>Minimum</th>
<th>Median</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA-MJ</td>
<td>0.0004</td>
<td>0.9997</td>
<td>-10.2833</td>
<td>-0.0216</td>
<td>7.9921</td>
</tr>
<tr>
<td>DA-KO</td>
<td>0.0001</td>
<td>0.0950</td>
<td>-0.6795</td>
<td>-0.0017</td>
<td>1.1060</td>
</tr>
<tr>
<td>SRID</td>
<td>0.2038</td>
<td>0.4029</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>ROE</td>
<td>0.0715</td>
<td>0.1720</td>
<td>-1.0013</td>
<td>0.0837</td>
<td>0.4059</td>
</tr>
<tr>
<td>OCFS</td>
<td>0.0563</td>
<td>0.1051</td>
<td>-0.4471</td>
<td>0.0517</td>
<td>0.5042</td>
</tr>
<tr>
<td>SIZE</td>
<td>19.6836</td>
<td>1.4564</td>
<td>15.8044</td>
<td>19.4225</td>
<td>25.1779</td>
</tr>
<tr>
<td>GRS</td>
<td>0.1820</td>
<td>1.1373</td>
<td>-0.09985</td>
<td>0.1011</td>
<td>44.7139</td>
</tr>
<tr>
<td>LEV</td>
<td>0.4253</td>
<td>0.1917</td>
<td>-0.4757</td>
<td>0.4271</td>
<td>0.9735</td>
</tr>
<tr>
<td>BIG</td>
<td>0.7196</td>
<td>0.4493</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>MSH</td>
<td>0.3587</td>
<td>0.1237</td>
<td>0</td>
<td>0.4245</td>
<td>0.4510</td>
</tr>
<tr>
<td>FSH</td>
<td>0.1002</td>
<td>0.1433</td>
<td>0</td>
<td>0.0352</td>
<td>0.8706</td>
</tr>
<tr>
<td>BIG</td>
<td>0.7212</td>
<td>0.4485</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>TA</td>
<td>-0.0045</td>
<td>0.1050</td>
<td>-1.0481</td>
<td>-0.0075</td>
<td>0.9381</td>
</tr>
<tr>
<td>ROA</td>
<td>0.0511</td>
<td>0.0979</td>
<td>-1.0252</td>
<td>0.0492</td>
<td>0.6068</td>
</tr>
</tbody>
</table>

*DA*<sub>it</sub> (DA-MJ or DA-KO): Discretionary accruals of firm i in year t (estimated by Modified Jones or Kothari model);

*SRID*<sub>it</sub>: 1 if firm i is an SRI fund firm in year t, and 0 if otherwise;

*ROE*<sub>it</sub>: Return on equity (net income/average equity) of firm i in year t;

*OCFS*<sub>it</sub>: Net operating cash flows/beginning total assets of firm i in year t;

*SIZE*<sub>it</sub>: Natural log of total assets of firm i at the end of year t;

*GRS*<sub>it</sub>: Sales growth rate of firm i in year t;

*LEV*<sub>it</sub>: Leverage ratio (total liabilities/total assets) of firm i at the end of year t;

*BIG*<sub>it</sub>: 1 if Big 4 auditor audited firm i’s financial statements for year t, and 0 if otherwise;

*MSH*<sub>it</sub>: Share of major stockholders and their related party of firm i in year t;

*FSH*<sub>it</sub>: Share of foreign stockholders of firm i in year t;
\[ YD_{it} \]: Dummy variable for year control, 0 or 1;
\[ IND_{ik} \]: Dummy variable for industry control, 0 or 1.
\[ TA_{t} \]: Total accruals/(net income - net operating cash flows) in year t;
\[ ASSET_{t-1} \]: Total assets at the beginning of year t;
\[ ROA_{t(\text{or } t-1)} \]: Return on asset, which is net income divided by \( \text{ASSET}_{t-1} \) in year t.

The Pearson's correlation coefficients for all variables used in the model are provided in Table 4. Multicollinearity would not pose a problem in the regression analysis, since the largest variance inflation factor (VIF) of the independent variables was found to be only 1.6358, which is far smaller than 10. Various recommendations for the acceptable levels of VIF have been published in the literature, and most commonly, a value of 10 has been recommended as the maximum level of VIF (e.g., Kutner et al., 2004; Hocking et al., 1983).

As seen in Table 4, the correlation coefficient of SRID with DA appears not significant (even at 10%), even though it is positive with DA-MJ and negative with DA-KO. The correlation coefficients of SRID with all other variables except GRS are significant (at 10% for LEV and at 1% for all others). Among them, only the one with MSH is negative and all others are positive. This implies that SRI firms tend to have larger ROE, OCFS, SIZE, LEV, and FSH, and smaller MSH. They also tend to be audited by Big 4 auditors.

### Table 4: Pearson's Correlation Coefficients

<table>
<thead>
<tr>
<th></th>
<th>DA-MJ</th>
<th>DA-KO</th>
<th>SRID</th>
<th>ROE</th>
<th>OCFS</th>
<th>SIZE</th>
<th>GRS</th>
<th>LEV</th>
<th>BIG</th>
<th>MSH</th>
<th>FSH</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA-MJ</td>
<td>1</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DA-KO</td>
<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X1=SRID</td>
<td>.037</td>
<td>-.007</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X2=ROE</td>
<td>.366***</td>
<td>.043**</td>
<td>.185***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X3=OCFS</td>
<td>-.577***</td>
<td>-.809***</td>
<td>.149***</td>
<td>.419***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X4=SIZE</td>
<td>.099***</td>
<td>.089***</td>
<td>.583***</td>
<td>.206***</td>
<td>.132***</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X5=GRS</td>
<td>.055***</td>
<td>.038*</td>
<td>.017</td>
<td>.074***</td>
<td>.039*</td>
<td>-.004</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X6=LEV</td>
<td>-.070***</td>
<td>.074***</td>
<td>.037*</td>
<td>-.209***</td>
<td>-.148***</td>
<td>.175***</td>
<td>.029</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>X7=BIG</td>
<td>.029</td>
<td>-.005</td>
<td>.249***</td>
<td>.161***</td>
<td>.156***</td>
<td>.430***</td>
<td>-.007</td>
<td>.045**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X8=MSH</td>
<td>.081***</td>
<td>.055***</td>
<td>-.088***</td>
<td>.059***</td>
<td>-.025</td>
<td>-.025</td>
<td>-.023</td>
<td>-.137***</td>
<td>-.015</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>X9=FSH</td>
<td>.020</td>
<td>-.045**</td>
<td>.388***</td>
<td>.174***</td>
<td>.188***</td>
<td>.460***</td>
<td>.012</td>
<td>-.109***</td>
<td>.249***</td>
<td>-.025</td>
<td>1</td>
</tr>
</tbody>
</table>

1) *, **, or ***: Significant at a 10%, 5%, or 1% level, respectively
2) See <Table 3> for definitions of variables.

### 4.2 Mean Comparison Analysis

In parallel with the Correlation Analysis, we can analyze the characteristics of SRI firms in relative to those of Non-SRI, by comparing means for each variable between the two groups. As seen in Table 5, means of all variables, except DAs and MSH, are greater in SRI firms than in Non-SRI, all significantly at 1% except for GRS and LEV. The means of DA-MJ and MSH in SRI firms are significantly smaller. These results are mostly consistent with what we see in the correlation matrix (See the column of SRID).
Table 5: Comparison of Variable Means between SRI vs. Non-SRI Firms

<table>
<thead>
<tr>
<th>Variable</th>
<th>SRI Firms (1)</th>
<th>Non-SRI Firms (2)</th>
<th>Mean Difference [(1) - (2)]</th>
<th>t Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA-MJ</td>
<td>0.0287</td>
<td>0.0348</td>
<td>-0.0061</td>
<td>-2.15***</td>
</tr>
<tr>
<td>DA-KO</td>
<td>-0.0013</td>
<td>0.0003</td>
<td>-0.0016</td>
<td>-0.36</td>
</tr>
<tr>
<td>ROE</td>
<td>0.1344</td>
<td>0.0554</td>
<td>0.0790</td>
<td>11.75***</td>
</tr>
<tr>
<td>OCFS</td>
<td>0.0872</td>
<td>0.0483</td>
<td>0.0389</td>
<td>7.41***</td>
</tr>
<tr>
<td>SIZE</td>
<td>21.4066</td>
<td>19.2425</td>
<td>2.1641</td>
<td>31.19***</td>
</tr>
<tr>
<td>GRS</td>
<td>0.2193</td>
<td>0.1724</td>
<td>0.0469</td>
<td>1.02</td>
</tr>
<tr>
<td>LEV</td>
<td>0.4394</td>
<td>0.4217</td>
<td>0.0177</td>
<td>1.77</td>
</tr>
<tr>
<td>BIG</td>
<td>0.9423</td>
<td>0.6646</td>
<td>0.2777</td>
<td>18.65***</td>
</tr>
<tr>
<td>MSH</td>
<td>0.3372</td>
<td>0.3642</td>
<td>-0.0270</td>
<td>-4.58***</td>
</tr>
<tr>
<td>FSH</td>
<td>0.2101</td>
<td>0.0720</td>
<td>0.1381</td>
<td>17.56***</td>
</tr>
</tbody>
</table>

1) *, **, and ***: Significant at a 10%, 5%, and 1% level, respectively
2) See <Table 3> for definitions of variables.

4.3 Multiple Regression Test Result

The regression showed peculiar results, as presented in Table 6. In both Modified Jones (MJ) and Kothari (KO) models, the coefficient of SRIID carried a negative value, which is insignificant in MJ model but significant in KO model. KO model produced the result showing that the null hypothesis is rejected, in favor of the existence of negative association between CSR firms and their earnings quality. In other words, SRI firms make less earnings management and thus report with higher earnings quality.

This seems to be consistent with Kothari’s suggestion that performance-matched discretionary accrual measures would enhance the reliability of inferences from earnings management research, when the hypothesis being tested does not imply that earnings management will vary with performance or where the control firms are not expected to have engaged in earnings management.

Regarding the control variables, in both models, the regression coefficients of ROE, SIZE, GRS, BIG and FSH are positive significantly at a 1% or 5% level while that of OCFS is negative significantly at a 1% level. Negative effects are also seen as significant with LEV in MJ model, but not significant in KO model. MSH does not have any significant effect in either model.

Table 6: Multiple Regression Test Result

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>DA-MJ (Modified Jones model)</th>
<th>DA-KO (Kothari model)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Regression Coefficient. P Value</td>
<td>Regression Coefficient. P Value</td>
</tr>
<tr>
<td>Intercept</td>
<td>-0.072 0.000</td>
<td>-0.146*** 0.000</td>
</tr>
</tbody>
</table>
4.4 Additional Analysis: A case of SRI fund inclusion for three consecutive year

For the purpose of an additional analysis, the definition of the independent variable, SRID, was slightly changed such that its value is equal to 1, if a firm is included into SRI fund for three years consecutively, and it is 0 if otherwise. The purpose of the additional analysis is to see how the regression results would change if firms are included in SRI funds for a longer lasting period.

Table 7: Comparison of Variable Means between 3-Years-SRI vs. Other Firms

<table>
<thead>
<tr>
<th>Variable</th>
<th>3 Years-SRI Firms (1)</th>
<th>Other Firms (2)</th>
<th>Mean Difference [ (1) - (2) ]</th>
<th>t Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>DA-MJ</td>
<td>-0.1201</td>
<td>0.0112</td>
<td>-0.131**</td>
<td>-1.83</td>
</tr>
<tr>
<td>DA-KO</td>
<td>-0.0223</td>
<td>0.0021</td>
<td>-0.024***</td>
<td>-3.57</td>
</tr>
<tr>
<td>ROE</td>
<td>0.1132</td>
<td>0.0676</td>
<td>0.046***</td>
<td>3.69</td>
</tr>
<tr>
<td>OCFS</td>
<td>0.0946</td>
<td>0.0527</td>
<td>0.042***</td>
<td>5.58</td>
</tr>
<tr>
<td>SIZE</td>
<td>19.7659</td>
<td>19.6759</td>
<td>0.090</td>
<td>0.84</td>
</tr>
<tr>
<td>GRS</td>
<td>0.295</td>
<td>0.1714</td>
<td>0.124*</td>
<td>1.51</td>
</tr>
<tr>
<td>LEV</td>
<td>0.4359</td>
<td>0.4243</td>
<td>0.012</td>
<td>0.84</td>
</tr>
<tr>
<td>BIG</td>
<td>0.8294</td>
<td>0.7111</td>
<td>0.118***</td>
<td>3.67</td>
</tr>
<tr>
<td>MSH</td>
<td>0.3391</td>
<td>0.3605</td>
<td>-0.021***</td>
<td>-2.4</td>
</tr>
<tr>
<td>FSH</td>
<td>0.1128</td>
<td>0.099</td>
<td>0.014</td>
<td>1.33</td>
</tr>
</tbody>
</table>

1) *, **, and ***: Significant at a 10%, 5%, and 1% level, respectively
2) See <Table 3> for definitions of variables.

The additional regression exercise did not change the previous regression result very much, as seen in Table 7. Table 7 shows the newly produced coefficients and their t values, with the
original ones taken from Table 6. The regression coefficient of SRID still carries a negative value, which is significant at 1%. The coefficients of all control variables carry values with the same sign, despite changes in the levels of significance. Values of F and Adjusted R² also look strong, even though they decreased slightly. Therefore, the test result still holds the same.

Table 7. Additional Multiple Regression Result: Consecutive Three Years

| Variable | DA-MJ (Modified Jones model) |  |
|----------|-----------------------------|--|---|
|          | Regression Coefficient. | t Value | Non-Consecutive, From <Table 6> |
| Intercept | 0.1582 *** | 5.78 | -0.072 |
| SRID | **0.0026 *** | **-2.09 | **-0.004 |
| ROE | 0.1651 *** | 27.27 | 0.425 *** |
| OCFS | -0.4227 *** | -42.17 | -0.891 *** |
| SIZE | -0.0059 *** | -6.94 | 0.005 *** |
| GRS | 0.0013 | 1.52 | 0.003 *** |
| LEV | 0.0224 *** | 4.8 | -0.033 *** |
| BIG | -0.0004 | -0.17 | 0.006 ** |
| MSH | -0.0318 *** | -4.16 | 0.005 |
| FSH | 0.0333 *** | 4.35 | 0.024 *** |
| F Value | 84.02 *** | 397.41 *** |
| Adjusted R² | 0.456 | 0.794 |
| N | 2,468 | 2,468 |

1) *, **, or *** : Significant at a 10%, 5%, or 1% level, respectively.
2) See <Table 3> for the definitions of variables.

Table 8. Additional Multiple Regression Result: Consecutive Three Years

<table>
<thead>
<tr>
<th>Variable</th>
<th>Regression Coefficient.</th>
<th>t Value</th>
<th>Non-Consecutive, From &lt;Table 6&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>0.1388 *</td>
<td>3.86</td>
<td>-0.146 ***</td>
</tr>
<tr>
<td>SRID</td>
<td>**0.0050 ***</td>
<td>**2.96</td>
<td>**-0.006 ***</td>
</tr>
<tr>
<td>ROE</td>
<td>0.0244 ***</td>
<td>3.06</td>
<td>0.242 ***</td>
</tr>
<tr>
<td>OCFS</td>
<td>-0.0412 ***</td>
<td>-3.1</td>
<td>-0.926 ***</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.0075</td>
<td>-6.64</td>
<td>0.009 ***</td>
</tr>
<tr>
<td>GRS</td>
<td>0.0011</td>
<td>1.05</td>
<td>0.003 ***</td>
</tr>
<tr>
<td>LEV</td>
<td>0.0455 ***</td>
<td>7.21</td>
<td>-0.002</td>
</tr>
<tr>
<td>BIG</td>
<td>-0.0023</td>
<td>-0.77</td>
<td>0.006 ***</td>
</tr>
</tbody>
</table>
5. Conclusions

This study was based on a sample of 2,468 KOSPI firms whose stocks were included in SRI funds during the years from 2007 (the year SRI funds were launched in Korean market) to 2011. The Modified Jones and Kothari discretionary accruals were used, and it was found that SRI firms revealed higher information quality probably as a result of lower earnings management than non-SRI firms. The evidence implies that SRI firms tend to focus on a long-term profitability rather than the short-term managed earnings level.
REFERENCES

EFFECT OF IFRS ADOPTION ON CORPORATE STRATEGY AND PERFORMANCE MEASUREMENT: EMPIRICAL EVIDENCE OF JAPANESE MANUFACTURING COMPANIES

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ABSTRACT

The International Financial Reporting Standards (IFRS) are becoming the leading principles and a special driver for the convergence of financial and management accounting in over 110 countries. The purpose of this study is to examine the impact of the adoption of IFRS on management accounting. More specifically, this study investigates the differences in the importance of strategy goals, and financial and nonfinancial measures that have changed after its adoption. The results of a questionnaire survey conducted on Japanese manufacturing companies indicate that the effects of respondent firms provide with management accounting practices and techniques before and after the adoption of IFRS. My findings suggest that there seem to be considerable differences in the importance of strategy goals, and financial and nonfinancial measures before and after IFRS adoption.

Keywords: IFRS; management accounting; strategy goals; financial measures; nonfinancial measures

Data Availability: Data pertaining to the individual firms used in this study cannot be made public due to confidentiality agreements with respondent firms.

JEL Classification: M41
1. Introduction

The purpose of this paper is to clarify the changes between before and after adoption of the International Financial Reporting Standards (IFRS) by an enterprise, on strategic goals and financial performance measurement. IFRS adoption may have a significant effect on the business management basis of Japanese companies, such as preparation of the annual report by profit disclosure using comprehensive income, retention of cross-shareholdings, business strategy such as mergers and acquisitions (M&A), improvement of the business process, and renewal of the information system.

The current trend of accounting internationalization worldwide has evolved by converging the accounting standards of each country with the International Accounting Standards toward a direction that promotes and encourages IFRS adoption. In the section of “purpose of the constitution” in the IFRS foundation, it was newly specified in March 2010, that IFRS was also adopted through convergence.¹

However, the movement toward IFRS adoption in Japan is still very slow. In June 2009, the interim report by the Financial Services Agency in Japan was announced, and it was leaning toward IFRS adoption. Consequently, the consciousness of the enterprise rapidly increased. The enterprise, which begins to move for early adoption has also appeared.² Then, in the schedule, whether or not it imposed the adoption by the listed enterprise in 2012 would be finally judged, and the directivity of the duty also worked out the adoption in 2015 or 2016. However, the road map to IFRS adoption by Japanese enterprises is not yet clarified, although the Accounting Standards Board of Japan (ASBJ) and the International Accounting Standards Board (IASB) keep the regular consultation afterwards. The fact is that the presentation of the securities reports by IFRS has still not been accepted, even though the convergence is progressing in Japan.

It was opined that people of the affirmative side should adopt IFRS to all listed enterprises at the beginning 2009, but it remains an idea limited to a part of listed enterprises at present.³ After all, it must be recognized that the directivity of the discussion for IFRS adoption is still not clarified. On the other hand, countries (declaring country is contained) where IFRS is being adopted or converged already include over 110 nations. The accounting standards of the world surely approach the direction of IFRS introduction, if the fact is considered, and it will only be a matter of time when the adoption starts in Japanese enterprises. Therefore, it can be easily considered that it does not become advantageous for the performance measurement of Japanese enterprises at all, even if IFRS adoption was delayed slightly.

Of course, the effect of IFRS adoption widely reaches not only changes in the preparation of the

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¹ IASC (2010, 5). The opening process of this article of association had been approved in January 2010, and was brought into effect in March 2010 by the International Accounting Standards Board (IASB). It was then revised in December 2010.
² Nihon Densha Kogyo Co., Ltd., of the crystal device company, voluntarily applied international accounting standards to their accounts for the year ending March 2010. Afterwards, it was made public that Sumitomo Corporation and Hoya in March 2011; Nippon Sheet Glass and Japan Tobacco in March 2012; the DNA, Anritsu, and SBI Holdings in March 2013; Rakuten, Chugui Pharmaceutical, and Asahi Glass Company Limited in December 2013; and Softbank and Marubeni Corporation in March 2014, etc. apply voluntarily.
³ Accounting’s editorial staff (2012, 69). Tsujiyama (2012, 52) assumes the concrete project that IASB and FASB advance to a
annual reports but also reviews of the financial measures as an evaluation base and the business process as a means of business management. In short, due to the changes in the financial measures after IFRS adoption, the effect on corporate performance is not small at all. It is proven that the financial performance of Japanese companies fluctuates, considering the international convergence of accounting standards as an opportunity. There exists research that indicates that this fact may significantly affect the dividend behavior and investment behavior of Japanese companies.\(^4\) After all, though the business process reform of such enterprises is the necessary for IFRS adoption, the global and common evaluation measure is possible, and as a result, the effect of the merit that M&A strategy becomes easy, is important. The content of the financial report measured by IFRS adoption is greatly useful for the management, having interest in future results rather than past performance, as the judgment material of the performance evaluation.

IASB has carried out the idea under the expected purpose, and have undertaken the mission of finally fulfilling the following tasks for global investors; (1) to offer high quality, transparent, and practicable information through the international accounting standards, (2) to promote utilization and strict adoption of the accounting standards, and (3) to harmonize the accounting standards of each country and IFRS with high quality.\(^5\) Therefore, IFRS adoption is important not only for disclosure to outside stakeholders but also the inside management.

Further, this paper examines the effect of adoption on the management accounting technique, while the problems of IFRS adoption are investigated. IFRS adoption is supposed to significantly affect the strategic objectives, and financial and nonfinancial measures. Therefore, by the internationalization of the accounting standards, the situation of importance and change of the availability is examined, and implies a meaning that is important for performance measurement and disclosure of future companies. Based on such problem recognition, this paper carries out a mail questionnaire survey for Japanese companies. The effects of IFRS adoption on the management accounting technique are demonstratively analyzed.

2. Research Questions and Related Literature

2.1 Verification subjects with IFRS adoption

IFRS adoption has several merits: (1) it is undertaken by stock investment and merchandising exceeding countries and regions; (2) since the appropriation rule of sales and profit differs, it is not possible to offer judgment material that can be compared internationally; and (3) the evaluation and reliability of the enterprise increases, when the common measures for the enterprise are adopted. However, it also has some demerits: (1) it is exposed to the severe evaluation of global investors; (2) the individual judgment is obtained based on the principle; and (3) time and cost

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\(^4\) Kagaya (2012, 42-43&46-52). In his thesis, it is proven that it has a negative influence on the investment behavior of Japanese firms when the introduction of IFRS focuses on the change of sustainable cash flow at the profit attribute, especially the future, and the change of the profit is large.

\(^5\) IASB (2004). The purpose of first IASC was very simple, having provided the organization and the function of the foundation rather than movement for the convergence.
depend on the conversion to the new standard from the existing one.

On the other hand, we need to bear in mind the effects of IFRS adoption on Japanese companies: (1) governance of consolidated accounting; (2) improvement of the internal control system resulting from the disclosure of information strengthening; (3) the substantiality of intangible assets' disclosure; and (4) strengthening of accounting literacy.\(^6\)

By the introduction of IFRS, a large change is anticipated for management control through global motivation of the increase of the opportunities for transactions and investment activities in which enterprises trade in foreign countries. Therefore, it is important to establish the performance measures for global consolidated accounting. On the other hand, statement of financial condition, statement of comprehensive income, and statement of cash flows, etc. will be newly used, if IFRS is applied, and it becomes impossible to correspond by the traditional financial performance measures used currently. Since the principles of accounting may change if IFRS is introduced, numerical values, such as sales revenues, expense, assets, and liabilities, also change. As a result, it is unclear how the valuation levels of financial measures of return on equity (ROE) and return on assets (ROA), etc. change. Then, to correspond to IFRS, the accounting evaluation system by which the top management can follow the performances of each department is requested to be maintained. Specifically, it is necessary to research management accounting by confirming how the relation between the management action and the performance measurement system of the firm changes after introducing IFRS, and collecting the data of the firm.

First, the performance measurement system should become one management accounting system to compose a new management technique for strengthening the industrial and global competitiveness only because of disclosure of the financial results. It is necessary to clarify the measures that should not only construct a useful management accounting system for the financial reporting of outside stakeholders, but also to support a variety of management processes, and to construct a useful performance evaluation system for motivating management's organizational behavior in Japan that may adopt IFRS in the near future. Moreover, if new "statement of financial performance" by non-financial information can be presented, it will become useful material for investors. In that sense, it seems that the influence of IFRS introduction on the performance appraisal system in Japanese companies will grow significantly in the future. Specifically, it is important to understand how the introduction of IFRS can unite the accounting business processes of Japanese companies and overseas group companies. Further, it is necessary to confirm how the performance measurement index changes by the uniformity.

It is necessary to review the management accounting system including budget management and a mid/long-term managerial planning, etc. because the standard of measurement for sales and profit is different between such a standard and the Japanese standard after applying IFRS. Therefore, after introducing IFRS, it is necessary to do the decision-making according to the information evaluated by new measures with stakeholders such as investors and stockholders.

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\(^6\) Hoshino (2012, 43). Refer to this thesis for the reason why international accounting standards are focused on, and the features, etc.
because the performance so far will be evaluated by different financial measures. In addition, the results of a survey conducted indicate that in European firms that apply IFRS, 45.7 percent of the companies have increased with gross profit, and 22.0 percent with net assets. Moreover, the following results of the survey reported how the management strategy changed: (1) 20.3 percent companies came to value the property efficiency thoroughly, (2) 13.6 percent companies became positive in M&A, and (3) companies that act rashly during business withdrawal constituted 3.4 percent.\(^7\)

Thus, the introduction of IFRS makes it possible to manage the entire business of the global companies by standardizing the accounting rule both in the headquarters and in the overseas group companies. Of course, financial numerical values collected from each company in an overseas group should construct a new accounting measurement system about the budget management and the performance evaluation of the headquarters in conformity with it because it is calculated by the IFRS standard. Further, after introducing IFRS, the viewpoint of how the business can be developed in the future becomes more important than past performance in globalization.

Further, it is necessary to examine the aspect of the research here valuing the following aspects: (1) change of management strategic goals and accounting systems, (2) shift from net income to comprehensive income, and (3) conversion from income expense approach to assets liability approach. Comprehensive income is the amount of the change under the expectation of the change of unrealized profits and losses related to securities and derivatives (variance of the estimate), and the foreign currency transaction adjustment, etc. was added to the net income here. In other words, the comprehensive income looks considerably different from the net income shown as income from operating activities in the last line of the income statement (bottom line). Since saleable value such as unused land is included in the comprehensive income that shows the change of net assets, Japanese companies that have been traditionally valuing sales and profit might have a sense of incompatibility. However, because the net income (profit or loss) is connected with "earnings manipulation" involving increasing the income by selling off the cross-holding of shares if the performance deteriorates, that forms the ground for introducing comprehensive income.

Thus, two hypotheses are defined as verification subjects in this paper. If the strategy and the evaluation rule are different regardless of the introduction of IFRS, the following hypothesis is derived.

**Hypothesis 1:** There is a difference in the degree (use level) valued between a strategic objective and financial, and nonfinancial measures.

On the other hand, when the profit and approach are made assuming conversion by introducing IFRS, another hypothesis is derived.

**Hypothesis 2:** There is a difference in the degree of valuing strategic goals, financial measures, and non-financial measures when comparing it before and after the introduction of IFRS.

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\(^7\) Nikkei Business (2010, 22 and 32). A numerical value concerned is based on the joint investigation by the Nikkei business magazine and Audit Corporation [Avantia]. This investigation is the result of the responses from 116 of 540 companies listed in Euronext of Paris.
In this paper, first, these hypotheses 1 and 2 are together set as an alternative hypothesis (H1). Second, strategic goals, financial measures, and nonfinancial measures are classified into three null hypotheses (H0) respectively in Chapter 4, and last, it is given official approval whether H0 is dismissed respectively. Next, we examine the content of prior research that examined the effect of the application of IFRS on management accounting concerning such problems.

2.2 Related prior research

This chapter will examine the domestic and foreign prior research that study the influence that IFRS introduction exerts on achievement measurement.

There are neither too many applications of IFRS nor research on its relation with management accounting. First, this chapter enumerates an overseas prior research. The research of Cohen and Karatzimas (2012) was regarding the influence that IFRS adoption exerts on management accounting. They examined the use of financial data of companies and the influence on the management accounting practice after it converts to IFRS. Specifically about companies in Greece, they clarify how the interaction between the manager's decision-making, internal reports, and external reports changes. This shows that the more the financial data is used for internal reporting purpose, the more the use extends to the management accounting purpose like decision-making and performance evaluation.8

On the other hand, Prochazka (2009) examines the influence of IFRS introduction on financial and management accounting in the Czech Republic. He points out that we cannot prevent IFRS from improving the quality of financial reporting, and making the management accounting high-quality as the main standard besides financial accounting as the base.9 Thus, he indicates that the coexistence between management and financial accounting will subsequently become inevitable.

In addition, though it is not a research in the area of management accounting, the profit attribute changes by introducing IFRS, and in the enterprise that adopts performance-based incentive systems, there is a research case that changes in financial performance by it influences even management compensation. Ozkan et al. (2012) can be considered one of the related research studies. They verify the influence on pay-for-performance sensitivity (PPS)10 and relative performance evaluation (RPE) by IFRS adoption in the European Union (EU), and research the importance given to the utility of the account information in the management compensation contract.11

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8 Cohen and Karatzimas (2012). The implication concerning the decision-making and the interaction on influence to the business of management accounting after IFRS is introduced here, especially between internal and external reports is useful.
9 Prochazka (2009). He analyzes the influence given to net income between the Czech Republic accounting standards and the IFRS. In the supplement, he analyzes the differences between the Czech Republic accounting standards and IFRS based on the data of the annual report of 2004-2005, and the case with 10 companies with revenue, net income, assets, equity capital, and liabilities analyzed.
10 Here pay-for-performance sensitivity (PPS) is a regression coefficient of the model shown by the sensitivity approach, and shows strength that the reward synchronizes with the corporate performance by the coefficient.
11 Ozkan et al. (2012). They verified the influence given to the enterprise that did the administrative by using data from 2002 to 2008 excluding 2005 when IFRS had been compelling applied in Europe.
Further, the feature of the profit concept of IFRS is to convert from net income (profit or loss for the period) to comprehensive income. In other words, there is a possibility that the technique of profit management changes greatly (management according to the segment, etc.) by using comprehensive income. One of the features of IFRS is the asset-liability approach. According to Shimizu (2011), IFRS suggests the conversion "from management that values the flow to management that values the stock." Certainly, it tends for the statement of financial position that calculates ROE and ROA, etc. as a financial measure to value, and to be adopted as more than a current balance sheet because the importance of the statement of financial position increases. Therefore, this statement of financial position will also be used as a main Key Performance Indicator according to the segment, in the future. In addition, Kawano (2010) points out that performance measures such as operating profit, net income, ROE, ROA, economic value added (EVA), and earnings before interests, taxes, depreciation and amortization (EBITDA) cannot avoid the influence by the difference with a Japanese standard by IFRS introduction. On the other hand, like Kanagarettnam et al. (2009), there are some researchers who point out that comprehensive income correlates to stock prices or return, and net income is a forecast factor of the profit in the future as well, thus the former cannot necessarily fix the domination.

The possibility that the measure of the performance evaluation changes greatly is incontrovertible if it shifts from "net income" of the dominant constraint to "comprehensive income" that is the management result of the enterprise that reflects the market value of the investor. Since the measure of Japanese standards and that of IFRS are different, sales and profit amounts are different. As a result, how performance measures that construct new management accounting systems of budget management, managerial planning, and performance evaluation, etc. within the framework of IFRS and obtains it is used, becomes important. Thus, it is necessary to change to the management technique for taking a management action different from the situation to date how for the management accounting related to the decision making and the performance evaluation to be going to achieve the strategic goals as long as "comprehensive income" becomes the measure of the profitability by introducing IFRS in the future.

Thus, as Shimizu (2011) suggests, by introducing regulations of IFRS, it is natural that accounting standards should be converted from management that values flow to one that values the stock. It is because the management method changes by changing from the income-expense approach that the profit concept values the profit and loss statement to the asset-liability approach that values the balance sheet. On the other hand, Sonoda (2011) points out that IFRS has the

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12 Shimizu (2011, 105). He points out that the management method cannot help changing by the change in the concept of this income (p.106).

13 Kawano (2010, 28). This thesis takes the standpoint that the business objective does not change at once because it does not aim at it alone even if the income concept changes into the comprehensive income, although the introduction of IFRS influences it.

14 Kanagarettnam et al. (2009). Canadian accounting standards set by the Accounting Standards Board (AcSB) in Canada are influenced by IASB and FASB, and these Canadian standards have features harmonized with IASB and FASB. Though it is necessary to understand after that is recognized, all the same, they have verified whether the stock market offers increased value relevance information, which exceeded the traditional historical cost basis approach on companies that report the comprehensive income by applying the accounting policy of Canada.
possibility of not only influencing the accounting side but also the management side, for instance, employees' working changes along with the change of performance evaluation measures. In addition, Sakurai (2012) insists that the bottom line can become the net income for manager's performance evaluation according to the strategy and the decision making though it will shift from the net income that a Japanese standard has caught up to now to the comprehensive income by the IFRS introduction. As Ueno (2010) suggests, net income is the performance measure of the top management while comprehensive income is a standard of the corporate performance measures.

3. Sample and Inspection Method

The survey questionnaire was mailed to 813 Japanese manufacturing companies that are listed on the first section of the Tokyo Stock Exchange, and are considered innovators and market leaders in their respective industries. The companies were grouped into 15 categories: food, apparel, chemicals, petroleum and coal products, rubber products, ceramics, steel, non-ferrous metal, metal products, machinery, electronics, transportation equipment, precision instruments, and other manufacturing industries. The questionnaires were addressed to the company controller or the manager of the accounting department. The questionnaire was administered between July 1 and 31, 2011. The completed questionnaires were returned by 65 Japanese companies, constituting a response rate of 8.0 percent. The highest industry response rate was 18.2 percent for rubber products, and the lowest was 2.8 percent for metal products. It is assumed that the response rate of companies was somewhat low because the investigation period was immediately after the great East Japan earthquake.

The survey questionnaire comprises 21 questions (31 items) relating to strategic goals, divisional organization, budgeting, capital investment, performance evaluation, and performance measurement. Specifically, this thesis analyzes strategic goals, and financial and nonfinancial measures in relation to IFRS introduction. In the next chapter, to clarify the characteristics resulting from investigating the actual conditions concerning strategic goals and performance measurement in Japanese manufacturing companies, the relevant aspects will be empirically analyzed.

Regarding the inspection method, first, it is necessary to verify by the chi-square test (test of independence) whether there was a difference before the introduction of IFRS on the use level of strategic goals, financial measures, and nonfinancial measures that Japanese firms valued. That is, it was verified whether three high-rank answers had differing valuing level of strategic goals, financial measures, and non-financial measures valued before and after IFRS introduction. Second,

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15 Sonoda (2011, 118). He indicated the importance of such management aspect in the process, which examines the influence of the application of IFRS on costing and management accounting.

16 Sakurai (2012, 247). This thesis serves as a reference concerning where the influence that IFRS exerts on management accounting is inclusively examined.

17 Ueno (2010, 191). This paper examines not only the problem of management accounting but also critical problems such as comprehensive income, fair value, and assets and liabilities approach, etc. regarding the process of convergence of IFRS.
Test (t-test) of the difference of mean value of two groups and Wilcoxon code ranking sum test are carried out based on the recovered data in order to confirm it. Moreover, use level of each item and each valuing level of strategic goals, financial measures, and nonfinancial measures valued before and after the introduction of IFRS will be qualitatively observed.

## 4. Empirical Result and Analysis

### 4.1 Strategy goals

This paper focuses on only strategic goals, and financial and nonfinancial measures, although the content of the questionnaire comprises five sections. The strategic goals will be investigated in this Chapter. How each strategic goal was valued before IFRS adoption is shown in Table 1 based on the Likert scale (5 is greatly dissatisfied, 1 is greatly satisfied). The chi-square test (test of independence) was carried out to verify whether the degree of the strengthening of strategic goals of Japanese companies differs. As a result, it was confirmed that the null hypothesis "There was no difference between the valued strategic goals" was rejected, and the alternative hypothesis was significant at the one percent level and was supported.

Table 2 depicts the comparison between the answers of two questions. One question concerns choosing three high ranks of strategic goals that have been valued before IFRS introduction, and the other concerns choosing three high ranks of strategic goals valued after IFRS introduction. It is shown that it is significant as a result of doing Test (t-test) of the difference of mean value of two groups with correspondence and Wilcoxon code ranking sum test based on the sample, respectively. That is, as a result of these tests, the null hypothesis "There will not be any difference in the valued strategic goals before and after the introduction of IFRS" was rejected at the five percent level of significance. Here, the t-value shows the statistic of the test of the difference of the mean of two groups, and the z-value shows the statistic of Wilcoxson test, which tests the significance. Thus, it was confirmed that the two tests were together significant at the five percent level. It is shown that there is a difference to some extent in the degree of the serious consideration of strategic goals between before and after IFRS introduction.

The difference is caused in sales revenue and profit revenue because the rules between Japanese and IFRS standards are different. We understand how to cause the differences in the management accounting techniques of budget management, managerial planning, and performance evaluation, etc. by introducing IFRS, and how the performance evaluation measures are used in addition, becomes important. Specifically, it will be assumed that comprehensive income measures of the profitability by introducing IFRS. This means that the management accounting technique related to current investment decision-making and managerial planning is converted into a technique for taking a new management activity by considering how to achieve strategic goals in the future.

Next, I will qualitatively observe Tables 1 and 2. First, 16 kinds of strategic goals were enumerated, and the questionnaire asked how to attach importance to each goal of the enterprise by a five-stage evaluation (1-5 Likert scale) in the question investigation vote. The evaluation of
In addition, it is because of the evidence that the stockholder control was low.

Table 1 depicts these results. The main strategic goals sequentially identified from the high rank by Table 2 include growth of earnings, strengthening of R&D efficiency, sales growth, improvement of product qualities, etc. This survey questionnaire's results were opposite to the forecast that sales growth (3rd rank) and growth in market share (7th rank) had forecast, valuing more than the profit at first, although strategic goals of Japanese firms are unlike those of American enterprises. That is, I would like to focus on the ranking of growth of earnings to first rank any more though sales growth and growth in market share are also high to some degree as seen in Table 2. This is an evidence to value the managerial efficiency of the rate of profit, etc. in Japanese firms managing it. In the feature concerning this in Table 2, strengthening of R&D ability and sales growth are ranked second and third, respectively. This is evidence suggesting that Japanese firms have improved global competitiveness through the achievement of strengthening technology and low-cost products.

When IFRS is applied, I will give the one that an important mean arose especially about strategic goals that the enterprise chose to be a high rank as one example. That is, they are sales growth (2nd rank from 3rd rank), return on investment (4th rank from 10th rank), return on equity (11th rank from 13th rank), and rationalization of the physical distribution system (12th rank from 16th rank), etc.

Within strategic goals, in addition, it is because of the evidence that the stockholder control was made a weakness by cross-shareholdings, that the degree of serious consideration of "capital gain of the stockholder" is low.

<table>
<thead>
<tr>
<th>Table 1 - Important Strategy Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greatly Dissatisfied</td>
</tr>
<tr>
<td>1</td>
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<tr>
<td>Return on investment (ROI)</td>
</tr>
<tr>
<td>Growth of earnings</td>
</tr>
<tr>
<td>Sales growth</td>
</tr>
<tr>
<td>Growth in market share</td>
</tr>
<tr>
<td>New product ratio</td>
</tr>
<tr>
<td>Capital gains for stockholders</td>
</tr>
<tr>
<td>Efficiency of production systems</td>
</tr>
<tr>
<td>Efficiency of physical distribution</td>
</tr>
<tr>
<td>Equity ratio</td>
</tr>
<tr>
<td>Improvement of product portfolio</td>
</tr>
<tr>
<td>Strengthening of marketing capability</td>
</tr>
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### Table 2- Importance of Strategy Goals between before and after IFRS Adoption

<table>
<thead>
<tr>
<th></th>
<th>Before IFRS</th>
<th></th>
<th></th>
<th></th>
<th>After IFRS</th>
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<tr>
<td></td>
<td>Mean</td>
<td>First (%)</td>
<td>Second (%)</td>
<td>Third (%)</td>
<td>Mean</td>
<td>First (%)</td>
<td>Second (%)</td>
<td>Third (%)</td>
</tr>
<tr>
<td>Number of respondent companies: 65</td>
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<tr>
<td>Growth of earnings</td>
<td>1.523</td>
<td>38</td>
<td>25(38.5)</td>
<td>11(16.9)</td>
<td>2(3.1)</td>
<td>1.292</td>
<td>34</td>
<td>20(30.8)</td>
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<td>Strengthening of</td>
<td>0.877</td>
<td>29</td>
<td>10(15.4)</td>
<td>8(12.3)</td>
<td>11(16.9)</td>
<td>0.600</td>
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<tr>
<td>Sales growth</td>
<td>0.815</td>
<td>23</td>
<td>9(13.8)</td>
<td>12(18.5)</td>
<td>2(3.1)</td>
<td>0.677</td>
<td>20</td>
<td>8(12.3)</td>
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<td>Improvement of product</td>
<td>0.585</td>
<td>16</td>
<td>8(12.3)</td>
<td>6(9.2)</td>
<td>2(3.1)</td>
<td>0.415</td>
<td>12</td>
<td>3(4.6)</td>
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<td>Improvement of public</td>
<td>0.369</td>
<td>10</td>
<td>5(7.7)</td>
<td>4(6.2)</td>
<td>1(1.5)</td>
<td>0.369</td>
<td>10</td>
<td>5(7.7)</td>
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<td>Development of human</td>
<td>0.264</td>
<td>13</td>
<td>1(1.5)</td>
<td>2(3.1)</td>
<td>9(13.8)</td>
<td>0.215</td>
<td>10</td>
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<td>Strengthening of</td>
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<td>1(1.5)</td>
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<td>Growth in market share</td>
<td>0.246</td>
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<td>1(1.5)</td>
<td>2(3.1)</td>
<td>9(13.8)</td>
<td>0.262</td>
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<td>4(6.2)</td>
<td>4(6.2)</td>
<td>0.154</td>
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<td>1(1.5)</td>
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<tr>
<td>Return on investment (ROI)</td>
<td>0.169</td>
<td>7</td>
<td>1(1.5)</td>
<td>2(3.1)</td>
<td>4(6.2)</td>
<td>0.385</td>
<td>13</td>
<td>4(6.2)</td>
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<td>Capital gains for</td>
<td>0.138</td>
<td>5</td>
<td>1(1.5)</td>
<td>2(3.1)</td>
<td>2(3.1)</td>
<td>0.062</td>
<td>2</td>
<td>1(1.5)</td>
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<tr>
<td>New product ratio</td>
<td>0.092</td>
<td>5</td>
<td>0(0.0)</td>
<td>1(1.5)</td>
<td>4(6.2)</td>
<td>0.046</td>
<td>3</td>
<td>0(0.0)</td>
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<tr>
<td>Equity ratio</td>
<td>0.092</td>
<td>4</td>
<td>0(0.0)</td>
<td>2(3.1)</td>
<td>2(3.1)</td>
<td>0.138</td>
<td>6</td>
<td>0(0.0)</td>
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<tr>
<td>Improvement in quality</td>
<td>0.062</td>
<td>3</td>
<td>0(0.0)</td>
<td>1(1.5)</td>
<td>2(3.1)</td>
<td>0.031</td>
<td>2</td>
<td>0(0.0)</td>
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<td>of working conditions</td>
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<tr>
<td>Efficiency of production</td>
<td>0.046</td>
<td>2</td>
<td>0(0.0)</td>
<td>1(1.5)</td>
<td>1(1.5)</td>
<td>0.031</td>
<td>2</td>
<td>0(0.0)</td>
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</tr>
<tr>
<td>Efficiency of physical</td>
<td>0.031</td>
<td>1</td>
<td>0(0.0)</td>
<td>1(1.5)</td>
<td>0(0.0)</td>
<td>0.062</td>
<td>2</td>
<td>0(0.0)</td>
</tr>
<tr>
<td>distribution</td>
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<tr>
<td>No response</td>
<td>-</td>
<td>10</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>37</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Result of test means difference; t-value=1.8237; p-value=0.0441. Significant at 5 percent level.

Wilcoxon rank sum test; z-value=2.0447. p-value=0.0409. Significant at 5 percent level.

The mean scores in the table are calculated as follows: 3 points for the most important goal, 2 for the second, and 1 for the third. For each item, the points are multiplied by the associated number of responses, and the weighted scores are aggregated and divided by 65, the number of responding companies. The percentages are the ratio of the number of industry firms surveyed, to the number of responding companies.
4.2 Financial measures

In the same way as strategy goals, financial measures are clarified in this section. How each financial measure was valued before IFRS adoption is shown in Table 3 based on the Likert scale (5 is greatly used, 1 is greatly not used). The chi-square test (test of independence) was carried out in order to verify whether the degree of strengthening of financial measures of Japanese companies differs. As a result, it was confirmed that the null hypothesis "There was no difference between the valued financial measures" was rejected, and the alternative hypothesis was significant at 1 percent level and was supported.

Table 4 depicts the comparisons of the two questions. One question is regarding choosing three high ranks of financial measures that have been valued before IFRS introduction, and the other concerns choosing three high ranks of financial measures valued after IFRS introduction. It is shown that neither the t-test nor the Wilcoxon test became significant. As a result of doing the Test (t-test) of the difference of mean of two groups with correspondence and Wilcoxon code ranking sum test based on the sample. As a result of the t-test of the difference of mean of two groups and the Wilcoxon code ranking sum test, the null hypothesis "There will not be any difference in the valued financial measures before and after IFRS adoption" was not proven significant. Here, t-value shows the statistic of the test of the difference of the mean of two groups, and the z-value shows the statistic of the Wilcoxon test, which tests the significance. Thus, it was not able to confirm that the two tests were together significant. This shows that there is no difference at the valuing level of financial measures between before and after IFRS adoption.

Japanese companies that refrain from IFRS introduction in the near future should clarify measures that are not only a motivation of the action that suits the objective of the organization to the manager, but should also support various processes. Thus, the performance management system that bears an appropriate performance measurement and evaluation is necessary and indispensable. Further, we should construct an accounting system that measures and evaluates useful financial performances for the financial reporting of an outside stakeholder.

Next, I will qualitatively observe Tables 3 and 4. First, the item of 25 kinds of financial measures was enumerated, and how each target was used was asked for each measure of the enterprise by a three-stage evaluation (1-3 Likert scale) in the question investigation vote. The evaluation of each used measure was requested to be shown by the figure. Table 3 shows the result. Table 4 depicts the ranking valued about the top three among financial measures of the performance measurement. It shows corporate numbers and ratios according to which a specific financial measure is ranked. In Table 4, it is shown that sales volume, operating profit margin, gross margin, and growth of earnings, etc. each have a high rank. In Japan, it tends for sales volume and operating profit margin, etc. to be valued still because performance measurement is information that forecasts the performance level of all company objectives of the organization. However, the point that should be focused on by this investigation is to locate the profit or the rate of profit in the high rank, including operating profit margin. The "rate of profit" will show the
efficiency of management in valued performance measures in the future, although the performance measures that the companies value are quantitative measures that show the results of amount of profit and sales volume, etc. This shows evidence to emphasize the managerial efficiency when companies plan the management strategy.

When IFRS is applied, I will provide as an example that an important mean arose especially about strategic goals that the enterprise chose to be a high rank. That is, they are profit margin on sales (3rd rank from 5th rank), cash flow (6th rank from 11th rank), return on equity (14th rank from 18th rank), assets turnover (17th rank from 22nd rank), and residual income (17th rank from 22nd rank), etc.

Table 3- Use of Financial Measures

<table>
<thead>
<tr>
<th></th>
<th>Greatly not used (%)</th>
<th>Moderately used (%)</th>
<th>Greatly used (%)</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales volume</td>
<td>11(15)</td>
<td>34(46)</td>
<td>66(93.8)</td>
<td>292.3</td>
<td>0.319</td>
</tr>
<tr>
<td>Sales growth</td>
<td>4(6.2)</td>
<td>24(36.9)</td>
<td>37(56.9)</td>
<td>2.508</td>
<td>0.611</td>
</tr>
<tr>
<td>Contribution margin</td>
<td>17(26.2)</td>
<td>21(32.3)</td>
<td>26(40.0)</td>
<td>2.108</td>
<td>0.843</td>
</tr>
<tr>
<td>Gross margin</td>
<td>6(9.2)</td>
<td>17(26.2)</td>
<td>41(63.1)</td>
<td>2.508</td>
<td>0.726</td>
</tr>
<tr>
<td>Controllable profit</td>
<td>24(36.9)</td>
<td>20(30.8)</td>
<td>19(29.2)</td>
<td>1.862</td>
<td>0.875</td>
</tr>
<tr>
<td>Profit margin on sales (pretax)</td>
<td>8(12.3)</td>
<td>23(35.4)</td>
<td>34(52.3)</td>
<td>2.400</td>
<td>0.697</td>
</tr>
<tr>
<td>Return on investment (ROI)</td>
<td>12(18.5)</td>
<td>42(64.6)</td>
<td>11(16.9)</td>
<td>1.985</td>
<td>0.595</td>
</tr>
<tr>
<td>Return on assets (ROA)</td>
<td>12(18.5)</td>
<td>38(58.5)</td>
<td>15(23.1)</td>
<td>2.046</td>
<td>0.643</td>
</tr>
<tr>
<td>Return on equity (ROE)</td>
<td>16(24.6)</td>
<td>33(50.8)</td>
<td>16(24.6)</td>
<td>2.000</td>
<td>0.702</td>
</tr>
<tr>
<td>Return on owners’ equity</td>
<td>11(16.9)</td>
<td>36(55.4)</td>
<td>18(27.7)</td>
<td>2.108</td>
<td>0.659</td>
</tr>
<tr>
<td>Residual income</td>
<td>44(67.7)</td>
<td>17(26.2)</td>
<td>6(9.2)</td>
<td>1.385</td>
<td>0.600</td>
</tr>
<tr>
<td>Growth of earnings</td>
<td>8(12.3)</td>
<td>23(35.4)</td>
<td>34(52.3)</td>
<td>2.400</td>
<td>0.697</td>
</tr>
<tr>
<td>Equity ratio</td>
<td>13(20.0)</td>
<td>26(40.0)</td>
<td>26(40.0)</td>
<td>2.200</td>
<td>0.748</td>
</tr>
<tr>
<td>Financing</td>
<td>23(35.4)</td>
<td>14(21.5)</td>
<td>28(43.1)</td>
<td>2.077</td>
<td>0.882</td>
</tr>
<tr>
<td>Rate of return on assets</td>
<td>27(41.5)</td>
<td>29(44.6)</td>
<td>9(13.8)</td>
<td>1.723</td>
<td>0.691</td>
</tr>
<tr>
<td>Operating profit margin</td>
<td>1(1.5)</td>
<td>12(18.5)</td>
<td>52(80.0)</td>
<td>2.785</td>
<td>0.447</td>
</tr>
<tr>
<td>Assets turnover</td>
<td>21(32.3)</td>
<td>32(49.2)</td>
<td>12(18.5)</td>
<td>1.862</td>
<td>0.699</td>
</tr>
<tr>
<td>Cash flow</td>
<td>8(12.3)</td>
<td>17(26.2)</td>
<td>40(61.5)</td>
<td>2.492</td>
<td>0.704</td>
</tr>
<tr>
<td>Inventory level</td>
<td>9(13.8)</td>
<td>18(27.7)</td>
<td>38(58.5)</td>
<td>2.446</td>
<td>0.724</td>
</tr>
<tr>
<td>Quality cost</td>
<td>13(20.0)</td>
<td>29(44.6)</td>
<td>23(35.4)</td>
<td>2.154</td>
<td>0.728</td>
</tr>
<tr>
<td>Cost variance</td>
<td>17(26.2)</td>
<td>25(38.5)</td>
<td>23(35.4)</td>
<td>2.092</td>
<td>0.779</td>
</tr>
<tr>
<td>Sales per employee</td>
<td>24(36.9)</td>
<td>31(47.7)</td>
<td>10(15.4)</td>
<td>1.785</td>
<td>0.690</td>
</tr>
<tr>
<td>Cost per employee</td>
<td>31(47.7)</td>
<td>27(41.5)</td>
<td>7(10.8)</td>
<td>1.631</td>
<td>0.670</td>
</tr>
<tr>
<td>Profit on economic measures</td>
<td>31(47.7)</td>
<td>28(43.1)</td>
<td>6(9.2)</td>
<td>1.615</td>
<td>0.649</td>
</tr>
<tr>
<td>(price earnings ratio, etc.)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic value added (EVA)</td>
<td>35(53.8)</td>
<td>24(36.9)</td>
<td>6(9.2)</td>
<td>1.554</td>
<td>0.657</td>
</tr>
<tr>
<td>Others</td>
<td>2(3.1)</td>
<td>3(4.6)</td>
<td>1(1.5)</td>
<td>0.169</td>
<td>0.570</td>
</tr>
</tbody>
</table>

Result of test of independence: Chi-square value=484.4810. Degrees of freedom=50. p-value=0.000. Cramer V=0.385 9.

Significant at 1 percent level.
Table 4: Importance of Financial Measures between before and after IFRS Adoption

<table>
<thead>
<tr>
<th>Financial Measure</th>
<th>Before IFRS</th>
<th>After IFRS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean Responses</td>
<td>Ranking</td>
</tr>
<tr>
<td></td>
<td>First(%)</td>
<td>Second(%)</td>
</tr>
<tr>
<td>Sales volume</td>
<td>1.492</td>
<td>41</td>
</tr>
<tr>
<td>Operating profit margin</td>
<td>0.985</td>
<td>31</td>
</tr>
<tr>
<td>Gross margin</td>
<td>0.508</td>
<td>17</td>
</tr>
<tr>
<td>Growth of earnings</td>
<td>0.415</td>
<td>13</td>
</tr>
<tr>
<td>Profit margin on sales (pretax)</td>
<td>0.369</td>
<td>12</td>
</tr>
<tr>
<td>Cash flow</td>
<td>0.308</td>
<td>14</td>
</tr>
<tr>
<td>Sales growth</td>
<td>0.292</td>
<td>8</td>
</tr>
<tr>
<td>Return on owner’s equity</td>
<td>0.292</td>
<td>10</td>
</tr>
<tr>
<td>Controllable profit</td>
<td>0.231</td>
<td>7</td>
</tr>
<tr>
<td>Contribution margin</td>
<td>0.215</td>
<td>6</td>
</tr>
<tr>
<td>Return on assets (ROA)</td>
<td>0.169</td>
<td>6</td>
</tr>
<tr>
<td>Return on investment (ROI)</td>
<td>0.138</td>
<td>4</td>
</tr>
<tr>
<td>Equity ratio</td>
<td>0.123</td>
<td>6</td>
</tr>
<tr>
<td>Financing</td>
<td>0.077</td>
<td>3</td>
</tr>
<tr>
<td>Inventory level</td>
<td>0.046</td>
<td>3</td>
</tr>
<tr>
<td>Quality cost</td>
<td>0.031</td>
<td>2</td>
</tr>
<tr>
<td>Cost variance</td>
<td>0.031</td>
<td>1</td>
</tr>
<tr>
<td>Rate of return on assets</td>
<td>0.015</td>
<td>1</td>
</tr>
<tr>
<td>Return on equity (ROE)</td>
<td>0.015</td>
<td>1</td>
</tr>
<tr>
<td>Economic value added (EVA)</td>
<td>0.015</td>
<td>1</td>
</tr>
<tr>
<td>Sales per employee</td>
<td>0.015</td>
<td>1</td>
</tr>
<tr>
<td>Residual income</td>
<td>0.000</td>
<td>1</td>
</tr>
<tr>
<td>Assets turnover</td>
<td>0.000</td>
<td>1</td>
</tr>
<tr>
<td>Cost per employee</td>
<td>0.000</td>
<td>0</td>
</tr>
<tr>
<td>Profit on economic measures (price earnings ratio, etc.)</td>
<td>0.000</td>
<td>0</td>
</tr>
<tr>
<td>Others</td>
<td>0.108</td>
<td>3</td>
</tr>
<tr>
<td>No response</td>
<td>0.108</td>
<td>4</td>
</tr>
</tbody>
</table>

Result of test means difference: t-value=1.3888. p-value=0.0886. No significance.

Wilcoxon rank sum test: z-value=0.7299. p-value=0.4654. No significance.

The mean scores in the table are calculated as follows: 3 points for the most important goal, 2 for the second, and 1 for the third. For each item, the points are multiplied by the associated number of responses, and the weighted scores are aggregated and divided by 65, the number of responding companies. The percentages are the ratio of the number of industry firms surveyed, to the number of responding companies.

4.3 Nonfinancial measures

Nonfinancial measures are clarified in this section. How each nonfinancial measure was valued before IFRS adoption is shown in Table 5 based on the Likert scale (5 is greatly used, 1 is greatly not used). The chi-square test (test of independence) was carried out in order to verify whether the degree of strengthening for nonfinancial measures of Japanese companies differs. As a result, it was confirmed that the null hypothesis "There was no difference between the valued nonfinancial measures" was rejected, and the alternative hypothesis was significant at the 1 percent level and was supported.

Table 6 depicts the comparison of the answers of two questions. One question concerns choosing three high ranks of nonfinancial measures that have been valued before IFRS
introduction, and the other concerns choosing those valued after. It is shown that it is significant as a result of doing the Test (t-test) of the difference of mean value of two groups with correspondence and Wilcoxon code ranking sum test based on the sample. That is, as a result of the t-test of the difference of the mean value of two groups and the Wilcoxon code ranking sum test, the null hypothesis "There will not be any difference in the valued nonfinancial measures before and after the introduction of IFRS" was rejected at the 1 percent level of significance by the t-test, and rejected at the 5 percent level of significance by the Wilcoxon test. Here t-value shows the statistic of the test of the difference of the mean of two groups, and the z-value shows the statistic of the Wilcoxon test, which tests the significance. Thus, it was confirmed that the two tests were together significant at the 5 percent level. It is shown that there is a difference to some extent in the degree of serious consideration of nonfinancial measures between before and after IFRS introduction.

True corporate value and strength can be measured by including nonfinancial measures in the present accounting measurement system. Moreover, performance evaluation measures on the intelligent property value must be utilized in strategic decision making and budgeting of companies in order to carry out effective management and proper resource allocation. Our attempt is not only to rely on financial measures but also to add the element of nonfinancial measures, and to use it appropriately for strategic judgment as an object of corporate value evaluation.

Next, I will qualitatively observe Tables 5 and 6. First, the item of 30 kinds of nonfinancial measures was enumerated, and how each target was used was asked to each measure for the enterprise by a three-stage evaluation (1-3 Likert scale) in the question investigation vote. The evaluation to each used measure was requested to be shown by the figure. Table 5 shows the result.

Then, the ranking valued about top three among financial measures of the performance measurement is shown in Table 6, which shows corporate numbers and ratios in which a specific financial measure is ranked. According to Table 6, growth in market share and prediction of sales growth are relatively valued. I want to focus on valuing for the measures that show non-cost readership strategy like product quality, effect of product development, and ratio of new product to sales, etc. again.

Thus, it is difficult to think that the company's management does well even if the accounting evaluation system is constructed without the use of the important nonfinancial measures. In other words, there is a limit in doing the management decision making only by the financial information based on the present insufficient accounting evaluation system. Both financial and nonfinancial measures improved further than the current measures necessary for the manager to evaluate corporate performance. In any case, it was clarified that it was important for companies to establish the new performance evaluation system that put in nonfinancial measures.

When IFRS is applied, I will give the one that an important mean arose especially for the strategic goals for which the enterprise had a high rank, as one example. That is to say, they are customer satisfaction (3rd rank from 4th rank), inventory turnover (5th rank from 6th rank), etc.
Table 5- Use of Nonfinancial Measures

<table>
<thead>
<tr>
<th></th>
<th>Greatly not used (%)</th>
<th>Moderately used (%)</th>
<th>Greatly used (%)</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Growth in market share</td>
<td>9(13.8)</td>
<td>30(46.2)</td>
<td>26(40.0)</td>
<td>2.262</td>
<td>0.686</td>
</tr>
<tr>
<td>Prediction of sales growth</td>
<td>15(23.1)</td>
<td>28(43.1)</td>
<td>21(32.3)</td>
<td>2.062</td>
<td>0.782</td>
</tr>
<tr>
<td>Sales according to distributors</td>
<td>45(69.2)</td>
<td>14(21.5)</td>
<td>5(7.7)</td>
<td>1.354</td>
<td>0.643</td>
</tr>
<tr>
<td>Ratio of distribution expense to sales</td>
<td>11(16.9)</td>
<td>36(55.4)</td>
<td>18(27.7)</td>
<td>2.108</td>
<td>0.659</td>
</tr>
<tr>
<td>Product quality</td>
<td>10(15.4)</td>
<td>23(35.4)</td>
<td>32(49.2)</td>
<td>2.338</td>
<td>0.729</td>
</tr>
<tr>
<td>Ratio of new product to sales</td>
<td>18(27.7)</td>
<td>30(46.2)</td>
<td>15(23.1)</td>
<td>1.892</td>
<td>0.787</td>
</tr>
<tr>
<td>Effect of product development</td>
<td>16(24.6)</td>
<td>29(44.6)</td>
<td>19(29.2)</td>
<td>2.015</td>
<td>0.774</td>
</tr>
<tr>
<td>Order number (value) of R&amp;D</td>
<td>38(58.5)</td>
<td>21(32.3)</td>
<td>4(6.2)</td>
<td>1.415</td>
<td>0.654</td>
</tr>
<tr>
<td>Return on investment to R&amp;D</td>
<td>37(56.9)</td>
<td>25(38.5)</td>
<td>2(3.1)</td>
<td>1.431</td>
<td>0.581</td>
</tr>
<tr>
<td>Ratio of R&amp;D cost to sales</td>
<td>27(41.5)</td>
<td>25(38.5)</td>
<td>13(20.0)</td>
<td>1.785</td>
<td>0.754</td>
</tr>
<tr>
<td>Effort to achieve production planning</td>
<td>20(30.8)</td>
<td>19(29.2)</td>
<td>26(40.0)</td>
<td>2.092</td>
<td>0.836</td>
</tr>
<tr>
<td>Output (performance) for one day</td>
<td>24(36.9)</td>
<td>26(40.0)</td>
<td>15(23.1)</td>
<td>1.862</td>
<td>0.762</td>
</tr>
<tr>
<td>Inventory turnover</td>
<td>11(16.9)</td>
<td>27(41.5)</td>
<td>27(41.5)</td>
<td>2.246</td>
<td>0.724</td>
</tr>
<tr>
<td>Total factor (labor, equipment, and raw material, etc.) productivity</td>
<td>14(21.5)</td>
<td>32(49.2)</td>
<td>19(29.2)</td>
<td>2.077</td>
<td>0.708</td>
</tr>
<tr>
<td>Jidoka of production (i.e., manufacturing automation)</td>
<td>25(38.5)</td>
<td>33(50.8)</td>
<td>6(9.2)</td>
<td>1.677</td>
<td>0.659</td>
</tr>
<tr>
<td>Engineering level (defect rates)</td>
<td>19(29.2)</td>
<td>27(41.5)</td>
<td>18(27.7)</td>
<td>1.954</td>
<td>0.793</td>
</tr>
<tr>
<td>Register number of industrial property (e.g., intellectual estate productivity)</td>
<td>20(30.8)</td>
<td>30(46.2)</td>
<td>13(20.0)</td>
<td>1.831</td>
<td>0.776</td>
</tr>
<tr>
<td>Efficiency of equipment</td>
<td>32(49.2)</td>
<td>30(46.2)</td>
<td>2(3.1)</td>
<td>1.508</td>
<td>0.585</td>
</tr>
<tr>
<td>Production engineering capability (e.g., process innovation)</td>
<td>18(27.7)</td>
<td>33(50.8)</td>
<td>12(18.5)</td>
<td>1.846</td>
<td>0.749</td>
</tr>
<tr>
<td>Important technique holding degree</td>
<td>24(36.9)</td>
<td>29(44.6)</td>
<td>11(16.9)</td>
<td>1.769</td>
<td>0.739</td>
</tr>
<tr>
<td>R&amp;D capability of technological experts</td>
<td>23(35.4)</td>
<td>30(46.2)</td>
<td>11(16.9)</td>
<td>1.785</td>
<td>0.734</td>
</tr>
<tr>
<td>Development of human resources</td>
<td>21(32.3)</td>
<td>28(43.1)</td>
<td>15(23.1)</td>
<td>1.877</td>
<td>0.775</td>
</tr>
<tr>
<td>Human cost-benefit</td>
<td>20(30.8)</td>
<td>34(52.3)</td>
<td>10(15.4)</td>
<td>1.815</td>
<td>0.699</td>
</tr>
<tr>
<td>Reduction of labor turnover</td>
<td>43(66.2)</td>
<td>20(30.8)</td>
<td>2(3.1)</td>
<td>1.369</td>
<td>0.543</td>
</tr>
<tr>
<td>Intangible assets</td>
<td>35(53.8)</td>
<td>28(43.1)</td>
<td>1(1.5)</td>
<td>1.446</td>
<td>0.556</td>
</tr>
<tr>
<td>Degree of global environment protection</td>
<td>22(33.8)</td>
<td>30(46.2)</td>
<td>12(18.5)</td>
<td>1.815</td>
<td>0.742</td>
</tr>
<tr>
<td>Safety</td>
<td>26(40.0)</td>
<td>25(38.5)</td>
<td>12(18.5)</td>
<td>1.723</td>
<td>0.794</td>
</tr>
<tr>
<td>Customer satisfaction</td>
<td>6(9.2)</td>
<td>32(49.2)</td>
<td>27(41.5)</td>
<td>2.323</td>
<td>0.635</td>
</tr>
<tr>
<td>Effort to achieve goals</td>
<td>8(12.3)</td>
<td>24(36.9)</td>
<td>32(49.2)</td>
<td>2.338</td>
<td>0.750</td>
</tr>
<tr>
<td>Balanced scorecard</td>
<td>43(66.2)</td>
<td>14(21.5)</td>
<td>6(9.2)</td>
<td>1.369</td>
<td>0.692</td>
</tr>
<tr>
<td>Others</td>
<td>6(9.2)</td>
<td>1(1.5)</td>
<td>0(0.0)</td>
<td>0.123</td>
<td>0.372</td>
</tr>
</tbody>
</table>

Result of test of independence: Chi-square value=352.5919. Degrees of freedom=60. p-value=0.000. Cramer V=0.302

2. Significant at 1 percent level.
Table 6 - Importance of Nonfinancial Measures between before and after IFRS Adoption

<table>
<thead>
<tr>
<th>Measure</th>
<th>Before IFRS</th>
<th>After IFRS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>Responses</td>
</tr>
<tr>
<td>Growth in market share</td>
<td>0.969</td>
<td>27</td>
</tr>
<tr>
<td>Product quality</td>
<td>0.862</td>
<td>2</td>
</tr>
<tr>
<td>Prediction of sales growth</td>
<td>0.492</td>
<td>14</td>
</tr>
<tr>
<td>Customer satisfaction</td>
<td>0.477</td>
<td>14</td>
</tr>
<tr>
<td>Effect of product development</td>
<td>0.431</td>
<td>14</td>
</tr>
<tr>
<td>Effort to achieve goals</td>
<td>0.385</td>
<td>13</td>
</tr>
<tr>
<td>Inventory turnover</td>
<td>0.308</td>
<td>10</td>
</tr>
<tr>
<td>Ratio of distribution expense to sales</td>
<td>0.262</td>
<td>10</td>
</tr>
<tr>
<td>Effort to achieve production planning</td>
<td>0.185</td>
<td>7</td>
</tr>
<tr>
<td>Total factor (labor, equipment, and raw material, etc.) productivity</td>
<td>0.169</td>
<td>6</td>
</tr>
<tr>
<td>Ratio of new product to sales</td>
<td>0.154</td>
<td>6</td>
</tr>
<tr>
<td>Engineering level (defect rates)</td>
<td>0.154</td>
<td>6</td>
</tr>
<tr>
<td>Output (performance) for one day</td>
<td>0.108</td>
<td>4</td>
</tr>
<tr>
<td>Balanced scorecard</td>
<td>0.092</td>
<td>2</td>
</tr>
<tr>
<td>Ratio of R&amp;D cost to sales</td>
<td>0.077</td>
<td>2</td>
</tr>
<tr>
<td>Production engineering capability</td>
<td>0.077</td>
<td>3</td>
</tr>
<tr>
<td>Safety</td>
<td>0.077</td>
<td>3</td>
</tr>
<tr>
<td>Degree of global environment protection</td>
<td>0.062</td>
<td>2</td>
</tr>
<tr>
<td>Return on investment to R&amp;D</td>
<td>0.031</td>
<td>2</td>
</tr>
<tr>
<td>Important technique holding degree</td>
<td>0.031</td>
<td>1</td>
</tr>
<tr>
<td>R&amp;D capability of technological experts</td>
<td>0.046</td>
<td>2</td>
</tr>
<tr>
<td>Sales according to distributors</td>
<td>0.046</td>
<td>2</td>
</tr>
<tr>
<td>Development of human resources</td>
<td>0.031</td>
<td>2</td>
</tr>
<tr>
<td>Human cost-benefit</td>
<td>0.015</td>
<td>1</td>
</tr>
<tr>
<td>Intangible assets</td>
<td>0.015</td>
<td>1</td>
</tr>
<tr>
<td>Jidoka of production (i.e., manufacturing automation)</td>
<td>0.015</td>
<td>1</td>
</tr>
<tr>
<td>Order number (value) of R&amp;D</td>
<td>0.000</td>
<td>0</td>
</tr>
<tr>
<td>Register number of industrial property (e.g., intellectual estate productivity)</td>
<td>0.000</td>
<td>0</td>
</tr>
<tr>
<td>Efficiency of equipment</td>
<td>0.000</td>
<td>0</td>
</tr>
<tr>
<td>Reduction of labor turnover</td>
<td>0.000</td>
<td>0</td>
</tr>
<tr>
<td>Others</td>
<td>0.000</td>
<td>0</td>
</tr>
</tbody>
</table>

Result of test means difference; t-value=2.7974; p-value=0.0049. Significant at 1 percent level.
Wilcoxon rank sum test; z-value=2.1899. p-value=0.0285. Significant at 5 percent level.
The mean scores in the table are calculated as follows: 3 points for the most important goal, 2 for the second, and 1 for the third. For each item, the points are multiplied by the associated number of responses, and the weighted scores are aggregated and divided by 65, the number of responding companies. The percentages are the ratio of the number of industry firms surveyed to the number of responding companies.
5. Summary and Conclusions

This paper searches for the trend and the feature concerning IFRS, and has analyzed what influence the introduction of IFRS exerts on the business strategy and performance measures of management accounting. Specifically, after introducing IFRS, I clarified how the importance of strategic goals of the companies, financial measures, and nonfinancial measures change through the mailing question investigation to Japanese companies, and did empirical analyses on how IFRS influenced various measures. It is thought that the clarification of the hypothesis concerning some performance evaluation systems through a statistical verification contributes to IFRS measures of Japanese manufacturing companies in the future. It is understood that the adoption of IFRS becomes an extremely strategic accounting initiative for Japanese companies as a result of the analysis.

As the features of IFRS, the conversion to the approach of (1) principle base, (2) assets-liabilities approach, and (3) fair value accounting can be pointed out. Specifically, if IFRS is introduced, comprehensive income will be adopted as the main performance measure, although Japanese companies have taken the standpoint where the final achievement is displayed by net profit up to now. Therefore, it is necessary to reflect the profit of the stock that shows market quotation of the property that the enterprise has. In short, the comprehensive income comprises the addition of the change of fair value of the cross-holding of shares and the change of the exchange of net assets, etc. the overseas subsidiary had to net profit. Specifically, such a new income concept of IFRS is an idea assumed to be "Value change of the risk property by which the cash flow that the enterprise will invent in the future influences it."  

By IFRS adoption, evaluation and measurement rule of the corporate performance may greatly change. Of course, sales of the product shift from shipment standard to arrival standard of goods, and selection application for depreciation is admitted. However, several restrictions exist, as it will be necessary to forecast the economic convenience in the future of the property. On the other hand, it is likely to arise also from the advantage of becoming easy to grasp and compare financial situations of companies by using a common standard, and easy to make a funding, M&A in foreign countries or a strategic plan.

Consequently, the possibility that the change appears obviously is incontrovertible to the current corporate strategy and performance evaluation. In this paper, being possible to verify it statistically was an important discovery when there was a difference in corporate strategic goals and performance measurement measures after IFRS adoption. Surely, assuming that the importance of corporate strategic goals, financial measures, and nonfinancial measures changed before and after IFRS adoption and having analyzed it were significant. As a result, it was not confirmed that the tendency (difference) to value financial measures after IFRS adoption was statistically significant.

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18 Nikkei Business (2010 26). By introducing IFRS, net income and income before extraordinary items disappears from the financial statements of Japanese companies, and a new income concept of comprehensive income will be displayed as one of the features. It comes for the enterprise to make the financial position more conspicuous, and to accomplish a new accountability to the management result by using this income concept.
However, there is a significant meaning in the implication of this study that the hypothesis about strategic goals and non-financial measures was obviously supported.

It is necessary to examine IFRS carefully to understand what influence is exerted on the accounting practice by its introduction, not only with respect to strategic goals and performance measurement measures, but also for other management accounting techniques such as capital investment and budget management, or research and development investment and international taxation, etc. I would like to suggest these as potential research subjects in the future.

Acknowledgments

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ACTIVITY-BASED COSTING AS AN ALTERNATIVE TOOL IN DETERMINING SUBIDIZED FARES OF PT PELAYARAN NASIONAL INDONESIA (PERSERO)

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ABSTRACT

This research is aimed to evaluate base fare by ABC to because each route is served by passenger vessels belonging PT. PELNI require different resources. This research was conducted by qualitative approach with a single case study through exploratory research strategy. The vessels that became the research object were two ships with 4 route network, ie K.M Leuser, route Tanjung Priok to Pontianak and Surabaya to Sampit and K.M Kelud, route Tanjung Priok to Batam and Batam to Belawan. The data used in this research was the data in 2011 due to determine fare in 2012. Data were gathered by semi-structured interviews to the informant that were five informants, and documentation by first doing a preliminary survey to the research site. This research used Miles and Huberman analysis techniques as a means of data analysis techniques. Analysis results showed cost of passenger by mile all routes that chosen by traditional costing systems higher than ABC calculation. Thus, the subsidy that had been provided by the government to PT. PELNI is not appropriate. Therefore, ABC may provide subsidy calculation more accurate.

Keywords: Activity-Based Costing, Economy Class Fare, Subsidy, Traditional Costing System
INTRODUCTION

Research Background

Indonesia as an archipelago country with 17,503 islands has a number of potential business development in maritime transportation. The Businesses related services in marine transport include loading and unloading of goods, transportation management services, marine passenger transport, the freight equipment rental, tally independent, container terminal, ship management, intermediaries of sell / buy or rent boats, ship agency, and ship maintenance and repairing (Karim, 2008).

Domestic marine transportation industry should be developed to compete with the domestic airline companies since the implementation of low-cost fare airline domestic service according to the law of Minister of Transportation No. 81 of 2004. The enactment of low-cost fares provided by the airlines through a variety of ticket fares in one flight, so the airline imposes the fares adjusted with the purchasing time of the passenger (Rahman, 2009).

The low-cost fare airline domestic cause the number of domestic airline passengers in January to October 2012, reached 44,951,400 passengers, is greater, than the number of domestic passengers of marine transport, reached 5,732,100 passengers (Central Bureau of Statistics of the Republic of Indonesia, 2012) due to the fare is one of the factors that influence the passenger’s decision to choose transportation services (Aswara et.al, 2010; Junaedi, 2009; Pramono, 2005).

The domestic marine transportation fares in Indonesia are regulated on the law of the Minister of Transportation No.57 of 2006. It is determined by the calculation direct cost and overhead cost of domestic passenger in marine transport. The cost per passenger for marine transport is currently calculated by traditional cost systems because the overhead cost allocation is with a single driver, which is not accurate.

The price for goods or services calculated by the traditional cost systems is considered not accurate because the overhead costs allocated to all units of the products or services produced makes distortion to be under-costing or over-costing (Fauzijah & Zain, 2005). Cooper and Kaplan (1991) states that "the traditional cost systems are no longer able to provide insight into the planning, intended, and the level of need for the use of required resources".

The weakness of the traditional cost systems led to develop a new costing method known Activity-based Costing (“ABC”) proposed by Cooper and Kaplan. ABC is the system to determine the unit cost that collect and process data based on activity and product company (Turney, 1989). According to Anderson (1993), "ABC assigns costs to activities based on resource consumption, and then the activity fee charged for products or services in proportion to the size of the every selected workload".

PT. Pelayaran Nasional Indonesia (Persero) (“PT. PELNI”) is one of the marine passenger transport companies which fare decided under the law of Minister of Transportation No. 57 of 2006. In addition, According to Article 15 the law of Minister of Transportation No. 54 of 2009, the Ministry of Transportation establishes PT. PELNI as the Company implements Public Service Obligation (“PSO”) Program for the economy class fare. Therefore, it is determined by the Indonesian Government through subsidy system, not by management decision like common business.

As the company implemented PSO, PT. PELNI faces problems of low number of passengers using marine transportation services. In January to May 2012, the number of passengers is low season, so PT. PELNI suffered a loss up to 2 billion (Tempo.co, 2012). According to PT. PELNI's Finance Director, Wibisono, "the economy class fares set by the government lead to a loss of PT. PELNI ". Wibisono also revealed that "all fares must be commercial" (Rakyat Sulsel Online, 2012). The policy for economy class fare determined by
traditional costing systems made the research accommodate both PT. PELNI and Indonesian Government interest to evaluate the fares with ABC as alternative calculation of cost per passenger in marine domestic transportation.

Henri’s study (2010) concludes ABC is capable to analyze the cost of logistics in Finland, which reached an average of 58% of the total costs generated logistics transportation when the price € 0.95 per kilometer, so the distance ground transportation must be minimized. Another research from Boris and Petr (2011) revealed that the method of ABC can help companies reduce the losses of the unproductive route, so that subsidies granted by Local Government can assist the needs of the operation on the productive route.

The difference this research with prior research is according to the transportation type, in which this research takes the passenger ship, but previous research using land transport and cargo to calculate the fares, so that the resources needed in the research are different. In addition, the determination of the amount of subsidy in this research under the law of the Ministry of Transportation of the Republic of Indonesia, but, prior research, the subsidy is determined Zlín City Government, Czech Republic and Finland Ministry Transportation.

Research Motivation

This study was motivated the different opinion on the need for economy class fare subsidy on domestic passenger of marine transport as long as the calculation of cost per passenger still use the traditional system. The reason for the implementation of ABC to evaluate the economy fares due to it is calculated based the distance, so that each ship requires different resource reaching a route in a certain distance range.

Research Problems

Based on the above description, the problem discussed in this study are:

1. How is the calculation of cost per passenger with the traditional cost system based on the law of Minister Transportation No 57 of 2006 in determining the economy class fare in PT. PELNI?
2. How is the calculation of cost per passenger with an ABC method to determine economy class fares in PT. PELNI?
3. What are the strategic implications can be implemented by the Ministry of Transportation and PT. PELNI from the comparison of calculation cost per passenger with the traditional cost system and ABC in determining economy class fares?

Research Objective

This research has objectives for better understanding in the research problem, such as:

1. To determine the process of calculation cost per passenger with the traditional cost system based on the law of the Minister of Transportation No. 57 of 2006 on PT. PELNI’s economy class fare.
2. To determine the process of calculation cost per passenger with ABC on PT. PELNI’s economy class fare.
3. To analyze the strategic implication strategy by comparing all method in determining economy class fares for the Ministry of Transportation and Management of PT. PELNI.
THEORITICAL FRAMEWORK

Cost Assignments

According to Blocher et. al (2011: 105), there are two cost assignment methods;
1) Direct cost: Direct costs are the costs can be traced directly and accurately cost of object.
2) Indirect cost: Indirect costs are the costs that cannot be traced accurately and economically from the cost of shelter or the cost of shelter to cost of objects.

According to Hansen and Mowen (2011: 50-52), "tracing the direct and indirect costs is carried in the following way":

a. Direct Tracing
   Direct tracing is cost assignment method by identifying and charging the cost related with the cost object in specifically and physically.

b. Driver tracing
   Driver tracing is cost assignment method by charging the cost relies on usage of causal factors called cost driver for determining the amount cost to object cost.

c. Arbitration
   Arbitration is cost assignment method by arbitrator is not directly to cost object related with assumption relation and easy to charge.

Overhead Cost Allocation with the Traditional Costing System

The traditional cost systems are basically trying to assign overhead costs directly to products with the understanding that the product causes costs than measure activities for overhead, and then calculating for product unit and demonstrate the use of overhead (Lind, 2001). It shows how to allocate overhead costs to products using volume-based measurement and computation similar overhead as direct labor hours and production units, so this method adopts the average principle that led distortion cost and result poorly strategic decisions (Asuquo, 2012).

According to Blocher et.al (2010), the traditional cost systems allocate the overhead costs with two stages. First, the overhead costs are charged to the organizational unit (factory or department). Second, the overhead costs are charged to the respective product. All cost elements are allocated in proportion to an appropriate comparison.

Overhead Costs Allocation with ABC

ABC aims to generate information cost production with more accurately. The calculation of the cost of production with the ABC consists of two stages called “two-stage allocation” as well as the procedure of allocation cost in traditional systems (Lind, 2001).

The first stage, the resource costs were placed on a cost pool in the activity center. The resource costs are obtained from each cost center that existed within the organization (Roztocki, Porter, Thomas, & Needy, 2004). They are distributed proportionally to the various activities using selected resource drivers to determine the activity cost (Cokins, 2006). Before distributing the resource costs, the activity must be identified, defined and classified in accordance with the hierarchy cost. Defining the activity based on activity analysis (Chrenková, 2011). The activity analysis is the nature of the work performed by each activity center (Shevasuthisilp & Punsathitwong, 2009).

The second stage, each activity costs is distributed to a cost object which have been determined as the outcome (output) production (Cokins, 2006). The distribution process the activity costs to cost objects in a cost pool are through selected activity drivers.
Determining Economy Fares in Marine Transportation

Under Article 3 of the Regulation of the Minister of Transportation No. 57 of 2006, an economy class fare structure consists of a base fare and distance fare. The base fare is expressed in monetary amount per unit of basic value loading unit. The distance is expressed in monetary amount per route per passenger.

The basic and distance fare formula in marine transportation based on the law of the Minister of Transportation No. 57 of 2006 as below:

\[
\text{Base fare} = (\text{Cost per passenger on Load Factor 70\%}) + 10\% \times \text{Profit Margin}
\]

\[
\text{Distance fare} = \text{Base Fare} \times \text{Distance Coefficient}
\]

Since 2000, the Ministry of Transportation establishes a policy for the economy class fare in PSO mechanism. According to Article 1, paragraph 3 the law of the Minister of Transportation No. 8 of 2008 stated:

"Compensation is the duty of the Government to finance the implementation of the assignment of public service obligations (PSO) for class economy passenger of marine transport where magnitude is the difference between production costs and the rates set by the Government and / or Local Government as a public service obligations".

Subsidies or compensation usually occurs because the consequences of measures taken by the government with the consideration about the public ability to willing pay. Fare based on willingness to pay is usually below the production costs of the service provider, so that the operator always getting net loss operation. Therefore, the government provides subsidies or compensation to ensure the implementation of PSO (Syadullah, 2007).
RESEARCH METHODOLOGY

Research Approach

This research was conducted through qualitative research approach. The reason applying qualitative approaches are (Basrowi & Suwandi, 2008):

1) This research is to describe the data obtained by analyzing resource costs consumption and cost drivers factors in calculating cost per domestic marine transportation in 2011 with the ABC method to determine economy class fares in PT. PELNI.

2) The data collection in this research is gathered by interviewing individuals who have the capacity to provide information about determining economy class fare policies in marine transport regarding to the law of the Minister of Transportation No. 57 of 2006 and the strategic implication of the research results.

The research is conducted with single case study because it is focused on one research object, namely PT PELNI, as the Company implements the law of Minister Transportation No. 57 of 2006 and the law of the Minister of Transportation No. 8 of 2008 about PSO in determining its economy class fares.

This research uses exploratory research strategy in order to design and implement an ABC method as an alternative to calculate costs per passenger as economy class fares pricing that is never implemented both in PT.PELNI or regulated in any law in Indonesia. Hence, it may be a new costing method.

Scope of Research

The scope of research to be analyzed to figure the reality of the problems faced. The scope of research includes:

1) The economy class fares comparison as the calculation result of traditional costing systems and ABC method.

2) The data gathered to calculate costs per passenger are from the PT. PELNI as of 2011 due to the subsidized fares is estimated by the prior cost of goods sold.

3) The number of ships to be research objects the K.M. Leuser and K.M. Kelud.

4) The routes to be analyzed in determining economy class fares are KM Leuser: Tg. Priok - Pontianak; Surabaya - Sampit and KM. Kelud: Tg. Priok - Batam; Batam - Belawan

Data Collection

Data collection procedures were performed in this research is a preliminary survey and field research:

a. Preliminary survey

Preliminary survey was performed at PT. PELNI on March 5, 2013 to conform the ABC requirement with the existing costing and operation system and at Planning and Evaluation Fare Division, Ministry of Transportation on April 26, 2013 to obtain information about the role of the Indonesian Government to determine the economy class fare.
Table 1
The result of preliminary survey at PT. PELNI (Persero)

<table>
<thead>
<tr>
<th>The requirement of Activity Based Costing</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Margin accuracy for individual products and services, as well as customer classifications, is becoming increasingly difficult to achieve given that direct labor is rapidly being replaced with automated equipment</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>Companies do not have time to make price or cost adjustments</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>Companies with inaccurate cost measurements tend to lose bids due to over-costed products</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>A larger proportion of overhead costs are company-wide costs that cannot be directly traced to specific services provided by the company</td>
<td>√</td>
<td></td>
</tr>
</tbody>
</table>

Source: Management of PT. PELNI (Persero), 2013

b. Field research
1) Semi-structure Interview
   This interview is set the open-ended nature of the questions provides opportunities for both the interviewer and interviewee to discuss certain topics in more detail.
2) Documentation
   Documentations are obtained from the results of field research in the form of basic costing, passenger data and revenue, the profile of PT. PELNI, the allocation of passengers each route, facilities for list and rates.

Selection of Informants and Key Informant Research

Informants are selected by purposive sampling, that the key informant is according to preselected criteria relevant to a particular research question. Key Informant selected in this study are individuals who have a strategic role in decision-making and evaluation for the economy class fares.

Table 2
Research Key Informants

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Reason to select</th>
<th>Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capt. Daniel E. Bangonan</td>
<td>PT. PELNI’ Operational Director</td>
<td>Has a responsibility in managing of ship operations such as passenger accommodation, scheduling, and passenger service on board</td>
<td>Informant 1</td>
</tr>
<tr>
<td>Indra Maulana</td>
<td>PT. PELNI’ Strategic Marketing Manager</td>
<td>Has a responsibility in planning and evaluation pricing strategy to gain competitiveness</td>
<td>Informant 2</td>
</tr>
<tr>
<td>K. Sinaga</td>
<td>PT. PELNI’ Budget Planning and Evaluation Manager</td>
<td>Has a responsibility in planning and evaluation of the subsidy allocation from the Indonesian Government for economy class fares</td>
<td>Informant 3</td>
</tr>
<tr>
<td>Wahyudi Prambandono</td>
<td>Head of Planning and Evaluation Fare Division, Ministry of Transportation</td>
<td>Has a responsibility in determining economy class fares in marine transportation in Indonesia</td>
<td>Informant 4</td>
</tr>
</tbody>
</table>
Edward Marpaung  
Head of Marine Transportation Research and Development, Ministry of Transportation  
Has a responsibility in evaluating marine transportation industry both from fare aspect and infrastructure  
Informant 5

Data analysis

Data analysis techniques used in this research is the design of interactive data analysis of Milles and Huberman (Basrowi & Suwandi, 2008)

1. Data reduction is the process of selecting, concentration, attention, abstraction, and in transforming raw data from the field. This process takes place during the research carried out from the beginning to the end of the research.
2. Presentation of data is a set of structured information that gives researchers the possibility to draw conclusions and taking action. The forms of of presentation are narrative text, matrices, graphs, networks, and charts.
3. The conclusion of researchers verified during the research. Meanings that emerge from the data should always be tested truth and appropriateness so the data validity is assured.

RESULT AND DISCUSSION

The Calculation of cost per pessanger PT. PELNI with Traditional Cost System

The cost per passenger is calculated according to the law of the Minister of Transportation No. 57 of 2006 by traditional costing. The domestic passenger cost components in marine transport are divided into two types of costs, are direct operating costs and indirect operating costs (overhead).

The traditional costs system existed to calculate the cost per pessanger is not precisely. First, inaccuracy costing lies in cost structure. Cost structure is divided into direct cost and overhead costs do not have a correct basis. Based on interview to Informant 3, “the direct and overhead cost assignment is traced from the linkage of transactions that relate directly to the shipping”.

Identifying structure cost to be direct costs or overhead costs on the current base is improper because the direct costs should be analyzed from to costs subject or output produced by PT. PELNI to customers. Thus, the cost of which can be direct cost is the cost of fuel oil, lubricant costs, crew costs and the insurance premiums crew because these costs can be traced directly to the call number as output.

The second, inaccuracy costing as the problem is to allocate the overhead cost. PT. PELNI imposes the overhead cost based on a percentage of the consolidated overhead cost, with the result PT. PELNI could not measure the actual overhead costs occurred due to there are overhead costs for subsidiaries portion that its business nature are different than PT. PELNI. Therefore, by interviewing Informant 4, the "overhead" is defined the cost incurred at the home office and branches office with coding account 8, however, the overhead costs are not just the home office and branch office costs in calculating production costs.

Home office cost and branch office costs associated with this research are 8% of the total cost of the entire home-branch cost which reach Rp148,083,879,010 because this research only uses 2 ships as the object of study from 25 ships owned by PT. PELNI, so prorate justification is used for each ship.
This research has restructured the direct costs and indirect costs currently used to be comparable with ABC method because the ABC method did not change the total cost, but only to allocate overhead costs more accurately. For more details can be seen in Table 3.

[Insert Table 3 Here]

The calculation of cost domestic passenger service at Marine Transport with the systems of traditional cost for both of ships if detailed based on the route with the call number as single driver in table 4.

Table 4
The calculation basic cost per route in Traditional cost systems (In Indonesia Rupiah)

<table>
<thead>
<tr>
<th>Total cost</th>
<th>Route</th>
<th>Percentage Call</th>
<th>Portion Cost for the Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>234,082,713,871</td>
<td>Tanjung Priok Port – Batam</td>
<td>13.63%</td>
<td>31,905,473,901</td>
</tr>
<tr>
<td></td>
<td>Batam – Belawan Port</td>
<td>20.44%</td>
<td>47,846,506,715</td>
</tr>
<tr>
<td></td>
<td>Tanjung Priok Port – Pontianak</td>
<td>8.89%</td>
<td>20,809,953,263</td>
</tr>
<tr>
<td></td>
<td>Surabaya – Sampit</td>
<td>6.81%</td>
<td>15,941,032,815</td>
</tr>
</tbody>
</table>

Source: Processed data

The Overhead Cost Center and data of PT. PELNI in 2011

This research has collected resource costs in total Rp96,520,048,794 related to K.M. Leuser and K.M. Kelud operations are assigned to passengers of 12 cost centers at PT. PELNI.

Table 5
The Overhead Cost Center (In Indonesian Rupiah)

<table>
<thead>
<tr>
<th>Costs Center</th>
<th>Overhead Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operational Division</td>
<td>7,414,412,780</td>
</tr>
<tr>
<td>Division of Service and Customer Relation</td>
<td>23,374,760,284</td>
</tr>
<tr>
<td>Sales and Marketing Division</td>
<td>6,870,323,145</td>
</tr>
<tr>
<td>Nautical and Navigation Division</td>
<td>1,918,974,524</td>
</tr>
<tr>
<td>Engineering and Maintenance Division</td>
<td>13,283,227,342</td>
</tr>
<tr>
<td>Accounting and Budgeting Division</td>
<td>2,027,389,956</td>
</tr>
<tr>
<td>Treasury Division</td>
<td>493,814,548</td>
</tr>
<tr>
<td>Human Resource Division</td>
<td>6,349,775,192</td>
</tr>
<tr>
<td>General Affairs Division</td>
<td>2,223,639,250</td>
</tr>
<tr>
<td>Risk Enterprise and Research Unit</td>
<td>30,741,579,492</td>
</tr>
<tr>
<td>Information and Technology Unit</td>
<td>811,754,852</td>
</tr>
<tr>
<td>Corporate Secretary Unit</td>
<td>1,010,397,429</td>
</tr>
<tr>
<td><strong>Total Overhead Cost</strong></td>
<td><strong>96,520,048,794</strong></td>
</tr>
</tbody>
</table>

Identification, definition, and Hierarchy of Activity Center

Based on interviews with Senior Managers and Managers of each cost center, there are 27 activities with five kinds of activity drivers of 12 activity centers on the PT. PELNI (Persero), as shown in Table 6.

[Insert Table 6 Here]
Direct Cost Allocation for ABC Method

After restructuring cost to be direct and overhead costs, the direct costs can be allocated on the basis of the services rendered of call. For more details, it is described in Table 7.

[Insert Table 7 Here]

Allocation Phase I: Distribute Overhead Costs to Activity Center

Overhead costs generated from each cost center are assigned to any activity that occurs with resource drivers of each cost center as shown in Table 8.

<table>
<thead>
<tr>
<th>Cost/Activity Center</th>
<th>Resource Driver</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operational Division</td>
<td>Average Voyage days</td>
</tr>
<tr>
<td>Division of Service and Customer Relation</td>
<td>Average Voyage days</td>
</tr>
<tr>
<td>Sales and Marketing Division</td>
<td>Working time quality</td>
</tr>
<tr>
<td>Nautical and Navigation Division</td>
<td>Working time quality</td>
</tr>
<tr>
<td>Engineering and Maintenance Division</td>
<td>Number of workers</td>
</tr>
<tr>
<td>Accounting and Budgeting Division</td>
<td>Working time quality</td>
</tr>
<tr>
<td>Treasury Division</td>
<td>Working time quality</td>
</tr>
<tr>
<td>Human Resource Division</td>
<td>Working time quality</td>
</tr>
<tr>
<td>General Affairs Division</td>
<td>Working time quality</td>
</tr>
<tr>
<td>Risk Enterprise and Research Unit</td>
<td>Working time quality</td>
</tr>
<tr>
<td>Information and Technology Unit</td>
<td>Number of workers</td>
</tr>
<tr>
<td>Corporate Secretary Unit</td>
<td>Number of workers</td>
</tr>
</tbody>
</table>

Allocation Phase II: Distribute Activity Cost to Cost Object

Allocation Phase II is to distribute allocated overhead costs to cost objects by using an activity driver. The selected activity drivers should be measured, so that costs can be assigned to each route as cost object produced by PT. PELNI.

<table>
<thead>
<tr>
<th>Activity Driver</th>
<th>Name of Ship</th>
<th>Total Activity Driver</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of call</td>
<td>K.M Kelud</td>
<td>350</td>
</tr>
<tr>
<td>Number of passenger</td>
<td>249,844</td>
<td>325</td>
</tr>
<tr>
<td>Number of offered seat</td>
<td>257,130</td>
<td>170,877</td>
</tr>
<tr>
<td>Time of ship operational</td>
<td>8,400</td>
<td>8,400</td>
</tr>
<tr>
<td>Number of Route</td>
<td>K.M Leuser</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>

Source: Processed data

Having obtained the value of each activity driver is from activity each vessel, the next step is to calculate activity driver rate. Activity driver rate is the result of dividing the total activity cost with the total driver activity as shown in Table 10.

[Insert Table 10 Here]
Activity drivers consumed each route should be known as individual activity driver for calculating the amount of the cost object assigned. Individual activity driver details are shown in Table 11.

[Insert Table 11 Here]

Individual activity driver multiplied activity driver rate to get the results of calculation of ABC each route are presented in Table 12.

[Insert Table 12 Here]

The calculation of cost per passenger service with ABC show that the route from Batam to Belawan generates greater cost which is equal for Rp41,367,032,846 compared to Tanjung Priok to Batam route which reaching Rp26,653,697,186 even from the route is the greater distance from Tanjung Priok to Batam. Meanwhile, the route Tanjung priok to Pontianak generate greater cost which is equal to Rp18,693,726,677 compared to Surabaya to Sampit route which only generate Rp15,293,704,009.

The Strategic Implication Calculation of ABC

The results calculation of cost per passenger by existing cost system used by the Ministry of Transportation and Management of PT. PELNI is to determine the fare for each class. This explanation is based on interviews with informants 1 and 4 as shown below:

"Fares are determined based on the cost of production of each vessel is owned by PT PELNI ... Unfortunately, the current fares have been set in 2009 by Ministry of Transportation calculation in 2008 which later became the fare base and economy class fare....." (Informant 1, dated March 05, 2013).

"The government applied the cost per passenger in 2008 to determine fares in above 2009 which is being implemented by PT. PELNI for economy class ... The calculation was set for a new fare in 2009 due to adjust for changes in fuel prices in 2008..... "(Informant 4, dated 26 April 2013).

Both informants explained that the current rate is rate based on the calculation of production cost in 2008. Thus, economy class fare is set at this time was never adjusted by the government since 2009 due to changes in fuel prices in 2008.

The cost per passenger per mile in 2011 by traditional costing system is greater than calculation with ABC generated in research. In table 13, it shows that traditional cost systems currently applied to assign overhead cost. Therefore, ABC provides information to PT. PELNI to control its overhead costs.

Table 13

<table>
<thead>
<tr>
<th>Route</th>
<th>Cost of per passenger per mile</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Traditional Costing</td>
<td>ABC</td>
</tr>
<tr>
<td>Tj. Priok – Batam</td>
<td>3,197.10</td>
<td>2,670.85</td>
</tr>
<tr>
<td>Batam - Belawan</td>
<td>6,421.40</td>
<td>5,551.80</td>
</tr>
<tr>
<td>Tj. Priok - Pontianak</td>
<td>3,813.47</td>
<td>3,425.67</td>
</tr>
<tr>
<td>Surabaya - Sampit</td>
<td>3,169.33</td>
<td>3,040.63</td>
</tr>
</tbody>
</table>

Source: Processed data

Then, the cost per passenger per mile is generated to be components for fare base calculation. Under fare base, PT. PELNI will be granted subsidies from the Indonesia Government called Public Service Obligation (PSO) up to 50% of the actual fare base in 2009. Subsidies are given to affordable economy class fare of 70% load factor. This information obtained from the informant 4 and 5:
"PSO is a government subsidy given to PT. PELNI as transportation company ... The government is considering the purchasing power of society, thus helping in the form of subsidies base fares of up to 50% ... The calculation of base fares per passenger per mile reached Rp819 in 2008, but the government decided to set a base rate per passenger per mile into Rp404.55 and became the fare base in 2009 until now...." (Informant 4, April 26, 2013).

".....PT. PELNI is given subsidy as consequences of the fare base of the cost per passenger is set lower of Rp819 to Rp404.55 with a load factor of 70% ... The need for ship operation result higher costs, but the Indonesian government has an obligation to provide an affordable public transportation, especially for people in the region of Eastern Indonesia" (Informant 5, May 1, 2013).

Based on Table 14, the fare base without subsidies by traditional costing is established by the Government of Indonesia to any route at 70% load factor in 2011 higher than ABC.

Table 14
The Difference of Base fares with Load Factor 70% (In Indonesian Rupiah)

<table>
<thead>
<tr>
<th>Route</th>
<th>The currently PSO Base Fares</th>
<th>The Proposed Base Fares 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Traditional calculation</td>
<td>ABC Calculation</td>
</tr>
<tr>
<td>Tj. Priok – Batam</td>
<td>404.55</td>
<td>3,516.81</td>
</tr>
<tr>
<td>Batam – Belawan</td>
<td></td>
<td>2,937.94</td>
</tr>
<tr>
<td>Tj. Priok – Pontianak</td>
<td></td>
<td>7,063.54</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6,106.98</td>
</tr>
<tr>
<td>Surabaya - Sampit</td>
<td></td>
<td>4,194.82</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3,768.24</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3,486.27</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3,344.70</td>
</tr>
</tbody>
</table>

Source: Processed data

The difference between fare base of PSO mechanism and proposed fare base is supposed to determine the subsidies required by the Management of PT. PELNI from the Government for their business. The subsidy required is shown in Table 15.

Table 15
The Required Subsidy for Base Fares per Mile (In Indonesian Rupiah)

<table>
<thead>
<tr>
<th>Route</th>
<th>The currently PSO Base Fares</th>
<th>The Proposed Base Fares 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Traditional calculation</td>
<td>ABC Calculation</td>
</tr>
<tr>
<td>Tj. Priok – Batam</td>
<td>404.55</td>
<td>3,112.26</td>
</tr>
<tr>
<td>Batam – Belawan</td>
<td></td>
<td>2,533.39</td>
</tr>
<tr>
<td>Tj. Priok – Pontianak</td>
<td></td>
<td>6,658.99</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5,702.43</td>
</tr>
<tr>
<td>Surabaya - Sampit</td>
<td></td>
<td>3,790.27</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3,363.69</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3,081.72</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2,940.15</td>
</tr>
</tbody>
</table>

Source: Processed data

Subsidies required by ABC are lower than traditional costing calculations. Therefore, traditional costing systems currently implemented results higher subsidy required although is not the actual subsidy required for 4 routes chosen. Hence, the Indonesia Government must plan the PSO in budget growth every year.

From the business view, the subsidy fare base cannot provide the financial feasibility for PT. PELNI, as expressed by informants 1 and 2:

"The economy class fares are determined by the government since 2009 with the subsidy system, known as the PSO fare policy ... The policy is not viable financially and not sustainable for our business because the fare is controlled by government without considering growth in passenger and fleet....." (Informant 1, March 5, 2013).

".....Every year the government subsidies vary due to PT. PELNI’s operating costs are influenced by variable cost, so the cost per passenger will change even if the government sets the constant fare base ... If PT. PELNI is not granted subsidy, the business cannot survive
because the fare base set by the government through a system of subsidies is not sufficient compared to the PT. PELNI actual needs "(Informant 2, May 1, 2013).

Informant 5 from the Ministry of Transportation is aware that the subsidy (PSO) which is granted by the Government to PT. PELNI has not been able to maintain of PT. PELNI businesses, here are the following statement:

"The Ministry of Transportation realized that subsidies are granted to PT. PELNI are not sufficient and certainly cannot cover all the needs of the PT. PELNI operations... PSO realization for PT. PELNI are only 70% of the total proposed because many required data and information by Ministry of Transportation from PT. PELNI are inaccurate and incomplete, thus making difficult to calculate the exact needs of the subsidy"(Informant 5, May 1, 2013).

The PSO realization for fare base granted by the Government are only 70% due to the incompleteness and inaccurate data of PT. PELNI required by the Ministry of Transportation as a regulator and economy class fare makers for all types of passenger transport, so the subsidy granted to PT. PELNI will never be able to cover the operational needs of the passenger ship.

The Ministry of Transportation may calculate the cost per passenger by ABC to give greater authorities to the Management of PT. PELNI in determining economy class fares for productive route or produces a load factor more than 100% due to ABC method can measure resource costs needed by route. Moreover, the subsidy provided the Indonesian government must be prioritized on the route with a load factor below 100% and can be controlled.

The Ministry of Transportation also may apply use fare base based on the actual load factor if the load factor more than 100% for a few years before the new base fares specified in a rule. However, the route with a load factor below 100% proposed applying fares with a load factor of 100%.

Informant 3 agrees the subsidy in accordance with the needs of the route. Here is the following statement informant 3:

".....The fare base of Rp 404.55 is not able to cover all routes ... So, if the productive route still implemented subsidy fare is rather heavier, because it could be an opportunity PT. PELNI increase revenue ... PT. PELNI given the opportunity for profitable route into commercial rates, the fare with same with the cost per passenger per mile ... I Agree it is subsidized according to the needs of the route, but it must be proven to be beneficial for PT. PELNI" (Informant 3, May 1, 2013).

The subsidy granted is based on route of ship operational PT PELNI especially on unproductive route, however, the productive routes are implemented commercial fares as competitors setting the fares as or larger than the cost per passenger set by Government. In other words, if the route which has a load factor more than 100%, the subsidies granted by the government will be allocated to the route with a load factor below 100%.

Economy class fare for the route with a load factor more than 100% supposed to PT. PELNI role to compete with pritvate pesangger shipping company. Nonetheless, Informant 4 gives another opinion regarding the authority of economy class fares:

".....The Ministry of Transportation must control of the economy class fare ... The quality, specifications, and ship facilities owned by PT. PELNI are above-average to competitors ... Based on Ministry of Transportation evaluation, subsidies for economy class fares are necessary due to not burden society because they still rely on PT. PELNI, so PT. PELNI ‘s market shares still much bigger than the competitors”(Informant 4, May 1, 2013)

Quality, specifications, and ship facilities of PT. PELNI is superiorly a private ship, with the result that the Ministry of Transportation have to control the economy class fares with the purpose society have on services of PT. PELNI at affordable prices. This is due to the Government has role to support the society economics with limited access to transportation.
In Table 16, if the proposed base fares with ABC are applied to the actual load factor, the route Surabaya to Sampit, Tanjung Priok to Batam, Batam to Belawan have proposed fare base as follows:

Table 16
Proposed Base Fares in Actual Route with ABC

<table>
<thead>
<tr>
<th>Route</th>
<th>Proposed Base Fares in Load Factor</th>
<th>70%</th>
<th>100%</th>
<th>Real</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tanjung Priok - Pontianak</td>
<td>3,768.24</td>
<td>2,637.76</td>
<td>7,117.55</td>
<td></td>
</tr>
<tr>
<td>Surabaya - Sampit</td>
<td>3,344.70</td>
<td>2,341.29</td>
<td>1,487.57</td>
<td></td>
</tr>
<tr>
<td>Tanjung Priok – Batam</td>
<td>2,937.93</td>
<td>2,056.55</td>
<td>1,487.57</td>
<td></td>
</tr>
<tr>
<td>Batam - Belawan</td>
<td>6,106.98</td>
<td>4,274.89</td>
<td>1,473.64</td>
<td></td>
</tr>
</tbody>
</table>

Source: Processed data

In table 17, if the average-actual load factor will be considered, the subsidies are required by PT. PELNI for Surabaya to Sampit, Tanjung Priok to Batam, Batam to Belawan lower than implement 70% subsidy due to those routes have a load factor more than 100%. Therefore, consideration of the average-actual load factor for the route with a load factor of over 100% in the determination of the base fares is needed as follows:

Table 17
Comparison Required Subsidy in Actual Route and Only 70% with ABC

<table>
<thead>
<tr>
<th>Route</th>
<th>Required Subsidy with ABC in Real Load Factor</th>
<th>Only 70% Load Factor</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surabaya – Sampit</td>
<td>1,083.02</td>
<td>5,702.43</td>
<td>(4,619.41)</td>
</tr>
<tr>
<td>Tanjung Priok – Batam</td>
<td>583.70</td>
<td>3,363.69</td>
<td>(2,779.99)</td>
</tr>
<tr>
<td>Batam - Belawan</td>
<td>1,069.09</td>
<td>2,940.15</td>
<td>(1,871.06)</td>
</tr>
</tbody>
</table>

Source: Processed data

Therefore, the benefits of using the actual load factor in determining subsidized base fares every route reaffirmed from the fare difference. Thus, the subsidies provided by the Government to the management of PT. PELNI will be prioritized on the less productive route such as Tanjung Priok to Pontianak, but productive route just getting lower subsidies for opportunity PT PELNI Management increase revenue from their pricing strategy on competing in the market.

The traditional costing systems has weaknesses due to not able to show the actual subsidy requirements when analyzed per route, so the Government cannot provide subsidies in the amount of 100% for PT. PELNI (Persero). Therefore, the government is difficult to control the subsidies realization because never knows the actual subsidy needs.

The policy of subsidy base fare through traditional costing systems showed a discrepancy. Informant 5 explains the current weakness of the traditional costing system:

".....The current methods for calculating the cost of the ship at this time are not able to provide accurate information needs subsidies of the passenger ship business to each route. The overhead costs calculation based on allocation percentages used throughout the consolidated overhead cost made us puzzled ... The consolidated overhead costs allocated from the hospital overhead costs, SBN, Shipyard and loading and unloading activities which are not related to services for passenger. Eventually, the passengers are charged the costs which the value never received....." (Informant 5, May 1, 2013).

Another weakness, according to Informant 4, the traditional costing system as existing costing faces the problem in overhead costs assignment to calculate cost per passenger per
mile. Overhead costs assigned by the percentage of consolidated overhead cost lead to miscalculations to determine the cost per passenger. Therefore, this research has improved the used traditional cost systems.

Ministry of Transportation may consider ABC to determine subsidized economy class fares onto this method to assign direct costs and overhead cost by tracing to the data completeness and validate Management Information System (MIS) of PT. PELNI. In addition, changes in the cost structure may be the basis of PT. PELNI to control their overhead costs that previously could not be identified properly.

The differences in the required subsidy fare base on the traditional cost systems and ABC give implication for the Ministry of Transportation and Management of PT. PELNI in the determination of fare. Below, quote of interviews with both informants.

"The base fares determination with the calculation cost of ABC method is expected to be closer to the actual cost of the operational ship to the route even though PT. PELNI has never count the cost per passenger per mile ... The base fares should be evaluated primarily fare for profitable or productive route so the expectations of the economy class fare into commercial rates will be realized "(Informant 2, May 1, 2013).

".....The Ministry of Transportation can get more accurate information from PT. PELNI about any activity that passenger vessel will cost to operate the ship, so that the fares and PSO needs to be known with relatively more uncertain as needed especially can solve overhead assignment problem that is still based on consolidated total overhead costs” (Informant 4, May 1 2013).

Informant 2 from the management of PT. PELNI explains that if the ABC as a method of calculating the cost per passenger per mile, the Ministry of Transportation can evaluate the route with has lots of passenger numbers. In addition, informant 2 hopes the Ministry of Transportation can set economy class fares into commercial fares, it means the fare is same as cost per passenger per mile with this method.

For Informant 4, if the calculation of the cost of production with ABC, information needed for subsidy determination more clear and accurate. As the result, the data to calculate cost provided by PT. PELNI are more valid. ABC is expected to resolve overhead costs assignment problem. Thus, the Indonesian government can control the subsidy received by PELNI.

The results of this research indicate that a cost analysis using ABC produce a more detailed calculation because the used cost driver as a divider basic costs per passenger per mile is not only the call number but all activity that occurs in the PT. PELNI for a passenger ship business.

In addition, the basic elements of the calculation of the cost per passenger per mile as the basis for disbursement of the subsidy, the management of PT. PELNI will consider factors beyond the calculation of the cost of such government decisions at the executive level between the Ministry of Transportation, the Ministry of Finance, and the Indonesia Parliament.

CONCLUSIONS, IMPLICATIONS AND LIMITATIONS

The Conclusion

This research has improved the structure cost in existing system due to the traditional costs system existed to calculate the cost per pessanger is not precisely. First, inaccuracy costing lies in cost structure. The direct and overhead cost assignment is traced from the linkage of transactions that relate directly to the shipping.
The calculation basic cost passenger service in marine transport with the traditional cost system for both of the vessel if explained by route with the call number as single driver route Tanjung Priok to Batam generated costs of Rp31,905,473,901 and the route from Batam to Belawan generated cost of Rp47,846,506,715. Meanwhile, with the route Pontianak to Tanjung Priok generate cost Rp20,809,953,263 and route from Surabaya to Sampit generate Rp15,941,032,815.

The Calculation of cost passenger service in marine transport with the ABC method generated costs from Batam to Tanjung Priok Rp26,653,697,186, route from Batang to Belawan generate cost Rp41,367,032,846, route from Tanjung Priok to Pontianak generate fee Rp18,693,726,677, and the route Surabaya to Sampit generate fee Rp15,293,704,009. The cost of the resources used in this research comes from 12 central costs. The activities that took place at PT. PELNI (PERSERO) as many as 27 activities from 12 center activity with using five activity drivers.

If the method of Activity Based Costing applied, there are two important things in focusing the usage. First, this method is expected to be useful for evaluating the rates for productive route, so PT. PELNI has the opportunity to maximize revenue from this route. Second, this method is expected to be useful for solving loading problems of overhead cost based on the consolidated overhead costs, so that the value of the subsidy can be controlled.

Research Implication

Based on the analysis and discussion that has been described, the conclusions that can be drawn to address the following research problems:
1. The results of this research can be considered to the Ministry Transport of the Republic of Indonesia in the formulation of policy of domestic passenger fare in marine transport and creating a viable, effective and economically mode transportation for public.
2. The results of this research provide measurements in the use of natural resources in the business operation of passenger vessels, thus providing for the financial feasibility for the business keep their customer.
3. The results of this research may provide insight for people who are users of transport services on the rates charged for avoiding bad image for the management.

Research Limitation

Based on the discussion and the conclusions that have been described previously, several limitations of the research that could be improved in the future research include:
1. This research is conducted with report of basic cost in 2011 and only done in 6 months with assessment activity and cost driver from every resource cost and activities, so the changing policy of company and policy of government to PT. PELNI influencing the decision of fare is irrelevant.
2. This research is not performing re-calculation for index of room conversion which becomes one of component of fare calculation and basic of accuracy calculation. It is caused the research background from accounting field.
REFERENCES


## APPENDIX

### Table 3

The Calculation of Total Cost with the current Traditional Cost System (In Indonesian Rupiah)

<table>
<thead>
<tr>
<th>Component of cost</th>
<th>KM. Leuser</th>
<th>KM. Kelud</th>
<th>Total Cost of ship</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct costs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel cost</td>
<td>29,567,211,326</td>
<td>84,417,119,435</td>
<td>113,984,330,761</td>
</tr>
<tr>
<td>Lubricants cost</td>
<td>1,652,109,127</td>
<td>4,383,605,290</td>
<td>6,035,714,417</td>
</tr>
<tr>
<td>Cost of Crew</td>
<td>4,872,643,502</td>
<td>9,152,911,200</td>
<td>14,025,554,702</td>
</tr>
<tr>
<td>Insurance premium crew</td>
<td>1,097,119,961</td>
<td>2,419,945,236</td>
<td>3,517,065,197</td>
</tr>
<tr>
<td><strong>Total direct costs</strong></td>
<td>37,189,083,916</td>
<td>100,373,581,161</td>
<td>137,562,665,077</td>
</tr>
<tr>
<td><strong>Indirect costs</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depreciation</td>
<td>3,603,284,165</td>
<td>23,733,883,027</td>
<td>27,337,167,192</td>
</tr>
<tr>
<td>Interest expenses</td>
<td>208,189,752</td>
<td>1,371,291,019</td>
<td>1,579,480,771</td>
</tr>
<tr>
<td>Ship Insurance</td>
<td>819,324,800</td>
<td>2,107,252,900</td>
<td>2,926,577,700</td>
</tr>
<tr>
<td>Port handling services</td>
<td>815,697,675</td>
<td>1,784,446,125</td>
<td>2,600,143,800</td>
</tr>
<tr>
<td>Port transportation services</td>
<td>99,774,823</td>
<td>381,652,075</td>
<td>481,426,898</td>
</tr>
<tr>
<td>Embarkation/debarkation</td>
<td>598,648,938</td>
<td>2,289,912,450</td>
<td>2,888,561,388</td>
</tr>
<tr>
<td>Passenger security</td>
<td>299,324,469</td>
<td>1,144,956,225</td>
<td>1,444,280,694</td>
</tr>
<tr>
<td>Passenger meals</td>
<td>5,170,116,000</td>
<td>11,450,674,200</td>
<td>16,620,790,200</td>
</tr>
<tr>
<td>Water supply costs</td>
<td>1,425,900,000</td>
<td>2,801,820,000</td>
<td>4,227,720,000</td>
</tr>
<tr>
<td>Passenger accommodation costs</td>
<td>475,937,658</td>
<td>787,187,384</td>
<td>1,263,125,042</td>
</tr>
<tr>
<td>Health care services costs</td>
<td>95,187,532</td>
<td>157,437,477</td>
<td>252,625,008</td>
</tr>
<tr>
<td>Cleaning service costs</td>
<td>380,750,126</td>
<td>629,749,907</td>
<td>1,010,500,033</td>
</tr>
<tr>
<td>Nautical &amp; navigation certification</td>
<td>88,076,309</td>
<td>73,375,455</td>
<td>161,451,764</td>
</tr>
<tr>
<td>Nautical &amp; navigation equipment maintenance</td>
<td>847,474,704</td>
<td>910,048,056</td>
<td>1,757,522,760</td>
</tr>
<tr>
<td>Floating, repairing, &amp; docking costs</td>
<td>2,125,161,551</td>
<td>2,877,328,522</td>
<td>5,002,490,073</td>
</tr>
<tr>
<td>Running Repair costs</td>
<td>776,707,183</td>
<td>1,535,033,243</td>
<td>2,311,740,426</td>
</tr>
<tr>
<td>Spare part and supplies</td>
<td>4,456,674,201</td>
<td>1,395,400,815</td>
<td>5,852,075,016</td>
</tr>
<tr>
<td>Fumigation costs</td>
<td>41,451,300</td>
<td>75,470,527</td>
<td>116,921,827</td>
</tr>
<tr>
<td>Economy class ticketing sales commission</td>
<td>1,170,322,243</td>
<td>2,091,101,566</td>
<td>3,261,423,809</td>
</tr>
<tr>
<td>Non-economy class ticketing sales commission</td>
<td>6,186,538</td>
<td>251,741,525</td>
<td>257,928,063</td>
</tr>
<tr>
<td>Ticket printing and design</td>
<td>251,514,751</td>
<td>445,606,027</td>
<td>697,120,778</td>
</tr>
<tr>
<td>Promotion &amp; advertising cost</td>
<td>19,412,928</td>
<td>7,999,263</td>
<td>27,412,192</td>
</tr>
<tr>
<td>Cost of verification and monitoring PSO</td>
<td>77,011,726</td>
<td>341,615,602</td>
<td>418,627,329</td>
</tr>
<tr>
<td>Cost of another sales</td>
<td>608,840,627</td>
<td>1,567,385,085</td>
<td>2,176,225,712</td>
</tr>
<tr>
<td>Cost of Branch</td>
<td>5,923,355,160</td>
<td>5,923,355,160</td>
<td>11,846,710,320</td>
</tr>
<tr>
<td><strong>Total Overhead Cost</strong></td>
<td>30,384,325,159</td>
<td>66,135,723,635</td>
<td>96,520,048,794</td>
</tr>
<tr>
<td><strong>Total Cost</strong></td>
<td>67,573,409,075</td>
<td>166,509,304,796</td>
<td>234,082,713,871</td>
</tr>
</tbody>
</table>

Source: Processed data
### Table 6

**Activity Center, Activity, Activity Driver, and Hierarchy activities**

<table>
<thead>
<tr>
<th>Activity Center</th>
<th>Activity</th>
<th>Activity Driver</th>
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<td>Number of Route</td>
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<td>Number of Route</td>
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<td>Management of director</td>
<td>Number of call</td>
<td>Facility Level</td>
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<td>Management of GCG mechanism</td>
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<td>Source: Management of PT. PELNI</td>
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### Table 7

**Allocation of Direct cost every route (In Indonesian Rupiah)**

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<th>Direct Cost</th>
<th>Ship Route</th>
<th>Tanjung Priok – Pontianak</th>
<th>Surabaya - Sampit</th>
<th>Tanjung Priok - Batam</th>
<th>Batam - Belawan</th>
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**Grand Total Biaya Overhead (Activity Cost)** 96,520,048,794

Source: Processed data
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<th>Batam - Belawan</th>
<th>Tanjung Priok - Pontianak</th>
<th>Surabaya - Sampit</th>
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<td>Number of passenger</td>
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<td>50.842</td>
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<td>34.715</td>
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<td>7.074</td>
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<td>Number of offered seat</td>
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<td>17.526</td>
<td>19.090</td>
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<tr>
<td>Process of anchored</td>
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<td>60</td>
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<tr>
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<td>50.842</td>
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<td>17.526</td>
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Source: Processed data
Table 12

The Calculation basic cost with Activity Based Costing

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<th>Activity Driver</th>
<th>Individual Cost Object</th>
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<th>Batam - Belawan</th>
<th>Tanjung Priok - Pontianak</th>
<th>Surabaya - Sampit</th>
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<td>Cost of Lubricants</td>
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<td>Unit Level Activity</td>
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<td>Facility Sustaining Level Activity</td>
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<td>The maintenance nautical facility</td>
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<td>227,653,901</td>
<td>177,891,292</td>
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MARKET PRICING ACCRUAL AND CASH FLOW COMPONENTS IN INDONESIA

Achmad Hizazi
Universitas Jambi
Indonesia

Winanto Widayat
Universitas Tarumanegara
Indonesia

ABSTRACT

This research aims to know whether market pricing accrual and cash flow components, particularly cash flow from investments and cash flow from financing. Research sample was taken from 116 listed companies in Indonesian Stock Exchange from 2005 to 2011.

Cumulative abnormal return was estimated to accrual and cash flow components underlining cash flow from investment and cash flow from financing using OLS regression. We find that market prices cash flow from investment consistent with theory but not cash flow from financing. Our result different from Livnat and Zarowin (1990) and Ryan et al (2006) in describing effect of cash from investment activity to security return.

Keywords: cumulative abnormal return, accrual, cash flow form operation, cash flow from investment, cash flow from financing.

Data availability: data is available at commercial database.
1. Introduction

This research address market pricing of cash flows components guided by IAS 07 which is adopted internationally through convergence most of countries’ accounting standards to IFRS. In the stream of research of information content, this research in line with Livnat and Zarowin (1990) and Ryan et al (2006), underlining cash flow from financing activities and cash flow from investing activities. Observing listed companies in Indonesian stock markets, this study has sample consist of 116 firms and 7 years (2005 - 2011) observations period.

Accounting research literature has provided evidence in market pricing of earning components. Beaver et al (1980) describes that security prices may capture changes in earning. Wilson (1986), (1987), Bowen (1987) show that information contents of cash flow and accrual as earning component have incremental information contents over earning itself. Some study show evidences that disaggregating earnings to cash flow and accrual information only at earning announcement show no incremental content [Bernard and Stober (1989), Livnat and Zarowin (1990)]. While Wilson (1986) finds no association between non-current accrual and return at earning announcement, Rayburn (1986) proves that non-current accrual has significant association with return when it is not period specific.


Dechow (2004) investigated market pricing on earning and earning components. She decomposed earning to accrual and cash flow from operation. Her research shows that market priced both earning components with higher informativeness on cash flow from operation. Extended research by Sloan (1996) provided evident that market price can be seen in abnormal accrual component separated from accrual. Pincus (2007) explored Sloan work in international level, and proved those accrual anomalies were also found at international level particularly in common low country but not in all countries. These researches focused on accrual component. Another research on cash operation by Cheng et al (2006) was basically on anomaly accrual. However Livnat and Zarowin (1990) find that inclusion cash flow components has better association to security return than both operating cash flow and accrual. In evaluating hybrid nature of trading position, Ryan et al (2006) also shows that cash flow components have significant association to security return.

This research differentes with Livnat and Zarowin (1990) and Ryan et al (2006) in several ways. First, Livnat and Zarowin (1990) doesn’t select industry classification in their sample, Ryan et al choose bank and financial industry which are suitable for their study, while this study select all industry except bank and financial firms. Second, this research uses Indonesian companies as sample of study.

Limitation of this is study that this study doesn’t include Nurnberg (1993) consideration that address inconsistency and ambiguity cash flow classification in financial reporting.
These ambiguity may affect level of significances of cash flow components and their direction in association to security return.

This research contribution is providing evidence on market pricing of cash flow from financing and cash flow from investment in Indonesia. This research results show that consistent with theory cash flow from investment has positive effect to return, this result differs with the work of Livnat and Zarowin (1990) who showed that cash flow from investment has negative effect to return and also different with Ryan et al (2006) who proved that cash flow from investment has no significant effect to return. But this research show that cash flow from financing doesn’t have significant effect to security return. However this research applied to companies other than banking and financing industries. Application to these industries needs further investigation.

Following part of this research discuss theoretical background in section 2, section 3 describes research design and research result discussed in section 4 and concluded in section 5.

2. Theoretical background

2.1. Market Pricing

Beaver et al (1980) suggest that earning has relevant information to describe changes in security prices. Relations between security prices and earnings provide interpretations about contemporaneous association between changes in prices and changes in earning and future earning and current earning as reflected in stock prices. Scott (2009) state that in ideal condition companies market value reflect all available information. But when it is not, market value would reflect all public information available, only when security market is efficient.

Security prices may reflect future earning which is predicted in basis of current earning. Collin et al (1987), and Beaver et al (1980) use following model to capture earning changes in security prices:

\[ CAR, = a + b\% \Delta EPS, + e_1 \]

Where CAR is cumulative abnormal return and \( \Delta EPS \) is changes in earing per shares. This model is initial step in describing price – earing relationship. Further researches show that cash flow and accrual as earning components has incremental information content (Wilson 1986, 1987) while other research prove they don’t have incremental information [Bernard and Stober (1989), Livnat and Zarowin (1990), Dechow (1994)].

\[ R_t = b_0 + b_1 CFO_t + b_2 Accr_t + e_t \]

Where \( R \) is security price, \( CFO \) is Cash Flow from Operation and \( Accr \) is accrual component of earning.

2.2. Accrual

As components of earning, both of cash flow and accrual has important role in explaining changes of security returns. Accrual component has important role in addressing
problem related to time allocation which are not solved by cash flow. However, accrual has weakness caused by subjectivity in defining when and how much to report (Dechow, 1994). Cash flow from operation has been seen as rigorous factor due to unrelated nature to subjectivity in reporting.

Jones (1991) formulated model that separates discretionary accrual from non-discretionary accrual component. Non-discretionary accrual are described by changes of revenue account and Plant, Property and Equipment accounts. Any part of accrual which is not be capture in those accounts considered as discretionary accrual. In the model, discretionary accrual is taken from model residual. Jones model has been modified in many research to find best approach. This research follows Dechow (1994) who modified Jones (1991) with adding changes in receivable in model.

\[
ACCR_t = \alpha_0 + \alpha_1(\Delta REV - \Delta REC)_{it} + \alpha_2 PPE_{it} + e_{it} \tag{3}
\]

ACCR is total accrual counted by reducing cash flow from operation from net income, with \(\alpha_0\), as constant and estimated coefficient \(\alpha_1\), and \(\alpha_2\). \(\Delta REV\) is changes in revenue and \(\Delta REC\) is changes in receivable. PPE is plant property and equipment. Non-discretionary accrual is fitted value from the model and discretionary accrual is model residu from following model:

\[
DA_{jp} = ACCR_{jp} - (\alpha_0 + \alpha_1(\Delta REV - \Delta REC)_{it} + \alpha_2 PPE_{it}) \tag{4}
\]

DA = Discretionary Accrual
ACCR = Total Accrual
\(\Delta REV\) = changes in revenue
\(\Delta REC\) = changes in receivable and
PPE = Plant Property and equipment

2.3. Cash Flow

Approach in decomposing cash flow in this research follows PSAK no 2 Indonesian SAK (Standar Akuntansi Keuangan, Indonesian Accounting Standard). This standard is basically similar to IAS 7, which is adapted in major by IAI (Ikatan Akuntan Indonesia/ Indonesian Accountants Association, Indonesian’s standard setter), and effectively converged to IFRS in 2007. Cash flow is defined as different in inflow cash and outflow cash or equal to cash account. Equal to cash is defines as liquid investment component which is qualified to short period cash commitment not for other investment goal, where this investment might be changed into cash in determined amount without risk of significant changes.

The PSAK no 2 states cash flow reported in certain period and classified in operating activity, investment activity and financing activity. Net cash flow is aggregate number of these three activities. Cash from operation defined as principal revenue-producing activities and other activities which are not investment activities and financing activities. Investments activity is defines as acquisition and termination of long period asset and investment which is not equal to cash. While, financing activities defined as activities causing changes in capital composition and companies’ debt.
2.4. Hypotheses developments.

Economic and financial theories suggest that cash flow components have significant association with security price. These theories imply estimation of these associations may result different magnitude and sign. In research stream of information content of financial report, Livnat and Zarowin (1990) and Ryan et al (2006) prove that cash flow components have information that address the change in security price, though their methodology and results somewhat different. Cash flow components as described in IAS 7 consists of three major category: cash flow from operating activities, cash flow from financing activities and cash flow from investment activities. Since major research in value relevant concerns about operating cash flow and accrual, this research focuses on cash flow from financing activities and investment activities.

2.4.1. Value relevant of cash flow from financing activities

Financing activities cover right side activities in balance sheet: debt, stocks (common and preference) and dividend. There are contradicting views on the debt issuance as a signal about future cash flow. Miller and Rock (1985) conclude that debt issuance may have negative reaction due to signaling lower cash flow in future than before issuance, in other side Ross (1977) see debt issuance as good signal about future cash flow rather than issuing stock, because owner still hold larger equities. Empirical study shows both side views that negative market reaction to announcement of debt. (Eckbo 1986) and Ryan et al (2006) show negative marginal significant relation. While Livnat and Zarowin (1990) show positive reaction.

Based on the assumption that managers hold private information about their firm, Smith (1986) believes managers may involve in stock transaction. This asymmetric information causes negative reaction of investors on stock issuance. Issuance of stock preference may have similar market reaction in less sensitive way than common stock.

Miller and Rock (1985) suggest that dividend announcement would have positive reactions from investors. Dividend announcements signal higher future cash flow in future. Empirical studies show that positive reaction of investors to dividend changes (Asquith and Mullin 1983).

Debt issuance and stock issuance which are in same side of account are predicted to have negative association to security price. In other side dividend payment although has positive market reaction but it is reduction to cash flow. First hypothesis of this study in alternative form is:

H1: stock market negatively reacts to changes of cash flow from financing.

2.4.2. Value relevant of cash flow from investing activities

In common view that investment activities would be followed with higher future cash flow, it is expected that stock market would positively react to changes of cash flow from investing activities. Miller and Rock (1986) theoretical view suggest similar associations. Opposite view of this association suggest negative reaction of stock market to investment activities. This reaction capture different form of investment, Amihud and Lev (1981) believe
that some managers may engage in negative net present value of investments. Empirical
evidence in research conducted by Livnat and Zarowin (1990) and Ryan et al (2006) resulted
in negative significant association.

H2: stock market positively reacts to changes of cash flow from investing.

3. Research method

3.1 Sample

This research sample taken from listed companies in Indonesian stock exchange in 2005
to 2011. From 463 listed companies in 2013, 234 companies excluded due to incomplete
data. Using data panel estimation causes more companies with incomplete data excluded
from observed sample. From rest of sample which have complete data, 113 companies
excluded due to negative income. Financing and banking companies are also excluded
because of tight rule and regulation and distinctive nature of accrual component and nature of
trading activities account.

3.2. Descriptive statistic

Tabel 1 shows statistic descriptive of the data with all variables has negative and positive
range except net income that are positive in all companies. Variables that have negative mean
and median value are Cash from Financing and Cash From investment. Normality of return
as depended variable is evaluated with Jarque Bera analysis which is shown at 4.336097.
That is normal above 5% probability where higher is better probability values.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>StdDev</th>
<th>Minimum</th>
<th>Median</th>
<th>Maximum</th>
<th>Jarque-Bera</th>
<th>Probability</th>
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Variable definition

CR is cumulative return companies which have average monthly return from 4th month
estimated year to 3rd month of following years. This cumulative return is consistent with ones
investigated by Subramanyam (1996). ACC is accrual variable calculated by reducing cash
from operation to net income before tax, scaled by opening balance of total asset. CF is
changes in total cash flow scaled by opening balance of total asset. CFF is cash flow from
financing scaled by opening balance of total asset. ACFI is cash from investment scaled by
beginning of total asset and NI is net income before tax scaled by opening balance of total asset.

Table 2 describes correlation between variable which show that low value correlations exist among all variable. In other words independent variables have low effect to dependent variable. The highest correlation between each variable to return is between CFO to return. This is interesting because it has higher value than correlation between earning and return. This imply that investor put more attention to cash flow from operation than to earning.

Univariate regression of return to each earning components are shown in the table 2, where almost all of earning components has significant correlation to earning except accrual and cash flow from financing. In this univariate regression each cash flow component has value that similar to expected value in hypotheses. All variables have expected sign, but among all only CFF has insignificant effect to return. Correlation among each variable shown that some variables are highly correlated. Accrual highly correlated with CFO and CFF, CFO highly correlated to CFF and CFI, while CFF itself it correlated to CFI, this correlations will cause problem in
Tabel 2. Correlation between variable

<table>
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<th>Correlation t-Statistic</th>
<th>CAR</th>
<th>ACC</th>
<th>CFO</th>
<th>CF</th>
<th>CFF</th>
<th>CFI</th>
<th>NI</th>
<th>PPE</th>
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<tr>
<td>ACCD</td>
<td>-0.022836 0.833732 -0.457921 -0.152149 0.318068 0.001781 0.253711 -1.27E-15 -3.39E-16 1.000000</td>
<td>-0.631764 41.76242 -14.24700 -4.257812 9.279219 0.049263 7.254678 -3.53E-14 -9.38E-15</td>
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3.2 Research Models


\[ CR_t = b_0 + b_1 CFO_t + b_2 Accr_t + e_t \] \hspace{1cm} (2)

Developing this model, we follow Livnat and Zarowin (1990) and Ryan et al (2006) that include all cash flow component in equation.

With expectation that CF would have positive sign, CFF has negative sign and CFI has negative sign, although CFF and CFI could be negative as well as positive sign. I also estimate Ryan et al (2006) model that include all cash flow component in a equation:

\[ CR_{it} = \gamma_0 + \gamma_1 ACC_{it} + \gamma_2 CFO_{it} + \gamma_3 CFF + \gamma_4 CFI + e_{it} \] \hspace{1cm} (4)

With expectation that CFO would have positive sign, CFF has negative sign and CFI has Positive sign. Because each of earning components has correlation among itself. We also estimate return to each earning components.

4. Results

Table 3 shows regression of return to earning components. Column 1 shows regression to all components where market significantly prices accrual and CFO and CFI with positive sign while CFF doesn’t have significant effect to security return. Positive value of cash flow from investment is consistent with theory while Livnat and Zarowin (1990) and Ryan et al (2006) showed negative associations. Market prices CFO higher than accrual.

At column 2 we can see that when cash flow and accrual are disaggregated from earning it has incremental information content. This result is consistent Wilson (2006) but not with Bernard and Strober (1989) and Livnat and Zarowin (1990). Column 2 also show that market prices cash flow from operation higher than accrual.

Column 3 describe univariate regression of return to earning, while column 4 and 5 show estimation when CFO replaced by CFF and CFI. At column 4 CFF has significant negative value as expected in hypotheze but at column 5 CFI loss its significance though still has positive value.

Tabel 3. Cumulative return regress to accrual and cash flow components

<table>
<thead>
<tr>
<th>Var</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<tr>
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<td>0.001108</td>
<td>0.00126</td>
<td>0.00552</td>
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<td>5.37529</td>
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<td>38.78675</td>
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5. Robustness test

Robusttest was conducted by replacing accrual with discretionary accrual from modified Jones model. Robustness model shows losing significances of accrual variables in last two models exactly similar with main investigation. In first two models discretionary accruals reduced their significant level and also CFI in the first model. This mean market price actually non-discretionary accrual higher than discretionary accrual as it is considered executed under opportunistic benefit of managers.

Market also put more expectation on investment activity more than financing activity. This is in line with theory that investor have positive expectation on investment but still in doubt in financing activity. (column 1)

Table4. Cumulative return regressed to non-discretionary accrual and cash flow components.

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<thead>
<tr>
<th>Var</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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</thead>
<tbody>
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<td>C</td>
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<td>0.013947</td>
<td>0.016621</td>
<td>0.011999</td>
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<td>6.680303 ***</td>
<td>6.53415 ***</td>
<td>12.20854 ***</td>
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<td>0.024421</td>
<td>0.003827</td>
<td>-0.00888</td>
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<td></td>
<td>1.88533    *</td>
<td>1.724514    *</td>
<td>0.292507</td>
<td>-0.728667</td>
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</tbody>
</table>
6. Conclusion

This study give evidence that market also prices cash flow components especially cash flow from investment in addition cash flow from operation. Consistent with theory, cash flow from investment has positive coefficient while cash flow from financing has insignificant effect to return value. When cash flow from financing and cash flow from financing replaced CFO in the models, results are consistent for cash from financing and cash from investment but cash from investment and accrual lost its significance.
REFERENCE


