The Impact of Recent Changes in the Audit Regulations and Auditing Standards on Auditors' Judgement and Decision Making

Pranil Prasad

A thesis submitted to Macquarie University in fulfilment of the requirements for the degree of Doctor of Philosophy in the Department of Accounting and Corporate Governance in the Faculty of Business and Economics

Macquarie University
December 2017

DECLARATION

I hereby certify that this thesis is the result of my original research and it has not been submitted for a higher degree to any other university or institution. The source of information used and the extent to which the work of others has been used is acknowledged in the thesis. This thesis meets the requirements of the National Statement on Ethical Conduct in Human Research and has obtained the approval of the Macquarie University Human Research Ethics Committee for the relevant projects that have been completed (Reference Numbers: 5201401145 and 52010600911).

....
Pranil Prasad

DEDICATION

I would like to dedicate this thesis to my wife and parents for their unconditional love and support.

ACKNOWLEDGEMENTS

It is with great pleasure that I express my sincere gratitude to those without whom completion of this thesis would not have been possible.

First and foremost, I would like to acknowledge the continuous support and guidance provided by my principal supervisor, Associate Professor Parmod Chand. Discussions that I have had with him on the research and his industrious feedback on all aspects of this thesis are gratefully acknowledged. At the same time, I would like to show my appreciation towards my associate supervisor, Dr Meiting Lu who has also provided immense support and feedback throughout the term of my candidature.

I would also like to thank Professor Graham Harrision, (Macquarie University) and Professor Terry Walter (The University of Sydney) for their comments and suggestions on the research instruments for Paper 2. The useful comments of Professor Divesh Sharma (Kennesaw State University) on Paper 4 are also acknowledged. Furthermore, the comments and feedback of the participants at the 2014 and 2015 Accounting and Finance Association of Australia and New Zealand conference on the early versions of Paper 1 and Paper 4 and the 40th European Accounting Association annual congress on Paper 2 is greatly appreciated. I would also like to acknowledge Professor Arvind Patel, Head of School of the School of Accounting and Finance at the University of the South Pacific, for his continued support and guidance.

Gratitude is due to the professional accountants in Sydney for their participation in the experiments for Paper 2 and Paper 3. My appreciation is also extended to the professional accountants and accounting academics at Macquarie University who participated in the pilot studies.

The list of those who have helped must include Macquarie University and the Faculty of Business and Economics of Macquarie University for their financial support. I would also like to thank the University of the South Pacific for allowing me a three-year study leave to pursue my studies at Macquarie University.

Finally, I must express full gratitude to my family for providing me with their continuous support throughout my doctoral candidature.

SYNOPSIS

The auditing profession has experienced significant transformations in the past fifteen years, in efforts to boost public confidence. In particular, auditing standards and corporate law have undergone significant changes. These reforms and changes were driven by large-scale corporate failures, financial scandals and dwindling public confidence in the craft of external assurance.

The aim of this thesis is to identify and examine empirically the impact of various factors that may impede the implementation of the numerous reforms in auditing standards and legislations. Specifically, this thesis has undertaken the following four research projects in the domain of audit regulations and auditor judgements: (1) to critically analyse the current audit report reforms and investigate the implications of the changes for the suppliers and users of the financial reports; (2) to examine the factors that affect the materiality judgements of auditors and identify interventions that could mitigate their effects; (3) to examine the factors that influence auditors' judgements to present key audit matters in an auditor's reports; and (4) to investigate the extent and causes of differences in audit fees between companies across countries.

This thesis employs both qualitative and quantitative research methods to examine the various factors affecting the adoption of new auditing standards and the impact of differences in legislation across countries on audit fees. The findings of this thesis provide evidence that reforms in auditing standards have significant implications for stakeholders such as the users of financial statements and the accounting firms who have to implement the changes. Furthermore, various factors such as personality traits of accountants, pressures from their clients and characteristics of the client have significant effect on the decision-making process and judgements of accountants. Finally, the findings show that differences in legal liability laws, national culture and the quality of audit environment and enforcement of accounting regulations have an impact on audit fees that auditors charge across countries. These findings have important implications for various stakeholders such as the auditing standard-setters and legislators, accounting firms and the users of the financial reports and auditor's reports.

TABLE OF CONTENTS

LIST OF TABLES

Chapter 2

Chapter 3

Chapter 4

LIST OF TERMS AND ABBREVIATIONS

AAS	Australian Accounting Standard
AICD	Australian Institute of Company Directors
AICPA	American Institute of Certified Public Accountants
ANOVA	Analysis of Variance
ASA	Australian Auditing Standard
ASIC	Australian Securities and Investments Commission
AUASB	Australian Auditing and Assurance Standards Board
CAANZ	Chartered Accountants of Australia and New Zealand
CEO	Chief Executive Officer
CFA	Chartered Financial Analyst
CFO	Chief Financial Officer
CLERP	Corporate Law Economic Reform Program
CPA	Certified Practising Accountants
D&O	Directors and Officers
E&Y	Ernst and Young Global Limited
EC	European Commission
ED	Exposure Draft
EFAA	European Federation of Accountants and Auditors
EQCR	Engagement Quality Control Review
ESG	Environmental Social and Governance
EU	European Union
FCPA	Foreign Corrupt Practices Act
FDI	Foreign Direct Investment
FRC	Financial Reporting Council
GDP	Gross Domestic Product
GFC	Global Financial Crisis
IACW	Internal Accounting Control Weakness
IAS	International Accounting Standard
IAASB	International Auditing and Assurance Standards Board
IASB	International Accounting Standards Board
ICAA	Institute of Chartered Accountants in Australia
IESBA	International Ethics Standards Board for Accountants
IFAC	International Federation of Accountants
IFAC SMP	International Federation of Accountants Small and Medium Practices Committee
IFRS	International Financial Reporting Standards
IND	Individualism
IPA	Institute of Public Accountants
ISA	International Auditing Standard
IT	Information Technology
J-SOX	Japanese SOX
KAM	Key Audit Matter
MAS	Masculinity
NZAuASB	New Zealand Auditing and Assurance Standards Board
PCAOB	Public Company Accounting Oversight Board
PD	Power Distance
PPE	Property Plant and Equipment
PQI	Preference for Quantitative Information
PSLRA	Private Securities Litigation Reform Act
PwC	PricewaterhouseCoopers
ROA	Return on Assets
SAS	Statements on Auditing Standards

SEC	Securities and Exchange Commission
SOX	Sarbanes-Oxley Act
TCWG	Those Charged with Governance
UA	Uncertainty Avoidance
U.K.	United Kingdom
U.K. FRC	United Kingdom Financial Reporting Council
U.S.	United States
U.S. GAAP	United States Generally Accepted Accounting Principles
VIF	Variance Inflation Factor

CHAPTER 1:

OVERVIEW OF THE THESIS

1.1 INTRODUCTION

At the turn of the new millennium, several countries experienced some of the largest corporate collapses in their history. Australia, for example, experienced its largest corporate collapse: that of HIH Insurance at the beginning of 2001. Around the same time, Australia saw the collapse of One.Tel and fraudulent financial reporting at Harris Scarfe was revealed (Houghton et al., 2013). In the late 2000s, there were more corporate failures and financial scandals reported in Australia. These raised great concern for regulatory agencies as well as auditors because the capital markets seemed to lose confidence in the audit function (Houghton et al., 2010). Independent auditors were implicated in these cases because financial statements that were certified as providing a true and fair view of the financial position and performance were found to be fraudulent and misleading. A properly conducted audit does not guarantee that the financial statements are free of serious distortion; however, it does provide a reasonable level of assurance that there are no such distortions. Thus, the failure to detect and report manipulations of financial statements may indicate the failure of auditors to question management, make sound audit judgements and think sceptically. It may also signal over-reliance on management assumptions about the financial statements or the impairment of the independence and objectivity of the auditor to report fairly on the audit that was conducted (Tackett et al., 2004).

In response to dwindling confidence in the audit function, national legislators and national and international auditing standard-setters undertook reforms of legislations and auditing standards to improve audit quality and restore public confidence in the auditing profession (Houghton et al., 2013). The auditing standard-setting responsibility was bestowed on an independent standard-setting body, and the auditing standards were given legal backing (Hecimovic et al., 2009). New auditor independence rules were implemented, and independent audit oversight and inspection programs were also implemented to enhance audit quality. At the same time, corporate governance reforms were undertaken, and corporate directors were being held to higher standards of responsibilities (Skinner, 2006). The auditing standard-setters undertook reforms of the auditing standards under the Clarity Project to improve the structure and content of the standards and ensure that they are more enforceable (International Auditing and Assurance Standards Board (IAASB), 2004). More recently, the result of the Global Financial Crisis (GFC) and pressure from stakeholders led to significant reforms of the auditing standards on audit report (IAASB, 2015a).

Motivated by the significant reforms in the audit market, this thesis undertakes a comprehensive analysis of the costs and benefits of these reforms and factors that may influence auditor judgements under the new and revised auditing standards. Prior studies provide piecemeal evidence of the benefits and costs associated with major audit market reforms (see for example, Hecimovic et al., 2009; Houghton et al., 2013). In contrast, this study undertakes a comprehensive analysis of the costs and benefits associated with major audit market reforms. Furthermore, studies that examine new and revised auditing standards focus on task and environmental related variables and how these variables influence auditors' judgements (see for example, Trotman et al., 2009; Carpenter & Reimers, 2013; Chen et al., 2015). Lacking in such works are studies which examine the impact of personality variables which may influence auditor judgements. The audit team personnel who perform the audit are inputs into the audit processes and are integral to the quality of the audit, yet very little is known about them (Francis, 2011). Literature from social and personality psychology provides evidence that psychological and cognitive characteristics can affect individual's performance and Nelson and Tan (2005) have called for more attention to individual auditor attributes in the design of judgement and decision-making research in auditing. This study extends prior research by examining the impact of personality variables in addition to the task and environmental variables on auditor judgements. In addition, unlike prior studies, this thesis examines both a technical-audit task-related judgement and judgement related to reporting of audit findings.

To examine these issues, four research projects were undertaken. The results of these projects are reported in the four papers included in this thesis. The first project critically examines the current audit report reforms and their implications. By examining the implications of the reforms, this study identifies the costs and benefits associated with the adoption of the new audit report requirements. The second project investigates the impact of auditors' preference for quantitative information on the utilisation of quantitative versus qualitative information and materiality judgement of auditors. It further examines the impact of a simple intervention in the form of a warning, a decision aid, motivation to systematically process information and auditors' levels of involvement on materiality judgement. It presents empirical evidence about the extent to which differences in the utilisation of quantitative versus qualitative information and resulting biases in judgement could be attributed to personality characteristics of the auditor. The third study examines whether the reporting judgement of auditors is influenced by the nature of the information being reported, the pressure exerted by the client and the financial condition of the client. This study provides empirical evidence of the impact of personal and client-related characteristics on auditors' reporting judgements on key audit matters (KAMs). It provides evidence of how the reporting judgements of auditors may differ systematically across clients. The fourth project examines how differences in laws, culture and the institutional environment related to financial reporting lead to differences in audit costs via audit fees for companies in different countries. It provides empirical evidence of the costs associated with major legislative reforms in the audit market and corporate governance in general.

This thesis contributes significantly to the behavioural and archival literature on auditing. It provides important insights into the challenges associated with achieving a high level of audit quality. In particular, it provides an understanding of the benefits and costs associated with efforts undertaken by legislators and auditing standard-setters to enhance audit quality. Beyond this, it adds to an understanding of how personal- and client-related variables impact auditors' judgements. In particular, the thesis provides evidence on the extent to which personal and client-related characteristics affect the ability of auditors to apply new and revised requirements of the auditing standards. The study also takes further steps towards identifying ways of improving auditor judgements, something which is extremely important if the aim of enhancing audit quality is to be achieved. Overall, the findings have important implications for national and international auditing standard-setters, legislators, regulators, independent enforcement bodies, such as the Australian Securities and Investments Commission (ASIC), accounting firms, users and suppliers of financial statements.

This chapter is organised as follows. Section 1.2 sets the background to the thesis. Section 1.3 outlines the aim and objectives, followed by an overview of all four research projects undertaken in this thesis. Section 1.4 describes the overall contributions of this thesis. The final section provides an overview of how the remainder of the thesis is organised.

1.2 BACKGROUND

The Australian public company audit market has been, over the last 15 years, the subject of increased regulatory reforms (Allan, 2006). These reforms followed some of the largest corporate collapses in Australia's history. The Australian government appointed a Royal Commission of Inquiry into the HIH Insurance collapse soon after it was wound up (Owen, 2003). Earlier, the government had initiated an inquiry into auditor independence which culminated in the publication of the Ramsay Report in 2001 (Ramsay, 2001). The Corporate Law Economic Reform Program Act 2004 (the CLERP 9 Act) was the catalyst for major reforms in Australia. This Act followed recommendations in the Ramsay Report (Ramsay, 2001) and the HIH Royal Commission Report (Owen, 2003). The Act targeted both corporate disclosure and auditing; however, the reforms weighed heavily on the auditing side and particularly on auditor independence and auditing standard-setting (Allan, 2006).

The CLERP 9 Act brought in significant reforms for public company auditors through amendments to the Corporations Act 2001 and the ASIC Act 2001. The reforms targeted areas of auditor independence and corresponding standard-setting. The quality of financial statement auditing depends greatly on the quality of the auditing standards. In Australia, auditing standards and the standard-setting regime have both undergone significant changes as a result of reforms under the CLERP 9 Act. Prior to the CLERP 9 Act, the auditing standards were issued by the Australian Auditing and Assurance Standards Board (AUASB) a body of Certified Practising Accountants (CPA) Australia and the Institute of Chartered Accountants in Australia (ICAA). A joint standing committee of the two professional bodies controlled the AUASB through the Australian Accounting Research Foundation (Jubb & Houghton, 2007). In essence, the auditing professional was self-regulated. Under Section 227A of the ASIC Act 2001, the AUASB was reconstituted as an independent statutory body and, under Section 336 of the Corporations Act 2001, was charged with the responsibility to issue auditing standards.

The shift from the profession-controlled audit standard-setting to a Federal Government controlled scenario led to a significant loss of power and influence of the profession and the professional membership bodies in Australia (Jubb & Houghton, 2007). This follows similar reforms in other jurisdictions, for example, in the United States (U.S.) where through the enactment of the Sarbanes-Oxley Act (SOX), the standard setting responsibilities for the public company audit market was transferred from the American Institute of Certified Public Accountants (AICPA) to the Public Company Accounting Oversight Board (PCAOB) (Coates and Srinivasan, 2014). The more profound change was that the auditing standards became legislative instruments under the Legislative Instruments Act 2003 and have the force of law effective from 1st July 2006 for audits performed under the Corporations Act 2001. It is now a strict liability offence to conduct an audit other than in accordance with the Australian Auditing Standards (ASAs). The auditing standards have never before carried this level of gravitas (Houghton et al., 2013). There are also no other jurisdictions apart from France that accords auditing standards legislative backing (Hecimovic et al., 2009).

After the passing of the CLERP 9 Act, ASIC began its audit inspection program to monitor compliance with auditing standards and auditor independence requirements (Niven, 2009). Under this program, ASIC conducts independent inspections of the Big 4 and non-Big 4 accounting firms for compliance with auditing standards and independence requirements under the Corporations Act 2001. ASIC also maintains the auditor surveillance program. Under this program, ASIC undertakes action after receiving complaints from the public or through media reports and intelligence from other areas of ASIC (ASIC, 2014a). If ASIC finds that an auditor's conduct is deficient, it has the powers to pursue regulatory actions. Apart from audit inspections and surveillance, ASIC also conducts a financial reporting surveillance program under which it reviews annual and interim financial reports of listed and other significant companies in Australia (ASIC, 2014b). The purpose of this program is to ensure that the financial reports comply with the Corporations Act 2001 and the Australian Accounting Standards (AASs).

Overall, the enactment of the CLERP 9 Act in 2004 and subsequent legislative reforms have significantly transformed the audit environment and the enforcement of accounting regulations. However, the auditing profession has gone through more changes, particularly in relation to the auditing standards themselves. The enactment of the CLERP 9 Act gave the Financial Reporting Council (FRC) powers to set AUASBs strategic directions. The FRC provided the AUASB with the strategic direction to use, as appropriate, the auditing standards of the IAASB as a base from which to develop ASAs. The AUASB can make amendments to the International Auditing Standards (ISAs) as necessary to accommodate and ensure that the auditing standards both exhibit and conform to the Australian regulatory environment, including amendments necessary for the standards to have the force of law.

The AUASB had a two-year timeframe from the enactment of the CLERP 9 Act; the legally enforceable standards were to come in to effect from 1st July 2006. In fact, by the time the AUASB was operational, it had little more than 18 months before the auditing standards were to become legally enforceable (Jubb & Houghton, 2007). The previous Board had largely used the ISAs as the base, with amendments, to formulate ASAs. The ISAs on which the auditing standards in Australia were converged at the time and upon which the new auditing standards in Australia were to be based on under FRCs strategic direction, were not written with a view to their legal enforcement (Jubb & Houghton, 2007). The AUASB, as a result, had the enormous task of redrafting the standards to ensure that the wordings met the requirements of the Legislative Instruments Act 2003 (Jubb & Houghton, 2007). The redrafted standards were issued for exposure in April 2006, and after a 45-day period for comments the standards were issued for implementation commencing 1st July 2006. The 2006-2007 financial year was the first period of application of the legally enforceable standards for the majority of the entities in Australia (Jubb & Houghton, 2007).

Soon after the completion of the project to revise the ASAs for legal enforceability as a result of the CLERP 9 Act, the AUASB had to commence work to prepare for the adoption of the revised clarity structure and reissue the standards based on the IAASBs Clarity Project (Houghton et al., 2013). In 2004, the IAASB undertook a project to comprehensively review all of the ISAs to improve their clarity and, thereby, their consistent application (IAASB, 2004). The entire suite of the ISAs was redrafted in the clarity format. In addition, almost half of the ISAs were substantively revised with the aim to improve practice in a variety of respects (IAASB, 2010). These ISAs were effective for audits of financial statements for periods beginning on or after 15th December 2009. The revised and redrafted ASAs based on the new ISAs were operative on or after 1st January 2010 (McAlary, 2010). The clarified ASAs conform to the clarified ISAs with minimal amendments (McCabe & Dillon, 2010).

In addition to applying the clarity format to all the extant auditing standards, almost half of the standards underwent significant revisions to the requirements (IAASB, 2010). A number of the auditing standards were significantly revised and stipulated new auditing procedures not present in the current standards. An analysis of the revised standards indicates that major changes were grouped around areas related to materiality and evaluation of misstatements, auditor communications, audit evidence, group audits, auditors' use of experts, and audit opinions. Since materiality is an important concept in accounting, prevalent both in financial reporting and auditing of the financial reports, the auditing standards related to materiality underwent significant changes. The changes were also made to the materiality standards because of long-standing concerns with an auditor's almost exclusive reliance on quantitative factors in assessing materiality. The former chairman of Securities and Exchange Commission (SEC), Arthur Levitt, in his "Numbers Game" speech suggested that the concept of materiality was being misused to the extent that firms managed their earnings by recording errors within a predefined ceiling (quantitative materiality threshold) and do not correct these errors, claiming that the effect of the misstatements are immaterial to the financial statements as a whole (Levitt, 1998). The auditors were accused of supporting the position of company management by relying on the concept of quantitative materiality. Another three auditing standards that were significantly revised were ISA 540, ISA 550 and ISA 600. Reforms for these three standards would have greatly impacted audit practice. The first two of these standards significantly increase the focus of the auditor on management processes and all three stipulate audit procedures that were not in the older standards.

The most recent and significant reform to take place in the audit market relates to the auditor's report. The standard auditor's report had been the subject of long standing discussions and debates due to concerns surrounding its form, content and communicative value (Cohen Commission, 1978; Church et al., 2008). The GFC in the latter part of the last decade led to increased company failures and regenerated interest in auditor reporting (Carson et al., 2013). Thus, after the completion of the Clarity Project, the IAASB initiated work on the auditing standards related to the auditor's report. The IAASB completed the auditing standards on the audit report in January 2015 with the issue of one new standard and five revised standards (IAASB, 2015a). The most significant changes to the auditor's report are the inclusion of KAMs in the audit report, disclosure of the name of the audit engagement partner, presentation of the audit opinion first followed by other sections, enhanced auditor reporting on going concern, inclusion of a statement about the auditor's independence and fulfilment of relevant ethical responsibilities and, finally, enhanced description of the responsibilities of the auditor (IAASB, 2015a). These changes to the auditing standard on audit reports significantly changes the face of the auditor's report. The presentation of KAMs is dubbed as the most significant change to take place in the auditing profession in over four decades (Montgomery, 2014).

While the reforms described above have significantly improved the quality of the audit environment, the quality of the auditing standards and the face of the auditor's report, there is still controversy about whether the reform benefits outweigh the costs. These concerns have been clearly raised in reports (CPA, 2013; ICAA, 2013). Even though prior studies provide insights into the effects of the new auditor's report on auditor liability, investors' decisions and capital markets, those studies have still not provided a holistic assessment of the new auditor reporting requirements (see for example, Christensen et al., 2014; Brasel et al., 2016; Gimbar et al., 2016). Furthermore, none of these studies considers whether there are factors that will influence the judgement of the auditor when it comes to the presentation of the KAM in the auditor's report, which is considered one of the most significant reforms of current times.

Another important issue that is yet to receive attention is the impact of personality variables on auditor judgements. Francis (2011) identifies audit personnel as crucial to audit quality because they represent an input into the audit process. Significant changes were made to auditing standards and, since the standards are principles-based, auditors are expected to exercise their judgements when applying these standards to conduct audits (AICPA, 1955; Mautz, 1959; Trotman, 2006). Therefore, personality related variables might influence the judgment of auditors when they apply the auditing standards.

This thesis aims to address the gaps in the auditing literature. In doing so, the thesis examines both the benefits and costs associated with some of the significant audit market reforms. It goes beyond this to identify and examine factors that may influence auditor judgements when applying these new and revised auditing standards. An understanding of the benefits and costs associated with new auditing standards will provide stakeholders with insights into the economic impact of reforms. An understanding of factors that influence auditor judgements when they apply new or revised auditing standards (and consequently audit quality) will be of importance for all relevant stakeholders involved in auditing standard-setting and legislators aimed at improving audit quality.

1.3 AIMS AND OBJECTIVES

The aim of this thesis is to empirically examine the conceptual and practical issues associated with the application of new and revised auditing standards and audit market legislations. Specifically, this thesis seeks to examine the benefits and costs of new and revised auditing standards and legislations and investigate the impact of factors that may influence auditor judgements when applying new or revised auditing standards. To address these issues, this thesis has the following objectives:

1. To critically analyse the current audit report reforms and investigate the implications of the changes for the suppliers and users of the financial reports;
2. To examine the factors that affect the materiality judgements of auditors and identify interventions that could mitigate their effects;
3. To examine the factors that influence auditors' judgements to present KAMs in the auditor's reports; and
4. To investigate the extent and causes of differences in audit fees between companies across countries.

To achieve these objectives, four research projects were undertaken as part of this thesis, with the results of these projects being reported in the relevant papers. They are described in detail below.

Paper 1: The Changing Face of the Auditor's Report: Implications for Suppliers and Users of Financial Statements

This study critically examines the current audit report reforms and their implications for suppliers and users of financial statements. Specifically, this study investigates the perceptions of prominent stakeholders in respect of the reforms and then evaluates the implications of the reforms on the informational value of the audit report, audit quality and audit costs. A content analyses of the comment letters that were written in response to the IAASB Exposure Draft (ED) '*Reporting on Audited Financial Statements: Proposed New and Revised International Standards on Auditing'* issued in July 2013 was undertaken to understand the perceptions of prominent stakeholders on the reforms.

This study addresses the first objective of the thesis by providing evidence of the impact of the current audit report reforms on different stakeholders. The findings suggest that the current audit report reforms will increase the informational value of the audit report. Audit costs and auditors' legal liability are expected to increase, following the implementation of the reforms. Another observation is that there is a high level of overall support for the audit report reforms, but this support varies between different stakeholder groups. It is expected that this analysis will provide jurisdictions contemplating the adoption of the new international standards on the audit report and jurisdictions already committed to adopting the new requirements' important insights into the benefits and costs associated with the reforms. The findings of the study have important implications for national and international auditing standard-setters, accounting firms, users and the suppliers of financial reports.

This paper has been published in the *Australian Accounting Review* in 2017. An earlier version of this paper was presented at the 2015 Accounting and Finance Association of Australia and New Zealand Conference, Hobart, Australia, 5-7 July 2015.

Paper 2: The Effects of Preference for Quantitative Information and Utilisation of Quantitative versus Qualitative Information on Auditors' Materiality Judgements

This study extends prior research on judgement and decision-making research in auditing by examining the effect of preference for quantitative information and whether it biases auditors' materiality judgements. It examines whether auditors with a high preference for quantitative information accordingly utilise more quantitative than qualitative information and whether this leads to a biased materiality judgement. The study follows this through to investigate whether a simple intervention, a decision aid, the level of involvement of auditors and their motivation to systematically process information could mitigate the effects of preference for quantitative information. Specifically, it formulates and tests the following hypotheses:

H1: Auditors with a high preference for quantitative information will utilise more quantitative than qualitative information when making materiality judgements compared to auditors with a low preference for quantitative information.

H2: Auditors who utilise more quantitative than qualitative information will make a biased materiality judgement compared to auditors who utilise more qualitative than quantitative information.

H3: Auditors provided with a simple intervention are likely to utilise both quantitative and qualitative information in their materiality judgement, thereby making an unbiased judgement compared to auditors not provided with a simple intervention.

H4: Auditors provided with a decision aid on materiality are likely to utilise both quantitative and qualitative information in their materiality judgement, thereby making an unbiased judgement compared to auditors not provided with a decision aid.

H5: Auditors with a higher motivation to systematically process information are likely to utilise both quantitative and qualitative information in their materiality judgements, thereby making an unbiased judgement compared to auditors with a lower motivation to systematically process information.

H6: Auditors with a higher level of involvement are likely to utilise both quantitative and qualitative information in their materiality judgements, thereby making an unbiased judgement compared to auditors with a lower level of involvement.

An experiment was conducted with professional accountants from the Big 4 and non-Big 4 accounting firms in Australia. A total of 75 participants were randomly allocated to the control group and the two experimental treatment conditions (simple intervention group and decision aid group). Data was then statistically analysed (SPSS univariate and multivariate analysis) to determine the factors that affect auditors' materiality judgement.

This study addresses the second objective of the thesis by examining the factors that affect the materiality judgements of auditors. The findings support the prediction that auditors whose preference for quantitative information is high utilise more quantitative than qualitative information and this leads to a biased materiality judgement. This study further suggests that a simple intervention in the form of a warning leads to improved materiality judgement. The results of this study provide important implications for standard-setters, accounting firms and auditors, as these results call for strategies that facilitate higher quality judgements.

An earlier version of this paper was presented at the 40th European Accounting Association Annual Congress, Valencia, Spain, 10-12 May 2017.

Paper 3: The Impact of Client Pressure and Client's Financial Condition on Auditors' Judgements to Report KAMs in the Auditor's Report

This paper examines factors that influence auditors' judgement to present KAMs in the auditor's report. In particular, it examines whether the nature, client pressure and client's financial condition influence the presentation of KAMs. Consequently, it formulates and tests the following hypotheses:

H1a: Auditors will present fewer negative KAMs than positive KAMs in the auditor's report.

H1b: Auditors will present negative KAMs after positive KAMs in the auditor's report.

H2: Auditors who experience high client pressure not to present negative KAMs will present fewer negative KAMs in the auditor's report compared to auditors who face no client pressure.

H3: Auditors whose client is in poor financial condition will present more negative KAMs compared to auditors whose client is in a healthy financial condition.

An experiment was conducted with professional auditors from the Big 4 and non-Big 4 accounting firms in Australia. A total of 112 participants were randomly allocated to the four experimental treatment conditions. Data was then statistically analysed (SPSS univariate and multivariate analysis) to determine the factors that affect auditors' judgement on the presentation of KAMs in the auditor's report.

This study addresses the third objective of the thesis by providing empirical evidence on factors that influence auditors' judgement on the presentation of KAMs. The results suggest that auditors present more negative than positive KAMs and present negative KAMs before positive KAMs in the audit report. The findings further show that presentation of negative KAMs is influenced by client pressure and client's financial condition. These findings have important implications for standard-setters, accounting firms and users of the financial reports.

Paper 4: The Impact of Director Liability Regime, National Culture and the Quality of the Audit Environment and Enforcement of Accounting Regulations on Audit Fees

This study examines how differences in law, culture and the institutional setting for financial reporting leads to differences in the audit fees for companies across countries. Therefore, the study investigates the impact of director liability regime[1], national culture and the quality of the audit environment and enforcement of accounting regulations[2] on audit fees for companies across thirteen Asia-Pacific countries.[3] The following hypotheses were formulated and examined:

H1: There is an association between director liability regime and audit fees.

H2: There is a positive association between secrecy and audit fees.

> H2a: There is a positive association between uncertainty avoidance in a firm's cultural environment and the level of its audit fees.
>
> H2b: There is a positive association between power distance in a firm's cultural environment and the level of audit fees.

---

[1] This study defines director liability regime as the collective set of laws that hold directors of companies legally responsible for their acts and omissions. It is measured using the director liability index reported by *The World Bank* which measures it as a plaintiff's ability to hold directors of a company liable for damages to the company.

[2] This study uses a measure of the quality of the audit environment and enforcement of accounting regulations from Brown et al. (2014). It measures the differences between countries in relation to the institutional setting for financial reporting. It takes into consideration factors such as whether auditors must be licensed, requirements for ongoing professional development for auditors, presence of an oversight body to apply sanctions against auditors for deficient conduct, requirements for rotation of audit firm or audit partner, whether there is a securities market regulator or other body which monitors financial reporting, the powers of the body to set accounting and auditing standards, independent body to review financial statements… and so on.

[3] The thirteen countries are: Australia, China, Hong Kong, Indonesia, India, Japan, Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand and Taiwan.

H2c: There is a negative association between individualism in a firm's cultural environment and the level of audit fees.

H2d: There is a negative association between masculinity in a firm's cultural environment and the level of audit fees.

H3: There is a positive association between the quality of the audit environment and enforcement of accounting regulations and audit fees.

Data to test the hypotheses was obtained from both Worldscope and DataStream (Thompson Reuters ASSET4) database for the five-year period 2009-2013. After deleting observations with missing data and observations of firms from the financial sector, there were 3,215 firm-year observations for the audit fee analysis. The audit fee model was adapted from Choi et al. (2009) and modified to include the independent variables to examine the associations between director liability regime, national culture, quality of audit environment and enforcement of accounting regulations and audit fees. Data were statistically analysed (STATA univariate and multivariate analysis) to determine the factors that affect audit fees across countries.

This study addresses the fourth objective of the thesis by providing empirical evidence on factors that lead to differences in audit fees across countries and, consequently, audit quality. The results suggest that companies located in countries where director liability regime is stronger pay lower audit fees. In addition, this study finds partial support for the association between the accounting cultural value of secrecy and audit fees. Finally, the results suggest that companies located in a country with a higher quality audit environment and stronger enforcement of accounting regulations pay lower audit fees. These findings have important implications for corporate legislators, financial regulators and accounting firms.

An earlier version of this paper was presented at the 2014 Accounting and Finance Association of Australia and New Zealand Conference, Auckland, New Zealand, 6-8 July 2014.

1.4 CONTRIBUTIONS OF THE THESIS

This thesis contributes to the literature in auditing – in particular, judgement and decision-making research in auditing and archival literature on audit fees. The primary contribution is that the thesis provides evidence that implementation of new and revised auditing standards and legislations will not in itself translate into improved audit quality as a number of factors influence auditors' judgements.

The first project of this thesis adds to the existing literature on the auditor's report. It further contributes to a growing body of literature on the impact of the current audit report reforms on the informational value of the auditor's report, audit quality and audit cost. At present, there is a lack of evidence on the holistic impact of the current audit report reforms. The findings of the study hold important implications for auditing standard-setters, accounting firms, suppliers and users of the financial reports in that it provides initial evidence on the informational value of the new requirements and whether the reforms will improve audit quality and increase audit costs.

The second project contributes to the extant judgement and decision-making literature in auditing. In particular, it contributes to a growing body of research on the utilisation of quantitative versus qualitative information and how a personality variable, preference for quantitative information, influences the utilisation of the two types of information. It further contributes to the literature on auditors' materiality judgement; specifically, the study provides evidence that preference for quantitative information may lead to biased materiality judgements. It also contributes to the literature on improving auditors' judgements. The findings of the study have important implications for accounting firms, in that they need to take into consideration individual auditors' personality-related variables when making staff allocations decisions and for auditing standard-setters to consider the impact of such variables when designing auditing standards.

The third project in this thesis also contributes to the judgement and decision-making literature in auditing, adding to the literature related to the reporting judgements of auditors. More accurately, the study contributes to a new stream of literature related to the presentation of KAMs in the auditor's report. This study is one of the first to empirically examine how factors such as the nature of the KAMs, client pressure and client's financial condition collectively influence auditors' judgements on presentation of the KAMs in the auditor's report. The findings imply that the presentation of KAMs may be influenced by a number of factors. The findings of this study also make a practical contribution by providing empirical evidence on how auditors respond to client pressure. This should be of importance to the auditing profession and accounting firms. The findings are similarly of importance to national and international auditing standard-setters as they identify factors that may impede the successful implementation of one of the most significant reforms in the auditing profession in over four decades.

The fourth study contributes to the literature on cross-country differences in laws, culture and the quality of the institutional environment for financial reporting as well as the archival literature on cross-country differences in audit fees. This study employs a unique set of measures for the director liability regime and the quality of the audit environment with its enforcement of accounting regulations to examine their impact on audit costs via audit fees. It overcomes the inherent problems in studying the impact of reforms in areas related to quality of the institutional setting for financial reporting, as several changes in the audit market at the same time means that isolating the impact of any single reform initiative is impossible. However, because different countries still have different laws and institutional settings for financial reporting, it is possible to examine if such heterogeneity influences audit fees for companies across countries. The findings imply that companies located in stronger director liability regime countries and in those with a higher quality audit environment and enforcement of the accounting regulations will pay lower audit fees. Furthermore, the results provide partial support for the association between national culture and audit fees. The results of this study are important for policy makers and financial regulators.

Overall, this thesis provides results which contribute significantly to the achievement of higher quality audits by drawing attention to the conceptual and practical issues with the implementation of new and revised auditing standards and legislations. The findings and conclusions drawn from the thesis have significant policy and practical implications. These inferences would be of particular interest to various stakeholders such as national and international standard-setters, professional membership organisations, accounting firms, suppliers and users of the financial statements. The implications of the thesis will be discussed in-depth in Chapter Six of this thesis.

1.5 ORGANISATION OF THE THESIS

The thesis is organised into six chapters, with three appendices providing supplementary materials. Chapter 1 presents an overview of the thesis. Chapters 2 to 5 consist of the four self-contained papers. Each paper is written in journal article format. The relevant tables and figures are provided at the end of each chapter, but a full bibliography is included at the end of the thesis. The research instruments that were used to collect the relevant data for the studies in Chapters 3 and 4 and the letters of ethics approval obtained for each research project are attached as appendices at the end of the thesis. Chapter 6 concludes this work and summarises the findings of each of the four papers, identifying the overall conclusions and implications of the thesis. The limitations of the thesis and recommendations for future research are also discussed in Chapter 6.

The details of the six chapters are as follows:

Chapter 1	Overview of the Thesis
Chapter 2	Paper 1: The Changing Face of the Auditor's Report: Implications for Suppliers and Users of Financial Statements
Chapter 3	Paper 2: The Effects of Preference for Quantitative Information and Utilisation of Quantitative versus Qualitative Information on Auditors' Materiality Judgements
Chapter 4	Paper 3: The Impact of Client Pressure and Client's Financial Condition on Auditors' Judgements to Report KAMs in the Auditor's Report
Chapter 5	Paper 4: The Impact of Director Liability Regime, National Culture and the Quality of the Audit Environment and Enforcement of Accounting Regulations on Audit Fees
Chapter 6	Conclusions and Implications

CHAPTER 2:

(PAPER 1)

The Changing Face of the Auditor's Report: Implications for Suppliers and Users of Financial Statements

ABSTRACT

The IAASB recently finalised several significant and controversial reforms of the auditor's reporting model. The reforms are in response to long-standing criticisms about the form and content of the existing audit report. This study critically examines the current audit report reforms and their implications. In particular, the study investigates the perceptions of prominent stakeholders with respect to these reforms and then evaluates the implications of the reforms on the informational value of the audit report, audit quality and audit costs. The findings suggest that the changes to the audit report are of significant informational value to users, while the implications for audit quality are unclear. Indeed, the changes would increase audit costs and potentially the legal liability of auditors. This appraisal is timely given the efforts made by the IAASB in commissioning these reforms to enhance the relevance and informational value of the audit report.

Keywords: Audit report; key audit matters; audit quality; audit expectation gap.

2.1 INTRODUCTION

The IAASB recently finalised significant and far-reaching reforms of the auditor's reporting model. For the first time, audit reports will provide insights into matters of significance to the audit (IAASB, 2015a). For many jurisdictions, audit reports will now provide the name of the audit-engagement partner and an explicit statement affirming the independence of the auditor. The audit report will also provide enhanced information on going concern. Another revolutionary change is the reporting of auditors' consideration of other information in the annual report (IAASB, 2015b). Lastly, the structure of the audit report and the order in which the elements are presented will be prescribed to the extent that the auditor's opinion and basis of opinion sections will be presented before all other elements. The Deputy Chairman of the IAASB, Daniel Montgomery (2014: 14), describes the reforms as one of the most significant developments in the auditing profession in many years.

The current reforms are driven by long-standing debates on the form, content, and value of the audit report (Cohen Commission, 1978; Church et al., 2008; Smieliauskas et al., 2008; Mock et al., 2013). In particular, the standardised form and restrictive content of the existing audit report have been found to limit the report's informational and communicative value (Coram et al., 2011; Vanstraelen et al., 2012). There is also evidence of significant perceptual differences between auditors and users with respect to the messages conveyed by the extant audit report (Innes et al., 1997; Gay et al., 1998; McEnroe & Martens, 1998; Manson & Zaman, 2001; Schelluch & Gay, 2006; Chong & Pflugrath, 2008; Gray et al., 2011; Asare & Wright, 2012; Gold et al., 2012). The financial crisis of 2008-2009 provided further evidence on the limitations of the existing audit-reporting model and increased the urgency for reform (Carson et al., 2013; Doogar et al., 2015).

The current reform's primary objective is to enhance the communicative value of the audit report (IAASB, 2015a). Investors and other users have called for the audit report to be more informative, and particularly for auditors to provide more relevant information on an audit (Chartered Financial Analyst (CFA) Institute, 2010). For example, a report published by the CFA Institute reveals that only 37 percent of respondents to their survey believe that the current audit report contains the right amount of information (CFA Institute, 2010). The IAASB argues that the reforms will enhance the informative value of the audit report and audit quality (IAASB, 2013).

Whether actively or passively fostered, there is controversy about the recent audit-report reforms. There are concerns that the reforms will add complexity and length to auditor reporting but not value (ICAA, 2013; Ghandar, 2014). There are also reservations about whether it is truly known what users want, and whether additional information will meet their needs (Australian Institute of Company Directors (AICD), 2013; AUASB, 2013). Furthermore, it is argued that additional information, such as the name of the audit engagement partner, will not influence audit quality nor improve investors' decision-making abilities (Ernst & Young Global Limited (E&Y), 2014; PricewaterhouseCoopers International Limited (PwC), 2014). There are also concerns that the reform will add to the cost of audits and auditors' legal liability (New Zealand Auditing and Assurance Standards Board (NZAuASB), 2013; Turner, 2013). The impact on cost is likely to be more onerous on small and medium entities and audit practices (European Federation of Accountants and Auditors (EFAA), 2013; International Federation of Accountants Small and Medium Practices Committee (IFAC SMP), 2013). Given these controversies, it is important to examine whether the audit report reforms will improve the value and quality of audits.

This pioneering study critically examines the current audit-report reforms and their implications. The objectives of this study are twofold. First, to investigate the perceptions of prominent stakeholders on these reforms. This is achieved by a content analysis of the comment letters of 138 respondents from 42 jurisdictions and 10 stakeholder groups, who responded to the ED issued by the IAASB on audit report reforms. Second, to evaluate the implications of the audit-report reforms, particularly with respect to their informational value, audit quality, and audit costs. This appraisal is timely, given the efforts made by the IAASB in commissioning these reforms to enhance the relevance and informational value of the audit report.

This study contributes to existing literature that examines the audit expectation gap and value of the audit report. Evidence on the influence of some of the new inclusions in the audit report, such as the name of the audit-engagement partner and key audit matter paragraphs, is mixed (King et al., 2012; Carcello & Li, 2013; Yen et al., 2013; Blay et al., 2014; Christensen et al., 2014). Moreover, prior studies have only considered a small number of reforms and have examined their impact in isolation.

The findings suggest that the current audit report reforms have positive implications for the informational value of the audit report while the implications for audit quality are unclear.

Audit costs and the auditor's legal liability are also expected to increase following the implementation of these reforms. Furthermore, the findings indicate a high level of overall support for audit report reforms; however, individual key reforms receive varied levels of support. The results also show that there are significant differences between stakeholder groups in their support for audit report reforms. This study concludes that the differences across stakeholder groups can be explained by the economic self-interest of these groups. The findings should be of interest to national standard-setters such as the AUASB, as they contemplate the adoption of these changes into their national auditing standards. The results of this study should also be of significance to the preparers and auditors of financial statements.

The remainder of the paper proceeds as follows. Section 2.2 provides an overview of the audit reforms. Section 2.3 discusses the relevant literature examining the effectiveness of the reforms. Section 2.4 outlines the research method. The perceptions of stakeholders on the audit reforms are presented in Section 2.5, followed by an outline of the implications of the reforms in Section 2.6. The final section provides a summary and offers the conclusions of this study.

2.2 AUDIT REPORT REFORMS

2.2.1 Background

The audit profession has experienced significant transformations over the past decade. These reforms comprise jurisdiction-specific regulatory reforms and reforms of the auditing standards in general.

The regulatory reforms followed large-scale corporate collapses around the globe at the turn of the new millennium. In the U.S., corporations such as Enron and World Com, and in Australia, companies like HIH Insurance, Telco, and One.Tel collapsed, causing significant losses for shareholders and a loss of confidence in the audit function for capital markets (Houghton et al., 2010). The major change that ensued was the separation from the profession of standard-setting responsibilities which, in many jurisdictions, were placed in the hands of a profession-independent statutory body (Houghton et al., 2013). Additionally, significant changes were endorsed in relation to audit oversight and auditor independence (Carey et al., 2014). A number of these changes, such as independent audit-inspection programs and restrictions on the supply of non-audit services, had significant implications for audit practice.

A number of changes were restricted to certain jurisdictions. For example, in Australia, the auditing standards became legislative instruments under the *Legislative Instruments Act 2003* and had the force of law from 1st July 2006 for audits performed under the *Corporations Act 2001*. In the U.S., the SOX mandated auditor reporting on internal control deficiencies in the audit report.

Auditing standards also experienced significant changes over the period. The most profound changes resulted from the Clarity Project undertaken by IAASB in 2004 (IAASB, 2004). The program involved the application of the new drafting conventions to all the ISAs and substantive revisions to several ISAs. The new drafting rules require the setting of objectives for each ISA and the structuring of each standard to contain the introduction, objectives, mandatory requirements, application guidance, and definition of main terms used in the standard. This fosters clarity and makes the standards easier to read and apply, removing much of the ambiguity that may previously have been present (IAASB, 2009).

An audit report that clearly conveys the results of an audit can enhance the audit quality, while additional disclosures in the audit report may influence the quality of audit in a positive manner as well. The current audit-report reforms complement prior changes in the audit-reporting framework to enhance audit quality and value.

2.2.2 Current Reforms

The current audit-report reforms of the IAASB include enhancements to the report's content and structure. The details of the reforms and the relevant auditing standards are presented in Table 2.1. In particular, the reforms include: (a) the communication of KAMs in a new section of the audit report; (b) the disclosure of the name of the audit-engagement partner; (c) the presentation of the opinion and basis of opinion section before all other sections; (d) enhanced auditor reporting on going concern; (e) an affirmative statement that the auditor is independent of the entity and has fulfilled the relevant ethical responsibilities, with the disclosure of jurisdiction of origin of those ethical requirements or reference to the *International Ethics Standards Board for Accountants (IESBA) Code of Ethics for Professional Accountants*; and (f) a new section addressing the responsibility of management and the auditor for other information in the annual report, and the auditor's conclusions about the consistency of other information with the audited financial statement.

The motivation behind the reforms undertaken by the IAASB is to enhance the informative value of the audit report by providing additional information relevant to the audit. The IAASB also expects that these reforms will positively influence the quality of audits.

<Insert Table 2.1 about here>

2.2.3 Reforms in Other Prominent Countries

A number of national auditing standard-setters have also revised the audit report in their respective jurisdictions in the past five years (see Table 2.2 for examples). In the United Kingdom (U.K.), for example, the FRC was the first to issue changes to the content of the audit report, in June 2013. The revised audit report was designed to complement changes made to the U.K. corporate governance code in October 2012 (United Kingdom Financial Reporting Council (U.K. FRC) 2013). The European Commission (E.C.) adopted major changes to audit market regulation through new legislation (Directive 2014/56/EU and Regulation No. 537/2014) (European Parliament and the Council of the European Union, 2014). Both the U.K. FRC and the E.C. have espoused ISAs as the base auditing standards in their respective jurisdictions.

Table 2.2 shows that both the PCAOB and U.K. FRC has either proposed or adopted disclosures similar to the key audit matter paragraph. The PCAOB refers to KAMs as critical audit matters. The proposed content of critical audit matter paragraphs is similar to that of key audit matter paragraphs. The U.K. FRC, on the other hand, requires auditors to report significant audit judgements to the audit committee. The audit committee reports its activities, including its communication with the auditor, to the board of directors. The board is then required to describe the work of the audit committee in the annual report. If the description of the audit committee's work is inadequate, the auditor is then required to address the relevant issues in the audit report (U.K. FRC, 2013).

Another common reform across many jurisdictions is the disclosure of the name of the audit-engagement partner. The E.C. and the U.K. FRC, along with other jurisdictions such as Australia, China, Taiwan, and Malaysia, took the lead on this reform, and have had this requirement for more than a decade (Carcello & Li, 2013).

A number of prominent national standard-setters also have unique requirements for the audit report. For example, for a decade or more PCAOB audits have required the reporting of the auditor's opinion on internal controls in the audit report or in a separate report. Prior studies found that internal control opinions have an impact on users' decisions (Schneider & Church, 2008) and that the market values these reports (Rezaee et al., 2012). On the other hand, there is also evidence that auditor reporting on internal controls is costly for companies (Raghunandan & Rama, 2006). In its proposals, the PCAOB advocates the disclosure of auditor-tenure information. Similar requirements for auditor tenure have been adopted by the U.K. FRC and the E.C. but not by the IAASB.

The U.K. FRC and the E.C. both require the disclosure of enhanced information on risk and materiality in the audit report. This information is useful to users of financial statements (Fisher, 1990; Manson & Zaman, 2001). The E.C. also requires the auditor to disclose the extent to which the audit was capable of detecting irregularities, including fraud. Furthermore, the E.C. mandates a declaration by the auditor in the audit report that no prohibited non-audit services have been provided to the client. Both the U.K. and the E.C. will eventually adopt the revised ISAs, and as a result, the various IAASB reforms will be adopted in these jurisdictions along with the reforms already implemented by these standard-setters.

The PCAOB in the U.S. has issued two EDs on audit report reforms, but they are still under consideration at this stage (PCAOB, 2013a; 2013b).

In Australia, the AUASB issued ED 01/15 on 30 April 2015. This ED presented the enhanced auditor reporting standards of the IAASB for consideration by constituents in Australia. The views of constituents were sought on a range of issues. A prominent issue was the costs and benefits of adopting enhanced auditor-reporting standards in Australia. In particular, the AUASB requested stakeholders to provide feedback on the anticipated costs of compliance and whether the benefits were likely to outweigh the costs.

<Insert Table 2.2 about here>

2.3 PRIOR RESEARCH

Limited research has been conducted on the effectiveness of the reforms as a means of enhancing audit quality and value, and only piecemeal evidence exists on some of the reforms. For example, Christensen et al. (2014) and Sirois et al. (2014) provided evidence that the key audit matter paragraph enhances the informational value of the audit report.[4] In particular, Christensen et al. (2014) reported that the key audit matter paragraph centred on fair value estimates influences the decisions of nonprofessional investors, while Sirois et al. (2014) indicated that key audit matter paragraphs improve users' search for information in the financial statements by directing their attention to particular disclosures.

Capital market-based studies show that key audit matter paragraphs do not have a significant effect on market participants. For example, Bedard et al. (2014) examined the market reaction to the release of audit reports containing the justification of assessments in France.[5] They examined cumulative abnormal returns around the date on which the audit reports containing the justification of assessments were released. The results show that the introduction of justification of assessments has no impact on the reaction of the financial market. The difference in findings between Christensen et al. (2014) and Bedard et al. (2014) could be due to the fact that the two studies examine similar yet not the same disclosures. Christensen et al. (2014) conducted an experiment with nonprofessional investors as decision-makers, while Bedard et al. (2014) examined the market reaction, summarising the decisions of a wide range of investors that included professional and nonprofessional investors. Prior research also shows that nonprofessional and professional investors acquire and use information very differently (Frederickson & Miller, 2004; Elliott, 2006; Hodge & Pronk, 2006). This may indicate that key audit matter paragraphs impact differently on professional and nonprofessional investors, which has important implications for the value of the additional disclosures in the audit report.

From an audit-quality perspective, Sirois et al. (2014) indicated that key audit matter paragraphs have a negative impact on the perceptions of users on the disclosures in the financial statement. The presence of these paragraphs causes confusion among users on the level of assurance provided by the audit report, and they also tend to ascribe different degrees of assurance across various components of the financial statements based on the contents of

[4] Christensen et al. (2014) based their study on reforms under consideration in the U.S. by the PCAOB. The PCAOB has proposed the disclosure of critical audit matter paragraphs, which are similar to key audit matter paragraphs. They acknowledged that due to the similarities between the critical and key audit matter paragraphs, the inferences from their study apply equally well to key audit matter paragraphs.

[5] In France, auditors were required from 2003 onwards to justify the findings made during the audit in the audit report. These justifications of auditors' assessments are very similar to key audit matter paragraphs. They are disclosed in a separate section of the audit report and must enable the user of the report to better understand the audit opinion presented. In addition, the justification of assessments generally relates to important matters, and selection and disclosure is based on the professional judgment of the auditor.

the key audit matter paragraphs (Sirois et al., 2014). Users may, therefore, express lower confidence in financial statement disclosures that are discussed in key audit matter paragraphs. For example, Kachelmeier et al. (2014) report that users treat key audit matter paragraphs as disclaimers for parts of the financial statement.[6] They find that financial statement users express less confidence and ascribe lower auditor responsibility for a misstatement in a financial statement area disclosed as a key audit matter in the auditor's report. Generally, the evidence from these studies suggests that the disclosure of key audit matter paragraphs is detrimental to perceived audit quality.

Cade and Hodge (2014) show that in a setting where key audit matter paragraphs are publicly reported, the client and its officers minimise the sharing of private information with the auditor. This action is likely to increase information asymmetry between the auditor and the auditee. Clear and effective two-way communication is not only important but is prescribed as necessary for effective audits. A breakdown in communication between management and the auditor, or a situation in which management deliberately conceals information from the auditor to minimise auditor reporting of KAMs, may have a detrimental impact on audit quality. However, a study of the justification of assessments disclosure in French audit reports shows that it has no significant impact on audit quality as measured by the level of earnings management (Bedard et al., 2014). The influence of key audit matter paragraphs on audit quality is obscure, and given the limited empirical evidence, it is difficult to conclude whether KAMs would indeed enrich audit quality.

On the other hand, recent evidence from capital market-based studies suggests that the name of the audit-engagement partner has informational value. Knechel et al. (2015) showed that the market recognises and reacts to differences in auditor-reporting style. For example, the credit market imposes higher interest rates and worse credit ratings, while the equity market attributes a lower value to a firm's stocks when audit partners have a history of aggressive reporting. Furthermore, audit committee members, analysts, and fund managers perceive that individual auditor attributes are more important than audit firm attributes (Kilgore et al., 2011). Since the market recognises differences between auditors and reacts accordingly, and users perceive auditor attributes as being more important than audit-firm attributes, the information on the identity of the audit-engagement partner may have significant value.

[6] Similar to Sirois et al. (2014), Kachelmeier et al. (2014) based their study on reforms under consideration in the U.S. by the PCAOB. The PCAOB has proposed the disclosure of critical audit matter paragraphs, which are similar to key audit matter paragraphs.

It has also been argued that disclosing the audit-engagement partner's name will increase their accountability and transparency (King et al., 2012). While audit-engagement partners have always been accountable and subject to monitoring within the audit firm and externally through accounting oversight bodies, the identity of the partner was only observable to a few parties (Carcello & Li, 2013). Identifying the audit-engagement partner to a much larger audience will motivate the partner to improve audit quality to avoid the adverse consequences of audit failure. For example, Carcello and Li (2013) show that in the U.K., disclosure of the audit-engagement partner's name leads to a better quality audit. The findings indicate that compared to the pre-disclosure period, abnormal accruals decline and the incidence of qualified audit reports increases in the post-disclosure period. Both are indicators of better audit quality, and the results support the propositions in King et al. (2012).

Users of audit reports and other stakeholders support the public disclosure of the audit-engagement partner's name and agree that it enhances auditor accountability (Yen et al., 2013). In the Netherlands, however, Blay et al. (2014) found no significant improvements in various measures of audit quality in the post-audit engagement partner signature period compared to the pre-signature period. The difference between the findings in Carcello and Li (2013) and Blay et al. (2014) could be due to the context in which they examined the impact of the audit partner signature on audit quality. The U.K. is characterised by higher legal liability for auditors because its legal environment is more litigious than that of the Netherlands (Brown et al., 2014). The Netherlands scores zero on a six-point scale measuring the level of litigation risk, while the U.K. scores six; therefore, auditors in the U.K. have a greater motivation to improve audit quality in an environment where their identity is publicly disclosed.

Research and anecdotal evidence indicate that the audit-report reforms are expected to increase audit costs. Prior research provides evidence of significant costs associated with changes in accounting and auditing standards and regulations for both auditors and audited entities (Kim et al., 2012; De George et al., 2013). The additional costs are primarily attributable to the increase in audit effort and audit risk (Ghosh & Pawlewicz, 2009). For example, Carcello and Li (2013) examined changes in the audit fees of U.K. companies from the pre-signature to the post-signature period following the implementation of the auditor signature requirement. Their findings reveal that audit fees increased by approximately 13 percent as a result of the requirement.

In France, on the other hand, Bedard et al. (2014) showed that neither audit cost nor the time taken to issue the audit report was significantly influenced by the reporting of the justification of assessments. As discussed earlier, the context in which the study was undertaken may have affected the results obtained. The level of litigation risk in France is lower than it is in countries like the U.K., the U.S., and Australia (Brown et al., 2014). Furthermore, France ranks lower than these jurisdictions on another important dimension: the strictness with which standards are enforced (Brown et al., 2014). Therefore, French auditors may be less motivated to increase audit effort or reduce audit risk by undertaking the additional audit work required to report on additional information in the audit report than are auditors in jurisdictions with higher litigation risk.

The impact of key audit matter paragraphs on the legal liability of auditors is mixed, with some studies showing that such disclosures have no impact, or that auditor liability is reduced, while others showing that auditor liability in certain contexts is higher. Brasel et al. (2016) showed that assessors of auditor liability experienced fewer negative emotional reactions to auditors when auditors have previously disclosed KAMs that relate to undetected misstatements. They also find that in certain circumstances, the disclosure of KAMs decreases the assessment of auditor liability. Gimbar et al. (2016) find that the disclosure of key audit matter paragraphs, whether related or unrelated to an undetected misstatement, leads to an increase in the legal liability of auditors in a rules-based setting but not in a principles-based setting. Backof et al. (2014) confirm that the disclosure of key audit matter paragraphs increases the legal liability of auditors, but only when the key audit matter paragraph contains a description of the specific audit procedures that the auditor must perform to address the identified matter. In all other circumstances, key audit matter paragraphs do not significantly affect the likelihood of an assumption of auditor negligence (Backof et al., 2014).

It is evident from prior studies that the disclosure of key audit matter paragraphs will impact auditor liability differently, depending on such factors as the type of standards in use and the information that will be disclosed in the KAM. This reaffirms the earlier conclusion that the context in which these reforms are implemented will be important in shaping their influence on the profession.

2.4 RESEARCH METHOD

A content analysis was conducted on the comment letters that were written in response to the IAASB ED *Reporting on Audited Financial Statements: Proposed New and Revised International Standards on Auditing* issued in July 2013. A total of 138 comment letters were analysed from a range of respondents. The content analysis was used to determine the perceptions of auditors, preparers and users on the implications of the audit-report reforms.

The comment letters were coded according to their overall agreement with each of the six major reform initiatives. The comment letters were divided into those that supported, opposed, or expressed no opinion on the reform.[7] Table 2.3 summarises the stakeholder group affiliation of the respondents and their overall position on each of the six audit report reforms. The grouping categories and designations supplied by the IAASB was used in this study. The IAASB divides respondents into 10 groups: investors and analysts, those charged with governance (TCWG), regulators and audit oversight bodies, national standard setters, accounting firms, public sector auditors, preparers, member bodies and other professional organisations, academics, and individuals and others.

Member bodies and other professional organisations comprise the largest block of respondents, generating 30 percent of the total number of letters. This is not surprising since the member bodies make up the International Federation of Accountants (IFAC) and the IAASB is an independent standard setting Board of IFAC. In addition, the member bodies and other professional organisations represent accountants and auditors, a group significantly affected by the changes to the audit report. A total of 16 (12 percent) accounting firms submitted comment letters, including all of the Big 4 accounting firms. A surprising 10 percent of comment letters were written by public-sector auditors, even though the changes are not related to public-sector auditing standards. Another 12 percent of letters were from regulators and audit-oversight bodies. National standard setters and investors and analysts each submitted nine percent of comment letters. Preparers contributed six percent of the total number of letters. Academics and individuals contributed six percent and five percent of comment letters, respectively. Overall, these participation rates are consistent with prior studies using comment letter analysis (Tandy & Wilburn, 1992).

[7] Krippendorff's Alpha for intercoder reliability ranged from KALPHA 0.71 to 1.00.

Table 2.4 summarises the geographical location and overall position of the respondents. The 138 respondents to the ED are from 42 different countries. This is not surprising, considering that the IAASB standards are used in more than 120 countries (IAASB, 2012). Twenty percent of the comment letters (the largest cohort) were written by global organisations and entities, including the Big 4 accounting firms, followed by the U.S. (10 percent), Canada (eight percent) and Australia (seven percent).

<Insert Table 2.3 and Table 2.4 about here>

2.5 PREPARERS', AUDITORS' AND USERS' PERCEPTIONS OF THE AUDIT REFORMS

A significant number of respondents indicated that the IAASB's audit-report reforms are important and timely. The perception of many respondents is summarised in the remarks made by the AUASB (2013: 1):

> Exploring options that may help reduce the 'expectation gap', and achieve reporting that better meets users' information needs and aims to enhance the relevance of the audit is clearly in the interests of users, preparers, auditors and others involved in financial reporting.

Similar sentiments are shared by PwC (2013: 1) in their comment letter:

> We fully support the IAASB's initiative to expand auditor's reports to make them more informative by sharing insight from the audit. Such expanded reports would help to reaffirm the relevance and value of the audit to users.

Although there is a high level of support for audit-report reforms, there are significant differences in the level of support for each of the six major audit-report changes. Differences also exist between stakeholder groups and respondents from different geographical locations.

Table 2.3 shows that 80 percent of respondents supported the communication of KAM through the audit report. A number of respondents within this 80 percent gave only partial support, i.e., they supported the idea of auditors providing more audit-related information, but they had reservations about how this would be executed and the potential costs and benefits of this requirement. The ICAA (2013: 3) provides a typical example of such a claim:

> We believe that the inclusion of KAM, if done well, in the auditor's report has the potential to increase the value of the audit to the users by increasing their awareness of significant matters that the auditor addressed during the audit and by increasing their understanding of the work performed by the auditor. However, this benefit needs to be evaluated in terms of costs. There were a number of other common issues and concerns about the usefulness of KAM raised by members during our consultations.

Sixty-two percent of respondents unilaterally supported the changes for enhanced auditor reporting on going concern. The final standard and the ED differ in one aspect of auditor reporting on going concern. The ED required auditors to present a separate section on going concern in the audit report in all circumstances, while the final standard only requires a separate section if material uncertainties related to going concern exist and are adequately disclosed in the financial statements. Many respondents expressed an explicit preference for exceptions-based reporting on going concern, and eventually this was adopted in the final standards.

The affirmative statement on auditor independence and fulfilment of relevant ethical responsibilities with the disclosure of jurisdiction of origin of these requirements received 63 percent affirmative responses. The ED proposed that the auditor should disclose the sources of all ethical pronouncements that were applicable in an audit. However, it was clear that practical difficulties would arise as a result of identifying and disclosing a relatively long list of such applicable pronouncements, particularly for consolidated financial statements with multiple subsidiaries located across different political boundaries. Consequently, IAASB decided to only require the disclosure of the jurisdiction of origin of the ethical requirements that were applicable for an audit or a reference to the IESBA's *Code of Ethics for Professional Accountants*.

Sixty-seven percent of respondents supported the disclosure of the name of the audit engagement partner. The other two reforms received less than majority support from the respondents. The first of the two requires the auditor to place the audit opinion in a prominent location in the audit report. Only 41 percent of respondents expressed unilateral support for this reform. The second reform requires the auditor to present any inconsistencies found in their consideration of other information in the annual report in a separate section of the audit report. This initiative received only 48 percent unilateral affirmative responses.

Table 2.3 also reveals that the majority of preparers were in disagreement with all six key changes. Prior research provides evidence that preparers are opportunistically motivated and are more likely to lobby for a reform if it maximises their economic self-interest (Watts & Zimmerman, 1978; Francis, 1987; Booth & Cocks, 1990; Tandy & Wilburn, 1996). It is also argued that preparers have a tendency to favour changes in accounting and auditing standards that reduce their political exposure and oppose those that increase their exposure (Georgiou, 2005). The reforms to the audit report would increase auditor reporting on KAMs and going concern, and would also require the prominent placement of the audit opinion. In addition, auditor reporting on inconsistencies between other information in the annual report and the audited financial statements is not an alluring proposition for preparers. Each of these changes would increase audit fees, and in some cases might increase the political exposure of the audited entities. This indicates that the preparers voted in self-interest when they opposed many of the key reform initiatives.

The position taken by the accounting member bodies and other professional organisations are largely consistent with the position taken by their constituents – accountants and accounting firms. Accounting firms overwhelmingly support all six key reforms, while the accounting professional-member bodies support five. The only difference in their view is on the placement of the auditor's opinion, which the majority (56 percent) of accounting firms support and the accounting professional-membership bodies view ambivalently.

All the Big 4 accounting firms strongly supported the reforms, with the exception of the naming of the audit-engagement partner, which three of the four firms opposed. The results related to the views of accounting firms and accounting professional-member bodies is largely consistent with prior research on lobbying behaviour, which concludes that trade organisations, such as accounting-member bodies, will lobby on behalf of their members by taking the majority view of their members (Sutton, 1984; Lindahl, 1987; Tutticci et al., 1994; Stenka & Taylor, 2010). Puro (1984) proposes that professional respondents such as accounting firms and accounting professional-member bodies will promote accounting changes that increase disclosure requirements, one reason being that increased disclosure requirements can increase the fees that these professional firms charge their clients. Research evidence confirms that following significant changes in regulations and accounting standards, accounting firms have benefitted economically through increased audit fees (Ghosh & Pawlewicz, 2009; Kim et al., 2012).

The users (investors and analysts), although a small group, strongly support four of the six reform initiatives, namely the KAMs, enhanced auditor reporting on going concern, affirmative statement on auditor independence, and disclosure of the name of the audit-engagement partner. The users do not unilaterally oppose the prominent placement of the auditor's opinion; however, 42 percent refrained from providing an opinion on the issue. Moreover, no users responded to the ED on the sixth reform initiative; thus, this study cannot assess the perception of users on auditor reporting on other information. Users make up only nine percent of the total number of respondents. The low participation of users in the process is not unusual because the economic impact of the reform falls mainly on preparers and auditors. The low participation of users is also consistent with prior research such as Davis and Hay (2012). Since users will not incur significant economic costs but will benefit significantly from these reforms, the users who responded strongly supported the reform initiatives.

Analysis of the voting pattern of respondents across political boundaries shows that there is general consensus on the audit-report changes, although some differences are evident. The data in Table 2.4 shows a high level of consensus supporting the disclosure of KAMs, but there are differences across countries on the voting for auditor reporting on going concern, the affirmative statement on auditor independence, and the disclosure of the name of the audit-engagement partner. The respondents from the two North American countries, the U.S. and Canada, provide less than majority support for the three reforms compared to the respondents from most other countries. There are a number of plausible explanations, including a strict legal liability regime and the economic self-interest of the respondents. For example, the U.S. is considered to be more litigious than other countries (Gul et al., 2013). The disclosure of the name of the audit-engagement partner, which is not a current requirement in the U.S., could lead to higher legal liability exposure for auditors, which might have encouraged respondents from the U.S. to oppose the requirement. A closer look at the data reveals that a high proportion (43 percent) of respondents from the U.S. are accounting firms and member bodies and other professional organisations, which affirms the proposition that respondents from the U.S. opposed the proposals as a result of economic self-interest.

2.6 IMPLICATIONS OF THE AUDIT REFORMS

2.6.1 Informational Value of the Audit Report

One of the shortcomings of the existing audit report is that it does not provide information that users find useful. As a result, numerous recent studies have suggested a range of disclosures in the audit report to fill the information gap (see for example CFA Institute, 2010; Coram et al., 2011; Gray et al., 2011). These studies indicate that investors and other users need more relevant information to facilitate their investment decisions. The current audit reforms aim to meet the needs of the users by providing more relevant information on the audit to be conducted (IAASB, 2015a).

The new audit report will encompass far more information than the existing audit report. The analysis of comment letters suggests that users strongly support the changes that lead to additional information disclosures in the audit report. For instance, 92 percent of investors and analysts supported the key audit matter paragraphs, and 58 percent supported the disclosure of the name of the audit-engagement partner. This suggests that users find the additional information relevant and useful. Similarly, other stakeholders, such as accounting firms and professional-member bodies, also express the opinion that the disclosure of additional information such as KAMs will enhance the informational value of the audit report. E&Y (2014: 2) noted that 'the communication of KAMs in the auditor's report should contribute to enhancing its informational value to all users'.

The additional disclosures, such as KAMs, are valuable because of their uniqueness to each audit (CFA Institute, 2013), but there is a risk that over time, key audit matter paragraphs would evolve into standard boilerplate statements and lose their informational value (AUASB, 2013; The World Bank, 2013). Another area of concern for many respondents to the ED was the impact of additional disclosures on the length of the audit report. The ICAA (2013: 4) points out that:

> …four or more pages [of the audit report] may be off-putting for users to read. Also a report of that length would likely mean the importance of the opinion could be lost. Both of these would negate any value of the additional information.

This issue is even more contentious given that there is evidence that users do not read the entire audit report (Coram et al., 2011).

There is also evidence that users seem to have problems understanding the consideration and use of materiality in audits (Houghton et al., 2011). Further, there are suggestions that users of the audit report would benefit from the disclosure of how materiality is applied in an audit and, more importantly, the level of materiality and how it relates to the level of assurance achieved (Messier et al., 2005). The U.K. FRC sought to include the requirement for auditors to provide such in-depth information on materiality in the audit report (see Table 2.2). However, the new audit report would not provide such in-depth information on materiality.

There are further suggestions from prior research that the internal control reporting mandated by SOX for U.S. companies is useful and relevant (Doyle et al., 2007; Ashbaugh-Skaife et al., 2008; Schneider & Church, 2008). Cheng et al. (2006) found that markets react to the reporting of internal control weaknesses. The results suggest that investors value internal control reporting and capital market reactions, indicating that this report provides new information to the market.

The reaction of respondents to the ED suggests that users and other stakeholders find the additional disclosures relevant and useful, indicating that the expanded information disclosures are likely to influence the informational value of the audit report in a positive manner. Nevertheless, there are a number of issues that national standard-setters should take into consideration when making a decision to adopt these changes into their national auditing standards. They include the risk of firm-specific disclosures, such as KAMs, becoming boilerplate over time, and the potential impact of the additional disclosures on the length of the audit report. This study also provides examples of additional disclosures that have been adopted into the audit reports of companies in jurisdictions such as the U.S. and the U.K. It is anticipated that the informational value of the audit report would be further enhanced by the inclusion of this additional information.

2.6.2 Audit Quality and Public Confidence

Audit quality is a complex and multi-faceted concept, and different stakeholders have different perspectives on it (Kilgore et al., 2014). The audit report and related auditor communications can influence audit quality; thus, an audit report that clearly conveys the outcome of an audit is likely to positively influence audit quality (Knechel et al., 2013).

There are divergent views amongst respondents to the ED as to whether the new audit report will improve audit quality. Some observe that the improvements to the audit report will enhance both actual and perceived audit quality, while others believe that actual audit quality may decline despite users' perception that audit quality has improved.

The AUASB (2013) opines that the introduction of KAMs will positively affect the quality of the financial reporting process. The CFA Institute (2013: 5) also believes that 'the engagement partner's name improves transparency for users and perhaps more importantly, instils a greater sense of responsibility and accountability which ultimately translates to improved audit quality'. Similarly, the auditor's affirmative statement that the auditor is independent of the entity being audited increases the level of transparency, which would positively influence audit quality.

The process by which enhanced audit-report disclosures, such as KAMs would influence actual audit quality are reflected in the comments of Deloitte Touche Tohmatsu Limited (2013: 2) in their comment letter:

> …auditor focus on KAMs will also drive enhanced attention by management and TCWG on the importance of informative and complete financial statement disclosures and the effectiveness of internal control over financial reporting, thereby setting the stage for improvement in the overall quality of financial reporting …the proposed changes may also positively impact audit quality, including providing an opportunity for auditors to further demonstrate use of professional scepticism, one of the important indicators of audit quality.

In contrast, those who argue that the additional disclosures in the audit report will not improve audit quality offer a number of counter-arguments. A national accounting firm in Australia points out that the reporting of KAMs can become a key consideration in audit tendering and replacement of auditors, and such pressures would not promote audit quality (Pitcher Partners, 2013). The Big 4 and other international accounting firms are firmly opposed to the disclosure of the name of the audit-engagement partner and are overly sceptical about the effects of the information on audit quality. E&Y (2014) and BDO International Limited (2013: 9) argued that 'the disclosure of the name of the engagement partner in the auditor's report does not add to the quality of the audit and may result in unintended or negative consequences'. However, the unintended or negative consequences that may arise from the disclosure of the name of the audit-engagement partner are not identified.

Another common argument is that the disclosure of information such as KAMs will consume time and require the attention of senior auditors. This would divert auditors' attention from critical audit work to non-critical determination and wording of key audit matter paragraphs, which would negatively influence audit quality (Deloitte Touche Tohmatsu Limited, 2013; Pitcher Partners, 2013). Auditors can eliminate this problem by allocating more hours to an audit, which would likely increase audit costs and consequently audit fees, and which is discussed in the next section.

Recent research provides direct evidence of the impact of key audit matter paragraphs on audit quality. Contrary to the standard-setters' expectations, the communication of additional information is associated with lower-perceived audit quality and a perception that the degree of assurance provided by the auditor differs across components of the financial statements (Sirois et al., 2014). This study has important implications for audit quality and the audit expectation gap. It supports earlier suggestions by the AUASB that the disclosure of KAMs may confuse users of the audit report (AUASB, 2013: 3).

Evidence on the audit-quality implications of the disclosure of the audit-engagement partner's name in the audit report is also mixed. Some studies find that financial reporting quality improves after auditors have signed the audit report (Carcello & Li, 2013; Yen et al., 2013), while others provide evidence to the contrary (Blay et al., 2014).

There are mixed views on the influence that the audit-report reforms will have on audit quality. Recent research supports the view that the additional information in the form of KAMs will have negative consequences for perceived audit quality, while the results on the effect of public disclosure of the audit-engagement partner's name on audit quality are inconclusive. Therefore, this study concludes that the influence of the current reforms on audit quality is unclear.

2.6.3 Implications for Audit Costs, Auditor's Legal Liability and Audit Practice

Audit costs are directly related to the extent of the resources consumed in conducting an audit. Changes in auditing standards and related legislations can have a significant impact on audit costs. Audit-service suppliers and other stakeholders concede that audit costs are most likely to increase following the implementation of the current audit report reforms. The comment of Pitcher Partners (2013: 9) in response to the ED sums up the views of numerous stakeholders with respect to the impact of reforms on the cost of audits:

> …the proposed auditor reporting requirements will introduce considerable additional costs for the audit firm while the benefits anticipated are not entirely clear. When there are any modifications to the auditor's report under the current reporting regime, significant time is needed for internal consultations with the engagement quality control review partner (EQCR), technical and other experts, and practice risk management, and then significant further time for consultation with the client. The time taken to finalise an auditor's report is rarely recoverable in the audit fees charged.

If audit costs increase, they will be passed on to clients in the form of higher audit fees. Audit costs are not publicly disclosed and therefore are not observable. On the other hand, audit fees are publicly disclosed in the annual reports and other annual filings, where they are easily accessible. As already indicated, prior research reports that following the disclosure of the name of the audit-engagement partner in the audit report, audit fees for firms rose by almost 13 percent in the U.K. (Carcello & Li, 2013).

Surprisingly, the Big 4 accounting firms do not comment on the cost of implementation of the changes. The point raised by the Institute of Chartered Accountants of England and Wales (ICAEW, 2013: 3) may provide the reason for this:

> Basic economics suggests that costs will be proportionally higher in the audits of smaller listed entities whose stakeholders, in many cases will be less interested in investing the time and effort required to achieve the benefits of enhanced reporting because they already have the information they need.

The Big 4 firms usually concentrate on and audit larger listed companies, while the smaller listed companies are served by the non-Big 4 firms (Ferguson et al., 2014). The difficulty the non-Big 4 firms would face in passing on additional costs to their clients might be the factor prompting them to raise the issue of additional costs in the comment letters.

The Big 4 firms are able to use the benefits of economies of scale, given the size of their operations, while such advantages resulting from economies of scale are virtually non-existent for non-Big 4 firms. Thus, initial costs such as the cost of updating audit manuals and audit procedures are disproportionately higher for non-Big 4 accounting firms. This explains the issue raised by Pitcher Partners (2013: 9), namely that the impact and cost of implementing changes to their audit methodologies and the cost of training auditors to identify and communicate KAMs may result in their exit from the listed company audit market. The exit of non-Big 4 accounting firms from the listed company audit market has significant implications for audit market competition (Carson et al., 2014).

Financial statement users and national standard-setters believe that the audit-report reforms will only have minimal implications for costs. For example, the CFA Institute (2013) argues that audit firms already identify and consider KAMs; therefore, the requirement of disclosure of these matters in the audit report should lead to only minimal additional costs.

Another, more contentious, issue for audit practice is the exposure of the auditors and audit firms to legal liability. The AUASB (2013: 26) points out that 'Australian practitioners were, in the main, quite concerned that the proposals [auditor reporting reforms] have the potential to cause significant increased exposure to their legal liability'. This issue, they claim, is especially relevant for Australia given auditing standards are legal instruments and as a result, are legally enforceable. In particular, many members of the Australian accounting profession were concerned with the potential for auditor litigation resulting from public disclosure of KAMs (ICAA, 2013: 5).

The Big 4 accounting firms similarly raise concerns about exposure to legal liability. These concerns are adeptly summarised by PwC (2013: 8): 'the judgements auditors are being asked to make in selecting the matters [key audit matters] to communicate are difficult and in many jurisdictions will result in increased legal risk for the profession'. The public disclosure of the audit-engagement partner's name is also likely to increase their legal liability exposure, and this is reflected in the reluctance of respondents from highly litigious countries such as the U.S. to support the reform (see Table 2.4: the majority of U.S. respondents oppose the public disclosure of the audit engagement partner's name). Lastly, ICAA (2013: 5) points out that the increased exposure of auditors to legal liability will potentially increase their professional indemnity insurance costs. This has implications for audit fees, as audit firms and auditors will pass on additional costs to their clients through higher audit fees.

It is evident from the claims of prominent stakeholders that the audit-report reforms have significant implications for audit costs, the auditor's legal liability, and audit practice. Moreover, the changes are most likely to disproportionately affect the costs of audit firms and audited entities based on their size. National auditing standard-setters contemplating the adoption of the revised standards need to consider the issues of audit costs and auditors' legal liability.

2.7 CONCLUSIONS AND IMPLICATIONS

This study investigates the perceptions of prominent stakeholders on the current audit-report reforms and evaluates the implications of the reforms on the informational value of the audit report, audit quality, and audit costs. The findings indicate a high level of overall support for audit-report reforms. However, individual key reforms receive varied levels of support.

The analysis showed significant differences between stakeholder groups in their support for audit-report reforms. The majority of preparers are opposed to all of the key reforms, while accounting firms and professional-member bodies, along with users, offer majority support for the reform initiatives. This study concludes that the differences across stakeholder groups can be explained by their economic self-interest. Preparers will incur significant costs as a result of the reforms, and this motivates their resistance to the changes. On the other hand, accounting firms stand to gain from the reforms through higher fee revenue as requirements increase. Users tend to gain, as well, from additional disclosures in the audit report. Consistent with prior research, professional-member bodies generally support the position of their constituents – in this case, the accountants and accounting firms.

There is also evidence of lobbying in accordance with self-interest across political boundaries; for instance, respondents from the U.S. were highly opposed to the disclosure of the name of the audit-engagement partner. Evidently, disclosure of the audit-engagement partner's name would expose them to higher legal liability, and in a country such as the U.S., which is considered to be highly litigious, the impact of such a reform would have a greater impact on the legal liability of auditors.

The additional disclosures in the audit report positively influence the informational value of the report. However, this value would be diminished if disclosures such as KAMs were to evolve into boilerplate statements over time. The value of the audit report would also be diminished if the report were to become excessively lengthy. Two time-tested disclosures – internal control reporting and enhanced information on materiality – found in the audit reports of companies in jurisdictions such as the U.S. and the U.K. would further enhance the informational value of the audit report.

The implication of the reforms on audit quality – actual and perceived – is not clear. The findings suggest that these reforms would increase the audit costs and legal liability of auditors. The additional costs would eventually be transferred to audit clients in the form of higher fees; however, there are indications that would not be entirely possible, particularly for smaller listed clients. There are also indications that the additional costs of the reforms would fall disproportionately on non-Big 4 accounting firms. The Big 4 are able to take advantage of economies of scale, whereas the non-Big 4 have to operate with limited resources. This outcome will potentially impact the competitiveness and supplier concentration in the listed company audit market, particularly if reforms such as these drive out the non-Big 4 firms.

As with all research of this type, a number of limitations exist. First, the judgement as to what to include and what to omit from the comment letters is subjective. A respondent's views may not be representative of others in their society, and perceptions might change over time as the reforms are adopted and applied across countries. It is also possible that the respondents were not fully informed, or that they provided intentionally misleading responses.

More empirical research is needed on the impact of the audit-report reforms on informational value, audit quality, and costs. Future research could explore how different KAMs affect users' decision-making and perception of audit quality. The implications of the changes to audit costs could be examined through changes in audit fees once the new audit reports become applicable. Experimental studies would be a good way to understand some of the issues and would assist to provide ways in which the audit report could be further improved.

Table 2.1
A Summary of the Significant Audit Report Reforms

Title of the Auditing Standard	Number	Reforms/Changes
Forming an Opinion and Reporting on Financial Statements	ISA 700	• Revises the presentation order of the elements of the auditor's report. Paragraph 23 requires the first section of the auditor's report to include the auditor's opinion. The basis for the opinion section will follow the auditor's opinion. • Prescribes the inclusion of KAMs in the auditor's report, and refers auditors to the new standard, ISA 701, for guidance on the disclosure of KAMs (mandatory for listed entities only, voluntary for other entities). • Enhanced description of auditors' responsibilities for the audit of financial statements. • Requires the engagement partner for audits of financial statements of listed companies to be named and establishes a "harm's way" exemption for the disclosure of the name of the audit engagement partner. • Requires for all auditor reports an explicit statement that the auditor is independent of the entity in accordance with the relevant ethical requirements relating to the audit, and that they have fulfilled all other ethical responsibilities. Also requires the identification of the jurisdiction of the origin of the ethical requirements or a reference to the IESBA *Code of Ethics for Professional Accountants*.
Communicating Key Audit Matters in the Independent Auditor's Report	ISA 701	• This is a new auditing standard. This standard introduces requirements for auditors to determine and communicate KAMs in the auditor's report.
Going Concern	ISA 570	• In cases where material uncertainty exists with respect to the going concern of an entity, the auditor must address this in a separate section of the auditor's report, which is broadly similar to the exceptions-based reporting required in the extant ISA 570. • For all auditor reports, the respective responsibilities of management and the auditor for going concern must be described. • If events and circumstances have been identified that might cast significant doubt on an entity's ability to continue as a going concern but the auditor concludes that no material uncertainties exist, there is a new requirement for the auditor to evaluate the adequacy of disclosure about these events and circumstances in the financial statements in accordance with the applicable financial reporting framework. • An acknowledgement in ISA 701 and ISA 570 that matters related to going concern may be determined to be a KAM.
Modifications to the Opinion in the Independent Auditor's report	ISA 705	• The revised ISA 705 makes it explicit that matters giving rise to the modification of the auditor's opinion are, by their nature, KAMs but are to be reported separately in the Basis for Qualified (or Adverse) Opinion section of the auditor's report. • The revised ISA 705 prohibits the auditor from including additional information on KAMs, going concern or other information about which the auditor disclaims an opinion.
Emphasis of Matter Paragraphs and Other Matter Paragraphs in the Independent Auditor's Report	ISA 706	• This standard was revised as a result of the new ISA 701.
Communicating with Those Charged with Governance	ISA 260	• This standard was revised as a result of the new ISA 701.
The Auditors Responsibilities Relating to Other Information in Documents	ISA 720	• There are other changes in this standard; this study only presents changes that affect the audit report. • Using the heading "Other Information" or other appropriate heading, the auditor's report will include: • A statement that management is responsible for the other information.

Containing Audited Financial Statements	• Identification of the other information obtained prior to the date of the auditor's report. In the case of a listed entity, the auditor is also required to identify any other information expected to be obtained after the date of the auditor's report.
	• A statement that the auditor's opinion does not cover the other information and, accordingly, that the auditor does not express (or will not express) an audit opinion or any form of assurance conclusion thereon.
	• A description of the auditor's responsibilities related to reading, considering and reporting on other information.
	• When other information has been obtained prior to the date of the auditor's report, either:
	  o A statement that the auditor has nothing to report; or
	  o If the auditor has concluded that there is an uncorrected material misstatement of the other information, a statement that describes the uncorrected material misstatement of the other information.

Table 2.2
IAASB's Audit Report Reform Initiatives vs Reforms in Other Prominent Countries

Reform Element	IAASB	United States † (PCAOB)	United Kingdom ‡ (U.K. FRC)	European Commission §
Introduction of a new section in which key/critical audit matters specific to an audit will be communicated.	X	X	X ¶	
Disclosure of the name of the engagement partner.	X	X	X ††	X††
Prominent placement of the audit opinion and the basis of the opinion.	X			
Enhanced auditor reporting on going concern.	X			X
Statement about the auditor's independence and fulfilment of relevant ethical responsibilities, with disclosure of the jurisdiction of origin of those requirements.	X	X		X ‡‡
Enhanced description of the responsibilities of the auditor.	X	X		
Disclosure of information on auditor tenure.		X	X §§	X
Statement regarding the auditor's consideration of other information in the annual report	X	X	X	
Auditor's opinion on internal control		X ¶¶		
Inclusion in the audit scope of how the audit addressed risk and materiality considerations.			X	X
Inclusion of information on the risks of material misstatement.			X	X
Explanation of how the auditor applied the concept of materiality in planning and performing the audit.			X	
Information on the extent to which the audit was capable of detecting irregularities, including fraud.				X
The place where the statutory auditor or audit firm is established.				X

Notes:
† The PCAOB issued the ED on the proposed changes to the auditing standards related to the audit report in 2013. As of April 2015, the PCAOB has yet to issue the final standards.

‡ The U.K. FRC issued revised standards on auditor reporting, based on ISAs, in 2013.

§ The European Commission in April 2014 approved changes to the audit market for E.U. member countries. The ISAs are to be used as auditing standards by the 28 E.U. member states, but additional requirements were prescribed for the audit report in the audit market directive and audit market regulation.

¶ The auditors are required to report if the board fails to adequately describe the work of the audit committee in the annual report.

†† The E.C. adopted the requirement for the statutory auditor (audit engagement partner) to sign the audit report in the Eighth Company Law Directive (Directive 2006/43/EC. European Parliament and the Council of European Union, 2006).

‡‡ In addition to a statement on the auditor's independence, the auditor will need to make a declaration that the non-audit services prohibited under the audit market legislation have not been provided by the auditor. The auditor will also have to provide information on any services rendered in addition to the statutory audit services that have not been disclosed in the management report or financial statements.

§§ The audit committee is required to disclose the length of auditor tenure in its report.

¶¶ This requirement is already in place in the U.S. for listed companies, having been a change espoused in the Sarbanes-Oxley Act (2002).

Table 2.3
Responses to the 2013 IAASB ED on the Audit Report Reforms

	Communicating KAM Information in the Audit Report				Enhanced Reporting on Going Concern and Materiality Uncertainty				Affirmative Statement on Auditor's Independence			
	Frequency (%) of Overall Position				Frequency (%) of Overall Position				Frequency (%) of Overall Position			
ED Respondent Groups	**Support**	**Oppose**	**No Opinion**	**Total**	**Support**	**Oppose**	**No Opinion**	**Total**	**Support**	**Oppose**	**No Opinion**	**Total**
Investors and analysts	11 (92)	1(8)	0(0)	12(9)	9(75)	1(8)	2(17)	12(9)	7(58)	2(17)	3(25)	12(9)
Those charged with governance	1(100)	0(0)	0(0)	1(1)	0(0)	1(100)	0(0)	1(1)	0(0)	0(0)	1(100)	1(1)
Regulators and audit oversight bodies	13(81)	2(13)	1(6)	16(12)	10(63)	5(31)	1(6)	16(12)	12(75)	0(0)	4(25)	16(12)
National standard setters	11(92)	0(0)	1(8)	12(9)	8(67)	4(33)	0(0)	12(9)	7(58)	4(33)	1(9)	12(9)
Accounting firms	13(81)	2(13)	1(6)	16(12)	11(69)	4(25)	1(6)	16(12)	13(81)	0(0)	3(19)	16(12)
Public sector auditors	9(64)	3(21)	2(15)	14(10)	5(36)	9(64)	0(0)	14(10)	7(50)	5(36)	2(14)	14(10)
Preparers	2(22)	7(78)	0(0)	9(6)	2(22)	5(56)	2(22)	9(6)	3(33)	2(22)	4(45)	9(6)
Member bodies and other professional organisations	37(88)	3(7)	2(5)	42(30)	29(69)	11(26)	2(5)	42(30)	31(74)	8(19)	3(7)	42(30)
Academics	7(78)	0(0)	2(22)	9(6)	5(56)	1(11)	3(33)	9(6)	3(33)	1(11)	5(56)	9(6)
Individuals and others	6(86)	1(14)	0(0)	7(5)	6(86)	0(0)	1(14)	7(5)	4(57)	1(14)	2(29)	7(5)
Total	110(80)	19(14)	9(6)	138	85(62)	41(30)	12(8)	138	87(63)	23(17)	28(20)	138

	Naming of Audit Engagement Partner in the Audit Report				Prominent Placement of Audit Opinion (Before all other elements)				Reporting on Other Information in the Annual Report †			
	Frequency (%) of Overall Position				Frequency (%) of Overall Position				Frequency (%) of Overall Position			
ED Respondent Groups	**Support**	**Oppose**	**No Opinion**	**Total**	**Support**	**Oppose**	**No Opinion**	**Total**	**Support**	**Oppose**	**No Opinion**	**Total**
Investors and analysts	7(58)	2(17)	3(25)	12(9)	4(33)	3(25)	5(42)	12(9)	0(0)	0(0)	0(0)	0(0)
Those charged with governance	0(0)	0(0)	1(100)	1(1)	0(0)	0(0)	1(100)	1(1)	0(0)	1(100)	0(0)	1(1)
Regulators and audit oversight bodies	11(69)	0(0)	5(31)	16(12)	4(25)	7(44)	5(31)	16(12)	0(0)	0(0)	9(100)	9(13)
National standard setters	9(75)	3(25)	0(0)	12(9)	4(33)	8(67)	0(0)	12(9)	4(40)	3(30)	3(30)	10(14)
Accounting firms	9(56)	6(38)	1(6)	16(12)	9(56)	4(25)	3(19)	16(12)	8(73)	2(18)	1(9)	11(16)
Public sector auditors	12(86)	0(0)	2(14)	14(10)	8(57)	5(36)	1(7)	14(10)	5(56)	1(11)	3(33)	9(13)
Preparers	3(34)	3(33)	3(33)	9(6)	4(45)	2(22)	3(33)	9(6)	0(0)	1(50)	1(50)	2(3)
Member bodies and other Professional organisations	32(76)	6(14)	4(10)	42(30)	19(45)	19(45)	4(10)	42(30)	16(64)	1(4)	8(32)	25(37)
Academics	4(44)	1(12)	4(44)	9(6)	2(22)	1(11)	6(67)	9(6)	0(0)	0(0)	0(0)	0(0)
Individuals and others	5(72)	1(14)	1(14)	7(5)	3(43)	1(14)	3(43)	7(5)	0(0)	0(0)	2(100)	2(3)
Total	92(67)	22(16)	24(17)	138	57(41)	50(36)	31(23)	138	33(48)	9(13)	27(39)	69

Notes:
† This reform was part of a separate IAASB project and was presented in a separate ED - *The Auditor's Responsibilities Relating to Other Information.* A total of 69 comment letters were received in response to this ED. This study analysed only a portion of these comment letters.

Table 2.4
Responses to the 2013 IAASB ED on the Audit Report Reforms by Geographical Location of Respondents

Geographical location of respondent	Communicating KAM Information in the Audit Report — Frequency (%) of Overall Position				Enhanced Reporting on Going Concern and Materiality Uncertainty — Frequency (%) of Overall Position				Affirmative Statement on Auditor's Independence — Frequency (%) of Overall Position			
	Support	Oppose	No Opinion	Total	Support	Oppose	No Opinion	Total	Support	Oppose	No Opinion	Total
Argentina	1(50)	1(50)	0(0)	2(1)	1(50)	0(0)	1(50)	2(1)	1(50)	0(0)	1(50)	2(1)
Australia	6(60)	3(30)	1(10)	10(7)	5(50)	5(50)	0(0)	10(7)	7(70)	2(20)	1(10)	10(7)
Brazil	2(100)	0(0)	0(0)	2(1)	2(100)	0(0)	0(0)	2(1)	2(100)	0(0)	0(0)	2(1)
Canada	8(73)	3(27)	0(0)	11(8)	0(0)	10(91)	1(9)	11(8)	3(27)	3(27)	5(46)	11(8)
China	1(100)	0(0)	0(0)	1(1)	0(0)	1(100)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)
Czech Republic	1(100)	0(0)	0(0)	1(1)	0(0)	1(100)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)
Denmark	1(50)	1(50)	0(0)	2(1)	1(50)	1(50)	0(0)	2(1)	1(50)	1(50)	0(0)	2(1)
Dubai	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)
EU	6(86)	0(0)	1(14)	7(5)	5(71)	0(0)	2(29)	7(5)	5(71)	0(0)	2(29)	7(5)
Finland	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)
France	2(100)	0(0)	0(0)	2(1)	2(100)	0(0)	0(0)	2(1)	1(50)	1(50)	0(0)	2(1)
Germany	3(75)	0(0)	1(25)	4(3)	3(75)	0(0)	1(25)	4(3)	2(50)	0(0)	2(50)	4(3)
Ghana	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)
Global	24(86)	2(7)	2(7)	28(20)	21(75)	5(18)	2(7)	28(20)	22(79)	2(7)	4(14)	28(20)
HK	2(50)	1(25)	1(25)	4(3)	1(25)	2(50)	1(25)	4(3)	1(25)	1(25)	2(50)	4(3)
India	1(100)	0(0)	0(0)	1(1)	0(0)	0(0)	1(100)	1(1)	0(0)	0(0)	1(100)	1(1)
Ireland	2(100)	0(0)	0(0)	2(1)	2(100)	0(0)	0(0)	2(1)	1(50)	1(50)	0(0)	2(1)
Italy	1(100)	0(0)	0(0)	1(1)	0(0)	1(100)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)
Japan	2(100)	0(0)	0(0)	2(1)	1(50)	1(50)	0(0)	2(1)	1(50)	1(50)	0(0)	2(1)
Kenya	2(100)	0(0)	0(0)	2(1)	2(100)	0(0)	0(0)	2(1)	2(100)	0(0)	0(0)	2(1)
Korea	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)
Malaysia	2(100)	0(0)	0(0)	2(1)	2(100)	0(0)	0(0)	2(1)	1(50)	1(50)	0(0)	2(1)
Malta	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)
Mexico	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)	0(0)	1(100)	0(0)	1(1)
Netherlands	4(100)	0(0)	0(0)	4(3)	4(100)	0(0)	0(0)	4(3)	2(50)	2(50)	0(0)	4(3)
New Zealand	3(75)	0(0)	1(25)	4(3)	4(100)	0(0)	0(0)	4(3)	4(100)	0(0)	0(0)	4(3)
Nigeria	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)
Norway	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)
Pakistan	2(100)	0(0)	0(0)	2(1)	2(100)	0(0)	0(0)	2(1)	1(50)	0(0)	1(50)	2(1)
Regional - South America	0(0)	1(100)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)	0(0)	1(100)	0(0)	1(1)
Russia	0(0)	0(0)	1(100)	1(1)	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)
Scotland	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)	0(0)	1(100)	0(0)	1(1)
Singapore	1(100)	0(0)	0(0)	1(1)	0(0)	1(100)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)
South Africa	3(60)	2(40)	0(0)	5(3)	0(0)	5(100)	0(0)	5(3)	3(60)	1(20)	1(20)	5(3)
Spain	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)
Sweden	2(100)	0(0)	0(0)	2(1)	1(50)	1(50)	0(0)	2(1)	2(100)	0(0)	0(0)	2(1)
Switzerland	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)
Thailand	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)
U.K.	5(83)	1(17)	0(0)	6(4)	5(83)	1(17)	0(0)	6(4)	6(100)	0(0)	0(0)	6(4)

Table 2.4 Continued
Responses to the 2013 IAASB ED on the Audit Report Reforms by Geographical Location of Respondents

	Communicating KAM Information in the Audit Report				Enhanced Reporting on Going Concern and Materiality Uncertainty				Affirmative Statement on Auditor's Independence			
	Frequency (%) of Overall Position				Frequency (%) of Overall Position				Frequency (%) of Overall Position			
Geographical location of respondent	Support	Oppose	No Opinion	Total	Support	Oppose	No Opinion	Total	Support	Oppose	No Opinion	Total
U.S.	10(71)	4(29)	0(0)	14(10)	5(36)	6(43)	3(21)	14(10)	2(14)	4(29)	8(57)	14(10)
Zambia	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)
Zimbabwe	0(0)	0(0)	1(100)	1(1)	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)
Total	110(80)	19(14)	9(6)	138	85(62)	41(30)	12(8)	138	87(63)	23(17)	28(20)	138

	Naming of Audit Engagement Partner in the Audit Report				Prominent Placement of Audit Opinion (Before all other elements)				Reporting on Other Information in the Annual Report †			
	Frequency (%) of Overall Position				Frequency (%) of Overall Position				Frequency (%) of Overall Position			
Geographical location of respondent	Support	Oppose	No Opinion	Total	Support	Oppose	No Opinion	Total	Support	Oppose	No Opinion	Total
Argentina	1(50)	0(0)	1(50)	2(1)	1(50)	0(0)	1(50)	2(1)	0(0)	0(0)	0(0)	0(0)
Australia	9(90)	0(0)	1(10)	10(7)	5(50)	3(30)	2(20)	10(7)	0(0)	2(50)	2(50)	4(6)
Brazil	2(100)	0(0)	0(0)	2(1)	1(50)	1(50)	0(0)	2(1)	1(100)	0(0)	0(0)	1(1.5)
Canada	5(45)	1(10)	5(45)	11(8)	3(27)	3(27)	5(46)	11(8)	1(25)	2(50)	1(25)	4(6)
China	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)	0(0)	0(0)	0(0)	0(0)
Czech Republic	1(100)	0(0)	0(0)	1(1)	0(0)	1(100)	0(0)	1(1)	0(0)	0(0)	0(0)	0(0)
Denmark	1(50)	1(50)	0(0)	2(1)	0(0)	1(50)	1(50)	2(1)	0(0)	0(0)	0(0)	0(0)
Dubai	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)	0(0)	0(0)	0(0)	0(0)
E.U.	5(71)	0(0)	2(29)	7(5)	2(29)	3(42)	2(29)	7(5)	8(62)	1(8)	4(30)	13(19)
Finland	1(100)	0(0)	0(0)	1(1)	0(0)	1(100)	0(0)	1(1)	0(0)	0(0)	0(0)	0(0)
France	1(50)	1(50)	0(0)	2(1)	1(50)	1(50)	0(0)	2(1)	0(0)	0(0)	0(0)	0(0)
Germany	3(75)	0(0)	1(25)	4(3)	0(0)	2(50)	2(50)	4(3)	1(100)	0(0)	0(0)	1(1.5)
Ghana	1(100)	0(0)	0(0)	1(1)	0(0)	0(0)	1(100)	1(1)	1(100)	0(0)	0(0)	1(1.5)
Global	15(54)	7(25)	6(21)	28(20)	14(50)	8(29)	6(21)	28(20)	10(59)	1(6)	6(35)	17(25)
HK	1(25)	1(25)	2(50)	4(3)	1(25)	0(0)	3(75)	4(3)	0(0)	1(100)	0(0)	1(1.5)
India	0(0)	0(0)	1(100)	1(1)	0(0)	0(0)	1(100)	1(1)	0(0)	0(0)	0(0)	0(0)
Ireland	2(100)	0(0)	0(0)	2(1)	1(50)	1(50)	0(0)	2(1)	0(0)	0(0)	0(0)	0(0)
Italy	1(100)	0(0)	0(0)	1(1)	0(0)	1(100)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1.5)
Japan	2(100)	0(0)	0(0)	2(1)	2(100)	0(0)	0(0)	2(1)	0(0)	0(0)	1(100)	1(1.5)
Kenya	1(50)	1(50)	0(0)	2(1)	1(50)	1(50)	0(0)	2(1)	0(0)	0(0)	0(0)	0(0)
Korea	1(100)	0(0)	0(0)	1(1)	0(0)	1(100)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1.5)
Malaysia	2(100)	0(0)	0(0)	2(1)	1(50)	1(50)	0(0)	2(1)	0(0)	0(0)	3(100)	3(4)
Malta	1(100)	0(0)	0(0)	1(1)	0(0)	1(100)	0(0)	1(1)	0(0)	0(0)	0(0)	0(0)
Mexico	1(100)	0(0)	0(0)	1(1)	0(0)	1(100)	0(0)	1(1)	0(0)	0(0)	0(0)	0(0)
Netherlands	3(75)	1(25)	0(0)	4(3)	1(25)	3(75)	0(0)	4(3)	0(0)	0(0)	1(100)	1(1.5)
New Zealand	3(75)	0(0)	1(25)	4(3)	2(50)	2(50)	0(0)	4(3)	0(0)	0(0)	2(100)	2(3)
Nigeria	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)
Norway	1(100)	0(0)	0(0)	1(1)	0(0)	1(100)	0(0)	1(1)	0(0)	0(0)	0(0)	0(0)
Pakistan	2(100)	0(0)	0(0)	2(1)	2(100)	0(0)	0(0)	2(1)	1(50)	0(0)	1(50)	2(3)
Regional - South America	1(100)	0(0)	0(0)	1(1)	0(0)	1(100)	0(0)	1(1)	0(0)	0(0)	0(0)	0(0)
Russia	1(100)	0(0)	0(0)	1(1)	0(0)	1(100)	0(0)	1(1)	0(0)	0(0)	0(0)	0(0)

Table 2.4 Continued
Responses to the 2013 IAASB ED on the Audit Report Reforms by Geographical Location of Respondents

	Naming of Audit Engagement Partner in the Audit Report				Prominent Placement of Audit Opinion (Before all other elements)				Reporting on Other Information in the Annual Report †			
	Frequency (%) of Overall Position				Frequency (%) of Overall Position				Frequency (%) of Overall Position			
Geographical location of respondent	Support	Oppose	No Opinion	Total	Support	Oppose	No Opinion	Total	Support	Oppose	No Opinion	Total
Scotland	1(100)	0(0)	0(0)	1(1)	0(0)	1(100)	0(0)	1(1)	0(0)	0(0)	0(0)	0(0)
Singapore	1(100)	0(0)	0(0)	1(1)	0(0)	1(100)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)
South Africa	3(60)	1(20)	1(20)	5(3)	1(20)	4(80)	0(0)	5(3)	1(33)	0(0)	2(67)	3(4)
Spain	1(100)	0(0)	0(0)	1(1)	0(0)	1(100)	0(0)	1(1)	0(0)	0(0)	0(0)	0(0)
Sweden	2(100)	0(0)	0(0)	2(1)	1(50)	1(50)	0(0)	2(1)	1(50)	1(50)	0(0)	2(3)
Switzerland	1(100)	0(0)	0(0)	1(1)	0(0)	1(100)	0(0)	1(1)	0(0)	0(0)	0(0)	0(0)
Thailand	1(100)	0(0)	0(0)	1(1)	0(0)	1(100)	0(0)	1(1)	0(0)	0(0)	0(0)	0(0)
U.K.	6(100)	0(0)	0(0)	6(4)	6(100)	0(0)	0(0)	6(4)	1(50)	1(50)	0(0)	2(3)
U.S.	3(21)	8(58)	3(21)	14(10)	6(43)	1(7)	7(50)	14(10)	2(33)	0(0)	4(67)	6(9)
Zambia	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)
Zimbabwe	1(100)	0(0)	0(0)	1(1)	1(100)	0(0)	0(0)	1(1)	0(0)	0(0)	0(0)	0(0)
Total	92(67)	22(16)	24(17)	138	57(41)	50(36)	31(23)	138	33(48)	9(13)	27(39)	69

Notes:
† This reform was part of a separate IAASB project and was presented in a separate ED - *The Auditor's Responsibilities Relating to Other Information*. A total of 69 comment letters were received in response to this ED. This study analysed only a portion of these comment letters.

CHAPTER 3:

(PAPER 2)

The Effects of Preference for Quantitative Information and Utilisation of Quantitative versus Qualitative Information on Auditors' Materiality Judgements

ABSTRACT

Bias in judgement resulting from over-reliance on quantitative information has serious implications for audits and financial reporting quality. This study examines the effects of individuals' preference for quantitative information on their utilisation of quantitative over qualitative information and its impact on the judgement of professional accountants. It further examines if bias introduced by utilisation of more quantitative than qualitative information is mitigated by any of the following: a simple intervention, a decision aid, accountants' motivation for processing information systematically, or the accountants' involvement level in the decision-making process. The results indicated substantial differences in utilisation of quantitative versus qualitative information between accountants who have a high preference for quantitative information and accountants who have a low preference for quantitative information. In particular, accountants with a high preference for quantitative information tend to utilise significantly more quantitative than qualitative information in their materiality judgement than do accountants with a low preference for quantitative information. Further, the results provide strong support for the hypothesis that accountants who utilise significantly more quantitative information than qualitative information are more likely to make biased materiality judgements than are accountants who utilise more qualitative than quantitative information. This study also provides evidence that a simple intervention in the form of a warning induces auditors to utilise both quantitative and qualitative information, leading to unbiased materiality judgements. These findings are of interest to accounting firms, standard-setters, regulatory enforcement agencies such as ASIC, and professional accountancy bodies.

Keywords: Materiality; quantitative information; qualitative information; preference for quantitative information; judgements.

3.1 INTRODUCTION

Materiality is an important concept in accounting. In financial reporting, materiality determines the importance of a matter for disclosure purposes (International Accounting Standards Board (IASB), 2013; Edgley, 2014). In auditing, materiality influences the extent and nature of audit procedures, correction of misstatements, and, most importantly, the audit opinion (Messier et al., 2005; Houghton et al., 2011). Traditionally, materiality decisions were based on quantitative rules of thumb (Holstrum & Messier, 1982; Messier et al., 2005); as such, it did not require accountants to exercise significant levels of professional judgement. However, regulatory agencies raised concerns that predominant utilisation of quantitative rules of thumb for materiality decisions were abused. Firms were recording errors of magnitudes below the quantitative materiality thresholds, and auditors were allowing this practice to continue, leading to a very different characterisation of the financial reports (Levitt, 1998).

New auditing standards adopt a more principles-based approach to materiality determination (IAASB, 2014). In particular, auditing standards are making increasing use of qualitative information (IAASB, 2014). Accountants are required to exercise a greater level of professional judgement when making materiality decisions, and to integrate both quantitative and qualitative information in their judgements (Edgley, 2014).

Recent research provides evidence that auditors continue to utilise quantitative rules of thumb to make materiality decisions, to the exclusion of qualitative information (Libby & Kinney, 2000; Ng & Tan, 2007; Legoria et al., 2013). Specifically, these studies showed that auditors allow firms to record misstatements that are below quantitative materiality thresholds even though the misstatements lead to an overstatement of reported net income or allow firms to meet or beat analysts' consensus forecasts. Misstatements that lead to an overstatement of profits or show a different characterisation of the financial statements are considered qualitatively material, although the amount of the misstatements are below the quantitative materiality thresholds (IAASB, 2014). The existence of quantitatively immaterial misstatements that are qualitatively material implies audit quality can be affected by auditors' predominant utilisation of quantitative information to the exclusion of qualitative information.

A small but rapidly expanding body of research has examined the impact of information type on judgements in the accounting context. These studies show that quantitative and qualitative information are utilised differently and have different influences on judgements and decisions (Bell, 1984; Dilla & Stone, 1997; Ittner et al., 2003; Kadous et al., 2005; Joe et al., 2014; Ang & Trotman, 2015). Additionally, given the characteristic precision of quantitative information, individuals generally prefer to utilise quantitative information over qualitative information to support decisions for which they are directly responsible (Ang & Trotman, 2015). While prior studies have considered the differences in utilisation of quantitative and qualitative information, and the impact that quantitative information has on decisions, studies have not examined how the personality traits of decision-makers influence the utilisation of quantitative versus qualitative information. Similarly, there is a lack of empirical evidence on whether differences in the utilisation of quantitative and qualitative information leads to biased audit judgements, and how such biases can be mitigated to improve the quality of judgements.

The preference for quantitative information is an important personality trait that may influence an individual's utilisation of quantitative over qualitative information in decision-making (Viswanathan, 1993; Liberali et al., 2012). It represents a preference for using quantitative information and engaging in thinking involving quantitative information (Viswanathan, 1993). It is important to note that the focus is on preference rather than ability in regard to the utilisation of quantitative information, as accountants likely possess the ability to utilise quantitative information but would have different proclivities to using such information for decision making purposes. In the context of materiality judgements, auditors have to integrate both quantitative and qualitative information in their decisions. In particular, in determining the materiality of a misstatement based on ISA 450 *Evaluation of Misstatements Identified During the Audit*, auditors are required to consider both quantitative information, such as the misstatement's percentage effect on current period net income, and qualitative information, such as whether the misstatement allows a firm to meet analysts' earnings forecasts.

As preference for quantitative information is a personal trait (Liberali et al., 2012), it varies across individuals (Viswanathan, 1993). This can lead to an inconsistent utilisation of information for judgements amongst accountants and auditors. Additionally, accountants' and auditors' inconsistent utilisation of quantitative and qualitative information can potentially lead to biases in judgements. Therefore, identifying and measuring individuals' preference for quantitative information, and making better informed audit-team-allocation decisions, can lead to improved judgements (Nelson et al., 2005). This demonstrates the importance of studying the impact that preference for quantitative information has on the utilisation of quantitative over qualitative information, and the influence of utilising quantitative information rather than qualitative information on auditors' professional judgements in the determination of materiality of misstatements.

Using a sample of professional accountants from Australia, this study places participants in the position of an audit manager in an audit-reporting situation that required judgement on the materiality of a misstatement in accordance with ISA 450. This study drew on Viswanathan's (1993) theoretical framework for preference of quantitative information. It was predicted that the utilisation of quantitative versus qualitative information for materiality judgements of accountants would be influenced by the accountants' preference for quantitative information. Drawing further on the theoretical framework of Denes-Raj and Epstein (1994), it was hypothesised that because quantitative information for materiality judgements relies mainly on ratios, it would be affected by ratio bias[8], leading to a biased overall judgement.

This study presents the results of six empirical hypotheses. The first hypothesis examined the effect of preference for quantitative information on the utilisation of quantitative versus qualitative information. It was predicted that auditors with a high preference for quantitative information would utilise more quantitative than qualitative information in the materiality judgement task compared to those with a low preference for quantitative information, who were expected to utilise more qualitative than quantitative information. The second hypothesis examined the impact of information utilisation on materiality judgement, predicting that accountants who utilise more quantitative than qualitative information would make a biased materiality judgement compared to accountants who utilised more qualitative than quantitative information. The third hypothesis examined the impact of a simple intervention in the form of a warning. This study predicted that accountants provided with a warning that they have to utilise both quantitative and qualitative information for materiality judgements in accordance with auditing standards, and that auditing standards are legally enforceable in Australia, would utilise both quantitative and qualitative information equally, and make an unbiased materiality judgement compared to accountants who did not receive a simple intervention in the form of a warning. The fourth hypothesis examined the impact of a decision aid that guides accountants in utilising both quantitative and qualitative

[8] Ratio bias is where decision makers view ratios presented in terms of smaller numbers as smaller than equivalent ratios presented in terms of larger numbers.

information in their materiality judgement task. This fourth hypothesis predicted that accountants provided with the decision aid would utilise both quantitative and qualitative information equally, and make an unbiased materiality judgement compared to accountants who were not provided with the decision aid. The fifth hypothesis examined the effects of motivation to systematically process information on materiality judgements, predicting that accountants with a higher motivation to systematically process information would utilise both types of information, and make an unbiased materiality judgement compared to accountants who had lower motivation to systematically process information. The sixth hypothesis predicted that accountants with a higher level of involvement would make an unbiased materiality judgement compared to accountants with a lower level of involvement.

Three key findings were noted. First, accountants with a high preference for quantitative information utilised significantly more quantitative information than qualitative information compared to accountants with a low preference for quantitative information who utilised more qualitative than quantitative information. This confirms the prediction that the personality of a decision-maker, in particular, a decision-maker's preference, had an effect on how they utilised information for judgements and decision-making. Second, and more importantly, the results indicated that judgements on materiality were biased for auditors who utilised significantly more quantitative than qualitative information compared to accountants who utilised more qualitative than quantitative information. Third, simple intervention in the form of a warning that auditing standards require the utilisation of both quantitative and qualitative information for materiality judgements, and that auditing standards are legally enforceable, mitigated the impact of preference for quantitative information and led to auditors making an unbiased materiality judgement. The results provide important implications for audit practice and the need to consider personality traits of auditors in accounting firms.

This study makes four key contributions to the literature and audit practice. First, this study provides new evidence that personality variables have an impact on the utilisation of information in the judgements and decisions of accountants. It further provides evidence of biased professional judgement as a result of the predominant utilisation of quantitative versus qualitative information. These findings add to literature about auditors' judgements and decision-making, and to the growing library of literature about the effects of different types of information (quantitative and qualitative) in judgement and decision-making. Second, the findings provide important contributions to understanding how audit evidence is evaluated in general and the effect of level of quantification on the evaluation of audit evidence. Third, the findings of this study have important implications for audit practice. In particular, the study enables accounting firms to make better staff-allocation decisions for audit teams, based on more holistic assessments of staff personality traits. Fourth, the findings also provide important lessons for accounting regulators and policy-makers on the importance of considering behavioural factors when designing new auditing standards and legislation for audit practice.

The remainder of this paper is organised as follows. Section 3.2 provides the background of this study. Section 3.3 outlines the relevant literature; Section 3.4 formulates the research hypotheses. Section 3.5 discusses the research method, followed by the presentation of results in Section 3.6. Section 3.7 provides a summary and offers the conclusions and implications of this study.

3.2 BACKGROUND

3.2.1 Materiality and Relevant Auditing Standards

The concept of materiality is defined in the ISA 320 *Materiality in Planning and Performing an Audit* by reference to the definition of the concept in the financial reporting framework. In the financial reporting framework such as the International Financial Reporting Standards (IFRS), materiality is defined in International Accounting Standard (IAS) No. 108 *Accounting Policies, Changes in Accounting Estimates and Errors* as:

> Omissions or misstatements of items are material if they could, individually or collectively, influence the economic decisions that users make on the basis of the financial statements. Materiality depends on the size and nature of the omission or misstatement judged in the surrounding circumstances. The size or nature of the item, or a combination of both, could be the determining factor (IASB, 2013).

This definition emphasises a user perspective in considering what is material (Eilifsen & Messier, 2015). The emphasis on users in defining materiality presents a number of problems, identified by Holstrum and Messier (1982). First, there is obscurity around how financial statements are used in investment and credit decisions. Second, judgements on materiality are made by preparers and auditors of financial statements, and these two heterogeneous groups are likely to have very different views of materiality. Third, very little is known about how materiality judgement of auditors and preparers of financial statements affects the users. These three issues, with a user-centric definition of materiality, still persists to date.

The auditing standards related to materiality have recently been reissued, subsequent to significant reforms. The reforms were prompted by professional and regulatory initiatives and concerns of auditor abuses of the concept of materiality (e.g., Levitt, 1998). These reissued standards provide a more comprehensive framework for auditors' materiality judgements. They provide more comprehensive guidance on setting multiple levels of materiality and give further emphasis to the consideration of both quantitative and qualitative factors in materiality judgements (IAASB, 2014). The standards also provide expanded guidance on materiality application in the evaluation stage, for example, the evaluation of misstatements detected during the audit. Explicit guidance is also included for the consideration of materiality in group audits.

3.2.2 Materiality in the Audit Process

Materiality permeates financial statement auditing, from the planning stage to performing the audit, to evaluating identified misstatements, all the way to forming of an opinion in the audit report (Messier et al., 2005). The auditing standards require the auditor to establish the level of planning materiality for the financial statements that are under audit (IAASB, 2014). Planning materiality is often determined by applying a percentage to a particular benchmark. The auditing standard ISA 320 requires auditors to exercise professional judgement in determining the appropriate benchmark and the percentage to be applied to the benchmark and provides limited guidance on this issue (IAASB, 2014). For example, ISA 320 states that benchmarks may include categories of reported income such as profit before tax, total revenue, gross profit, total expenses, total equity, or net asset value (IAASB, 2014). Often, profit-oriented entities utilise profit before tax as a benchmark (Eilifsen & Messier, 2015). However, the standard does not prescribe the percentages to be applied to the relevant benchmarks.

In determining the level of planning materiality, the auditing standard allows the auditor to utilise prior-period financial results, the period-to-date financial results, or budgets or forecasts for the period, all adjusted for any significant changes in the circumstances of the entity and/or changes in the industry or economic conditions (IAASB, 2014; Eilifsen & Messier, 2015). It also allows the utilisation of normalised income based on past results in the case of volatility in a firm's profit before tax. As the audit progresses, the standards prescribe that the auditor revise the level of planning materiality in the event that they become aware of information during the audit that would have caused the auditor to set a different amount for materiality initially (IAASB, 2014).

Another level of materiality that the auditing standards espouse is performance materiality (Eilifsen & Messier, 2015). A more common terminology for performance materiality is "tolerable misstatement". According to ISA 320, the auditor is required to assess whether, in light of particular circumstances, there are certain accounts or disclosures for which there is a greater likelihood that misstatements of lesser amounts than planning materiality would influence judgement of a reasonable investor (IAASB, 2014). If so, the auditor is required to establish a separate materiality level for those accounts and disclosures. In essence, performance materiality is a separate level of materiality set for a certain account or disclosure. The standard provides limited guidance on how performance materiality is to be determined or implemented, therefore, much is left to the auditors' judgement. Prior research, such as by Eilifsen and Messier (2015), provide evidence through examination of audit-firm manuals that performance materiality is usually established at a certain level (mostly in the range of 50-75 percent) of planning materiality.

A separate auditing standard, ISA 450 *Evaluation of Misstatements Identified during the Audit,* contains guidance on materiality considerations in the evaluation of the audit results and formulation of the audit opinion. The auditing standard requires auditors to accumulate all identified misstatements during the audit, except those that clearly are trivial (IAASB, 2014). The auditor can designate an amount below which misstatements will be considered clearly trivial. This amount should be set so that any misstatements below the amount would not be material to the financial statements. All misstatements that are not clearly trivial should be communicated to the management on a timely basis for correction (IAASB, 2014). If the management refuses to correct the misstatements, the auditor has to obtain from the management an understanding of the reasons for the non-correction (IAASB, 2014). The management's explanations should be taken into consideration when the auditor evaluates whether the financial statements are free of material misstatement. Any uncorrected misstatement will also have to be communicated to the audit committee, or, in absence of an audit committee, to TCWG (IAASB, 2014).

The evaluation of the materiality of uncorrected misstatements involves the consideration of the size of the misstatement, individually or in combination, and the relevant qualitative factors (IAASB, 2014). The auditing standard ISA 450 provides a list of qualitative factors that serve as indications of the types of factors that the auditor is expected to consider. Misstatements may not materially affect users' decisions based solely on their size but may have an impact if it leads to a qualitatively different characterisation of the financial statements, for example, where a misstatement turns a small loss into a small profit (Legoria et al., 2013). The consideration of qualitative factors is the greatest in the evaluation stage of the audit (Eilifsen & Messier, 2015).

3.2.3 The Incorporation of Auditing Pronouncements on Materiality into Audit Manuals of Public Accounting Firms

The audit firm manual is an important source from which we can ascertain how audit firms apply the relevant auditing standards on materiality. Eilifsen and Messier (2015) gained access to the audit firm manuals of eight of the largest U.S. public accounting firms, providing a unique insight into the practices of audit firms in relation to the application guidance on materiality. They found that the across the eight firms, profit before income taxes was the most widely utilised metric and the main quantitative benchmark for determining overall materiality. One firm utilised profit after taxes as the main benchmark. Other benchmarks identified in the audit firm manuals were total assets; total revenues; net assets; normalised earnings; earnings before interest, taxes, depreciation and amortisation; gross profit margin; operating income; current assets; net working capital; total equity; cash flow from operations; and total expenses. All firms allowed the utilisation of alternative benchmarks in certain situations. For example, if an entity was normally profitable but recorded a loss in the current period, the firm could consider using other measures, such as revenue or gross margin, as a basis for overall materiality.

There was a high level of consensus among the audit firms on the percentage to be applied to the relevant benchmarks (Eilifsen & Messier, 2015). Six of the eight audit firms expected, suggested, or required the utilisation of 5 percent of profit before taxes; one firm allowed between 5 to 10 percent. The eighth audit firm did not provide a specific percentage but stated that its percentage was based on individual clients' facts and circumstances. The percentages pertaining to other benchmarks, such as total assets and total revenue, ranged from 0.25 to 2 percent for seven audit firms, while the eighth firm provided a wider range of 0.8 to 5 percent. Overall there was a high level of consistency among the audit firms in their utilisation of benchmarks and percentages applied to the benchmarks.

Eilifsen and Messier (2015) found that audit firms specify the determination of performance materiality. They generally found that the performance materiality is set between 50 to 75 percent of overall materiality in seven of the eight audit firms, while one firm allowed a range of up to 90 percent. More specific guidance is provided to assist auditors in determining the appropriate level of performance materiality; for example, factors that may lead the auditor to set a lower level of performance materiality were discussed (for a complete list of these factors, see Eilifsen and Messier (2015: 13). Seven of the eight audit firms set the threshold for clearly trivial misstatements at between 3 to 5 percent of overall materiality, while the eighth firm set it between 5 to 8 percent of overall materiality. Again, there was a high level of consistency between firms in setting the requirements for determining performance materiality and the threshold for clearly trivial misstatements (Eilifsen & Messier, 2015).

Three studies prior to Eilifsen and Messier (2015) had examined audit firms' manuals to understand the application of materiality in practice. One of these, Steinbart (1987), relied on the audit manual of 10 audit firms to develop a rule-based expert system for making materiality judgements. Consistent with Eilifsen and Messier (2015), they found that auditors' materiality decisions were comprised of two sub-decisions. First, the auditor chose a relevant benchmark and then selected a percentage to apply to the benchmark. The choice of percentage was more subjective and depended on the intended use of the financial statements under audit and the nature of the audit engagement.

Friedberg et al. (1989) obtained the audit manuals of six of the then Big 8 U.S. accounting firms, to examine the audit firm's guidance for determining materiality. The relationship of a misstatement to net income and the effect of a misstatement on earnings trend were the two most common benchmarks utilised in making materiality judgements. However, contrary to Eilifsen and Messier (2015), they found that there were substantial differences between the detailed quantitative and qualitative guidelines of the six audit firms.

Martinov and Roebuck (1998) used the audit manuals of the Big 6 audit firms from Australia and conducted interviews with senior executives from each of the six firms to understand their materiality decisions. Their results were consistent with Friedberg et al. (1989), finding substantial differences between the approaches taken by the firms when determining overall materiality. They also found that all firms established performance materiality at the individual account level, or for a class of transactions. In all firms, performance materiality was determined as a function of overall materiality.

The examination of public accounting firms' audit manuals provides unique insights into auditors' materiality judgements. The most recent study by Eilifsen and Messier (2015) showed that the materiality guidance of audit firms was more consistent and included more comprehensive guidance. It also confirmed the inclusion of comprehensive guidance related to the determination of different levels of materiality. The study also confirmed that the audit firm guidelines on materiality are consistent with the relevant auditing pronouncements.

Overall, a comparison of the four studies shows considerable developments to the audit manuals of the major public accounting firms over a period of almost three decades. In particular, the inclusion of more comprehensive guidance on the consideration of qualitative information in auditors' materiality judgements is evident in the most recent study.

3.3 RELATED LITERATURE

3.3.1 Auditors' Materiality Judgements

Research on audit materiality spans over five decades and covers a wide range of issues, ranging from examination of factors that influence auditors' materiality judgements to a comparison of the materiality judgement of different stakeholders, such as auditors, preparers and users. Holstrum and Messier (1982) and Messier et al. (2005) conducted comprehensive reviews of materiality research up to 2005. Research on audit materiality up until 2005 can be broadly categorised into the following: (1) studies that examine the impact of person-related variables on auditors' materiality judgement; (2) studies that examine the impact of environmental variables on auditors' materiality judgement; and (3) studies that examine the impact of task-related factors on auditors' materiality judgement. Research subsequent to 2005 focuses mainly on the impact of quantitative versus qualitative information on auditors' materiality judgement, and as such, falls within the third category of studies.

Studies in the first category predominantly employed experiments and surveys to examine the impact of experience (Messier, 1983; Krogstad et al., 1984; Estes & Reames, 1988; Carpenter & Dirsmith, 1992); risk propensity of the auditor (Newton, 1977); national culture (Arnold et al., 2001) and organisational culture (Carpenter et al., 1994). The level of experience improved auditors' materiality judgement consensus, consistency, and self-insight (Krogstad et al., 1984; Carpenter & Dirsmith, 1992). Experience also improved auditors' self-insight into their decision-making processes (Messier, 1983). Arnold et al. (2001) examined the other important factor of national culture, finding that culture influences the judgement of auditors in a way that sees auditors with a higher preference for uncertainty avoidance making higher materiality estimates compared to auditors with a lower preference for uncertainty avoidance. Additionally, Carpenter et al. (1994) found that organisational or audit firm culture also influences auditors' materiality judgements. In particular, as auditors' tenure with a particular public accounting firm increased, they exhibited judgement strategies more in line with the firm's culture. Differences were also observed in the number of cues utilised by less-structured, organic firms versus highly structured, mechanistic firms. Audit partners from larger firms set higher levels of materiality compared to partners from smaller audit firms (Messier, 1983; Chewning et al., 1989). Furthermore, personal characteristics such as age and place of employment has also been shown to impact auditors' materiality judgements (Estes & Reames, 1988).

In the second thematic area, a limited number of studies examined the influence of two very important environmental factors on auditors' materiality judgement. The first of these is the level of accountability pressure, and the second is group decision-making. DeZoort et al. (2006) showed that accountability pressure had positive implications for auditors' materiality judgement quality. Higher accountability pressure increased conservatism as well as reduced variability in judgement, thereby improving judgement consistency. Additionally, higher accountability pressure motivated auditors to expend more effort on the task. Group discussions, on the other hand, did not lead to a significant improvement in auditors' materiality judgement (Schultz & Reckers, 1981).

Prior studies in the third thematic area aimed to identify information utilised by auditors to make materiality judgements. In particular, in the pre-2005 period, these studies focused on identifying the quantitative information upon which materiality judgements were based (Messier et al., 2005). The earliest study, Woolsey (1954a), used a questionnaire survey to examine the basis of determining materiality among audit firms and groups of individuals. He found that auditors' decision on the materiality of certain figures in the financial report was determined by the percentage effect of the figures on current period income. The thresholds for materiality were determined to be 5-15 percent of the current period income. These results were confirmed subsequently by Woolsey (1954b). The effect of a misstatement or figure in the financial report on current period net income remains the most important factor in materiality judgement over time, and was revealed in numerous subsequent studies using surveys and experiments (Boatsman & Robertson, 1974; Moriarity & Barron, 1976; Firth, 1979; Moriarity & Barron, 1979; Messier, 1983; Krogstad et al., 1984;

Jennings et al., 1987; Carpenter & Dirsmith, 1992; Carpenter et al., 1994); as well as archival studies (Frishkoff, 1970; Dyer, 1975; Chewning et al., 1989; Icerman & Hillison, 1991; Chewning et al., 1998). Some other, earlier studies using archival data to infer information-utilised failed to find any relationship between various financial variables and auditors' materiality judgements (Bernstein, 1967; Neumann, 1968).

Moriarity and Barron (1976; 1979) examined the underlying structural form of audit partners' materiality judgement and the utilisation of a number of financial variables in the judgement process. In Moriarity and Barron (1976), 15 audit partners ranked 18 cases for materiality of a situation. Three variables were manipulated between the 18 cases: the level of income and the asset size, each manipulated at three levels, plus the earnings trend, manipulated at two levels. The item that necessitated the materiality judgement was the estimation of the useful life of special-purpose equipment. The management had estimated the useful life of the equipment as 10 years; however, the auditor judged this as five years, based on knowledge of the industry and other factors. This led to an audit difference of $500,000 in the current period before tax earnings. Using the ranking of the 18 cases, a model for auditor's materiality judgement was derived. Eight of the 15 participants employed an additive model in their materiality judgement. For these eight participants, materiality was the sum of scaled net income effect, scaled asset-size effect, and scaled earnings-trend effect. The income effect was the dominant factor for every participants' materiality judgement, but significant differences were evident on the second most important factor.

Moriarity and Barron (1979) examined pre-audit (planning) materiality judgement of eight audit firm partners and the impact of five financial variables on their judgement, using 30 cases. The results of the study demonstrated a lack of consensus among participants both in the materiality judgement and the weights assigned to the five financial variables. Consistent with Moriarity and Barron (1976), the level of income was the dominant factor in determining pre-audit levels of materiality, followed by the level of asset.

Ward (1976) examined the relative importance of 20 factors to the materiality judgement of 24 audit firm partners from three different accounting firms. A Q-Sort technique was used in capturing the relative importance placed on each of the 20 factors. The study found that there was a high level of consensus among the professional auditors about the relative importance of factors affecting materiality judgement. Hofstedt and Hughes (1977) conducted an experiment to investigate the joint issue of materiality and disclosure. The experiment required participants to make disclosure judgements based on the consideration of materiality. The disclosure item that required auditors' judgement was a loss from the write-down of a subsidiary that was to be disclosed as an extraordinary item based on its magnitude measured as a percentage of current period income. Three financial variables were varied; these included the loss on write-down as a percentage of income, the loss as a percentage of all parent investment in unconsolidated subsidiaries, and the loss as a percentage of net book value of the subsidiary being written down. Two behavioural factors were also examined in the study, namely the participants' general probability of requiring disclosure of similar losses, and their risk-taking propensity. The study used 19 MBA students as surrogates for practising auditors. All three financial variables were significant in explaining the judgement of participants. The effect of the loss on current period income was the most important factor in determining materiality. However, the study found significant differences between participants in the importance of each variable to the materiality judgement.

Schultz and Reckers (1981) conducted an experiment in which 64 audit firm partners evaluated two cases of loss contingency, and judged the minimum probability at which they would require disclosure of the item in the financial statements. In relation to materiality, the results showed that when the magnitude of the potential loss increases from low to high, there was a small but significant decrease in probability levels for disclosure from 46 percent to 40 percent. This study contributes to understanding group performance on audit judgement tasks, by having participants complete the case on their own and then in a group. Within-group discussions revealed that many subjects had put themselves in the role of users of financial statements. Furthermore, recording of group discussions revealed that subjects considered more traditional materiality guidelines, such as the relationship of the contingency loss, over some measure of current period income. A few subjects pointed out that the absolute magnitude of the loss amount was material, while some subjects cited SEC court case guidelines, and others cited pervasiveness of the loss as a criterion for their decision. The results also indicated that group decision-making did not result in a shift in the judgement. However, the variance between group members decreased following the group discussions.

Mayper (1982) and Mayper et al. (1989) both examined auditors' judgements on the materiality of internal accounting control weaknesses (IACWs) using the same experiment, but with more sophisticated statistical methods in the Mayper et al. (1989) study, to provide further insights into the findings. The type of missing control, the type of asset affected by the missing control, and the most likely dollar effect of the missing control, were manipulated in 12 cases of IACWs. The experimental instruments were administered to 38 practising auditors from five national public accounting firms in the U.S. Mayper (1982) reported that differences exist in both the choice of factors utilised by auditors to determine materiality of the IACWs and their materiality thresholds. One of the contributing factors for the lack of consensus between auditors could have been the lack of guidance in auditing standards at the time on how to determine materiality of IACWs. Mayper et al. (1989) used more sophisticated statistical analysis on the same data, and revealed that an auditor's decision-making model indicated differences in the importance attached to the three variables (type of IACW, dollar effect of the weakness, and the asset affected by the IACW) affecting materiality judgement of the IACWs. On average, all three variables were important in explaining auditors' materiality judgements in the case of IACWs.

Finally, Bernardi and Pincus (1996) investigated how 10 commonly utilised quantitative-information cues and the related rules of thumb influenced auditors' materiality judgement. Their study also examined the relationship between the auditors' materiality judgement, prior expectation of fraud, amount of evidence examined and post-audit judgement of fraud risk. The experiment was administered to 152 audit managers for an actual case in which material fraud risk was undetected. Results showed that the majority of the auditors set their materiality estimates within the quantitative rules of thumb identified in prior research. Other factors, including auditors' prior expectation of fraud, amount of evidence examined, and post-audit assessment of fraud risk did not lead to significant differences in materiality judgement.

Studies in the third category focused primarily on determining which financial variable or quantitative information cue is the most important in influencing auditors' materiality judgement. These studies revealed that the most common quantitative information utilised in determining materiality is the level of current period net income. Concerns raised by regulatory agencies (see for example, Levitt 1998) regarding abuse of the concept of materiality and shortcomings in the predominant utilisation of quantitative information in determining materiality resulted in auditing standard-setters incorporating more comprehensive guidelines and requiring auditors to incorporate qualitative factors in their materiality judgement processes. As such, recent materiality research examines the relative utilisation and influence of quantitative versus qualitative information on auditors' materiality judgements.

3.3.2 The Utilisation of Quantitative versus Qualitative Information in Auditors' Materiality Judgements

Libby and Kinney (2000) were the first to examine how quantitative and qualitative factors jointly influenced auditors' materiality judgements. Their study examines auditors' materiality judgements about misstatements that are quantitatively immaterial, but the correction of the misstatements would cause reported earnings to fall below analysts' consensus forecast. According to auditing standards, misstatements that cause earnings to be overstated if they are not corrected are considered qualitatively material, even though the magnitude of the misstatement might not be quantitatively material (IAASB, 2014). The findings showed that very few auditors expect management to correct any portion of a misstatement. This leads to an overstatement of reported earnings, and, therefore, confirms regulators' existing concerns that auditors conveniently disregard qualitative information in favour of quantitative information when making materiality judgements.

Subsequent studies, including Ng and Tan (2003); Ng (2007); Ng and Tan (2007) and Legoria et al. (2013), confirmed the findings of Libby and Kinney (2000). In particular, Legoria et al. (2013) investigated whether auditors were more likely to allow earnings management of amounts that were less than typical quantitative materiality thresholds even though they were qualitatively material in accordance with the auditing pronouncements. Their findings showed that firms were more likely to manage earnings (by reducing income tax expense) to beat the consensus analyst forecast if the amount of earnings-management needed was below the quantitative-materiality threshold. According to the auditing pronouncements, although the reduction in income tax expense was of a magnitude below the quantitative-materiality threshold because it was hiding a failure of the firm to meet analysts' consensus expectations, it was considered qualitatively material (IAASB, 2014).

Studies in other areas of accounting also indicate general proclivity toward quantified information (see for example, Stone & Dilla, 1994; Dilla & Stone, 1997; Ittner et al., 2003; Anderson et al., 2004; Kadous et al., 2005; Ang & Trotman, 2015). In particular, Ang and Trotman (2015) explicitly examine the relative utilisation of quantitative versus qualitative information. Their findings showed that when making judgements individually, accountants exhibited a tendency to utilise more quantitative than qualitative information. They also referred more to quantitative information than to qualitative information in group discussions; however, the difference between the utilisation of quantitative and qualitative information disappeared in group judgement. An important implication of this finding is that in group settings with multiple decision-makers, the difference in the utilisation of quantitative and qualitative information is not present because individuals may have different preferences towards the utilisation of quantitative information.

Prior research in psychology suggests that individuals differ in their ability to comprehend and apply quantitative or numerical information, and this difference has implications for decision-making in various contexts (see for example, Viswanathan, 1993; Peters et al., 2006; Dieckmann, 2008; Cokely & Kelley, 2009; Peters, 2012). Peters et al. (2006) measured individuals' quantitative abilities using an 11-item questionnaire. Individuals were divided into a highly-numerate or a less-numerate group in line with their performance on the questionnaire. The highly-numerate group demonstrated more likelihood of retrieving and using appropriate numerical principles and numerical information compared to the less-numerate group. Liberali et al. (2012) provided further evidence on individual differences in the ability and utilisation of quantitative information by testing several widely-used measures of quantitative ability. Such differences have also been shown to exist between individuals who are highly educated (Lipkus et al., 2001). Research shows that individuals who are classified as highly numerate tend to make more utilisation of, derive more meaning from, and have more reliance on quantitative information, while less numerate individuals do not entirely disregard quantitative information, but rather utilise both quantitative and qualitative (non-numeric) information (Peters et al., 2006; Reyna & Brainerd, 2008; Reyna et al., 2009).

Viswanathan (1993) examined preference for quantitative information as a personality trait that specifically captures an individual's preference for utilising quantitative information rather than qualitative information, despite their ability to utilise either or both. As a personality trait, preference for quantitative information is defined as an individual's inclination to utilise quantitative information over qualitative information and to engage in thinking involving quantitative information (Viswanathan, 1993: 742). The *preference* for quantitative information taps into proclivity to quantitative information. It is different from the *ability* to understand and utilise such information, as subjects in accounting and auditing would possess the ability to understand and utilise quantitative information but may differ on their willingness to utilise such information in decision-making. The willingness of an individual to utilise quantitative information in decision-making may be related to the need for precision (Olson & Budescu, 1997), given quantitative information is perceived as more precise than qualitative information (Jaffe-Katz et al., 1989). Additionally, preference for quantitative information might be related to an individual's tolerance for ambiguity (Norton, 1975). Individuals who are less tolerant of ambiguity may prefer to utilise quantitative information in decision-making, as such information is perceived as being objective and precise (Porter, 1995).

Since judgements and decisions often require the consideration of competing quantitative and qualitative information, how the decision-maker resolves these conflicts and utilises both types of information can have important consequences on decision quality (Peters, 2012). The preceding discussions suggested that individuals with a higher preference for quantitative information will utilise more of such information in judgements and decisions to the exclusion of relevant qualitative information. As such, individuals with a higher preference for quantitative information would be more exposed to biases and fallacies resulting from quantitative information. For example, prior research shows that the format in which quantitative information is presented can lead to biases. Denes-Raj and Epstein (1994) provided evidence of a ratio bias whereby individuals judge ratios presented as small numbers as smaller than equivalent ratios presented as large numbers. Similarly, individuals judge numbers presented in absolute form as being greater than equivalent percentages (Brase, 2002). Nelson and Rupar (2015) provided evidence of such bias among investors when they assess risk disclosures related to information provided in the annual report of companies.

Furthermore, quantitative information may artificially enhance the persuasiveness of information. Evidence of this effect is provided by Kadous et al. (2005), whereby the effect of quantification was examined on management judgement. Kadous et al. (2005) found that when a proposal is presented with more quantified information, it enhances the persuasion power by increasing both the perceived competence of the proposal preparer and the perceived plausibility that a favourable outcome could occur. This effect on perceived competence of the preparer and the perceived plausibility of a favourable outcome occured without any changes in the underlying actual competence of the preparer or the favourable outcome of the proposal. Thus, judgements and decisions of those who relied more on quantitative information could be influenced by the level of quantification of the information provided to them. In essence, management of companies being audited could influence judgements and decisions of auditors who have a higher preference for quantitative information by presenting more quantified information. This can lead to significant biases in the judgement of accountants and auditors.

3.3.3 Improving Auditors’ Materiality Judgement through Simple Interventions, Decision Aids, Motivation to Process Information Systematically, and Level of Involvement

Auditing research identifies several methods that can improve auditors’ judgements. Since auditing is highly regulated and competitive, some theoretically feasible methods of improving judgement and decision-making quality may not be practically feasible (Bonner, 2008). Additionally, any method of improving judgements and decisions needs to address the cause of less than “acceptably high” quality judgements and decisions. Therefore, this study examines the effects of a simple intervention in the form of a warning and a decision aid on auditors’ materiality judgement. Furthermore, the study investigates whether accountants’ motivation to systematically process information and their level of involvement with the audit task, mitigates the impact of preference for quantitative information on their materiality judgement.

3.3.3.1 Simple Interventions

Simple interventions can be used to increase the quality of cognitive processing and also reduce the negative effects of task characteristics (Bonner, 2008). Simple interventions can be of a wide variety of types. In accounting, two types of simple interventions have been widely studied. The first is a simple intervention that tells people to provide explanations or reasons to support their judgement. The second asks people to provide counter-explanations or to consider alternatives to their judgement. A further third type of simple intervention that has not been discussed and researched widely is the provision of an explicit warning.

Explanations are simple instructions that are often incorporated into organisational systems, in particular, into accounting firms whose accountants are usually required to document their reasons for their judgements and decisions (Koehler, 1991). Requiring people to provide explanations can encourage them to search for and evaluate more information than they would otherwise do (Bonner, 2008). In effect, requiring explanations may increase the quality of cognitive processing and the quality of the resulting judgement. It is also argued that requiring an explanation might not always result in high-quality information processing and judgements because often people defensively direct their efforts toward evidence that supports their desired conclusion (Bonner, 2008). Additionally, Larrick (2004) argues that explanations can reduce quality judgements if they cause people to focus on easily accessible reasons that are less-relevant than less-accessible reasons.

On the other hand, simple intervention in the form of requiring counter-explanations or requiring consideration of alternatives are typically effective in improving cognitive processing (Lord et al., 1984; Hoch, 1985; Hirt & Markman, 1995). Counter-explanations can reduce cognitive processing biases that result from knowledge being structured in the decision-makers' memory and activation spreading only to items associated with initial judgement (Arkes, 1991). Larrick (2004) provided evidence that counter-explanation also reduced confirmation bias and errors in hypothesis evaluation, and reduced overconfidence in judgements, by asking decision-makers to consider reasons that do not support their proposed judgement. Counter-explanations also reduced the effect of task framing by encouraging people to consider different frames (Plous, 1993). Under some scenarios, counter-explanations and consideration of alternatives might not be effective, as if people are asked to list too many counter-explanations or alternatives, they might be convinced that their initial judgements were correct (Sanna et al., 2002). Additionally, if people are asked to explain or consider alternatives that are not plausible, then this technique might not be effective (Hirt & Markman, 1995).

Anderson and Wright (1988) examined the effect of asking auditors and students for explanations in an audit task related to internal control evaluation. They found that students exhibit the explanation effect, while experienced auditors do not. Koonce (1992) examined the effect of explanations and counter-explanations in an audit task involving the evaluation of management-provided causes for fluctuations in a client's financial ratios. The cause provided by management did not indicate that an error was the cause of the fluctuation in the financial ratio. The auditors had to evaluate the probability that the management-provided cause was correct. The findings indicated that auditors who were asked to explain provided a higher probability that the cause was correct than did auditors who were not required to explain. However, auditors who explained and then counter-explained judged the probability that the cause was correct to be lower than the explanation-only auditors. Anderson and Koonce (1995) examined the same issue as Koonce (1992) but provided additional information to auditors on the cause of the fluctuation. They found that additional information on the cause was helpful in reducing the explanation-effect in two scenarios: first, when the cause is indeed correct and, second, when the cause is incorrect.

Heiman (1990) examined the effect of consideration of alternatives on auditors' judgement. He showed that auditors who are provided with an alternative set of hypothesis for a ratio fluctuation decreased their probability judgement for the initially presented cause of ratio fluctuation. The same effect was recorded for a scenario in which auditors were told to generate (themselves) two or more alternative hypotheses on the ratio fluctuation. Other studies, such as Reimers and Butler (1992) and Lowe and Reckers (2000), provided results consistent with the notion that consideration of alternatives leads to a reduction in hindsight bias among auditors.

Warnings as a form of simple intervention have not been widely used in auditing or materiality judgement tasks (Bonner, 2008). Reimers and Butler (1992) examined the effect of a weak warning on eliminating hindsight bias in the context of an auditing task. Their findings suggested that a simple intervention in the form of a warning was successful in reducing the hindsight bias among auditors. Similarly, Hasher et al. (1981) also provided evidence to support the notion that a warning telling participants that the information already incorporated into memory is wrong reduces hindsight bias. However, the impact of a warning does not fully eliminate the anchoring and adjustment bias (Block & Harper, 1991; George, 2000).

Clarkson et al. (2002) examined the effects of a weak and strong warning in the context of auditing judgements. They found that a weak warning to the decision-maker about potential biasing effects of outcome information was only weakly significant in eliminating outcome information bias. On the other hand, a strong warning was effective in significantly mitigating the outcome effect. Cheng and Wu (2010) examined the effect of warnings in mitigating framing effects. They found that when participants were warned, the differences between positively- and negatively-framed conditions decreased or were eliminated depending on the strength of the warning.

Results from the above studies indicate that the debiasing effect of a warning is mixed and inconclusive. In general, a strong warning appears to work better than a weak one. Furthermore, the effect of warnings has been examined in the contexts of hindsight bias; anchoring and adjustment effect; outcome effect; and framing, with results indicating they work effectively for some biases and not for others. In particular, the effect of warnings has not been examined in the context of auditing judgements and biases arising from the predominant utilisation of quantitative information.

3.3.3.2 Decision Aids

Decision aids are "tools that assists the decision maker in gathering and processing, or analysing information for a decision" (Brown & Eining, 1997). In auditing, decision aids have been widely used and advocated as a relevant judgement- and decision-making-improvement tool (Bonner, 2008). Decision aids typically have positive effects on the quality of cognitive processing, and in turn, various aspects of these cognitive processes can have positive effects on judgement and decision-making quality. There are many types of decision aids available, ranging from simple checklists to complex decision support systems (Messier, 1995). Structured audit procedures, checklists, and standard audit programs are examples of decision aids commonly used in auditing (Bonner, 2008).

In the context of auditors' materiality judgements, two recent studies have examined the effects of decision aids. Ng and Tan (2003) conducted an experiment in which auditors were required to make a judgement on the materiality of a proposed audit adjustment. The availability of a decision aid in the form of an authoritative guidance was manipulated between-participants in the study. Findings indicated that when the clients' audit committee was ineffective, the availability of the authoritative guidance had a greater effect on auditors' perceived negotiation outcomes. That is, when auditors were provided with authoritative guidance in the presence of an ineffective audit committee, the proportion of those who believed that the proposed audit adjustment was material was significantly higher than those who did not receive any form of authoritative guidance. Similarly, DeZoort et al. (2006) provided evidence that a planning-materiality decision aid increased materiality judgement conservatism and reduced judgement variability. Both these studies employed a simple decision aid. Since quantitative information was dominant in the materiality judgements of auditors under prior auditing pronouncements, the decision aids used in prior studies were mainly designed as materiality-calculation worksheets, with a greater focus on quantitative thresholds and rules of thumb. Since the new auditing standards require greater consideration of qualitative information in addition to quantitative information in materiality judgements, it is now imperative to design and test decision aids that incorporate both quantitative and qualitative aspects of materiality judgements.

3.3.3.3 Motivation to Systematically Process Information

Motivation is generally defined as "an internal state of an organism that impels or drives it to action" (Reber, 1995). Motivation is an intermediate state that is either initiated or invoked by other factors (Bonner, 2008). It can be created by a number of internal and external factors. Collectively, motivation created by internal factors is called intrinsic motivation.

Intrinsic motivation is the inspiration that people bring to a judgement task, and this varies across individuals (Bonner, 2008). However, accounting studies have long focused attention on motivation elicited by environmental factors such as accountability demands and incentives (Sprinkle, 2000). Bonner (2008) argues that the reason accounting researchers have predominantly examined the effects of variations in motivation created by external factors is because the accounting environment contains a number of such factors, and researchers may believe that the variation in motivation created by external factors may be greater than variation in intrinsic motivation.

Intrinsic motivation may have a more significant influence than extrinsic motivation when it comes to the processing of quantitative and qualitative information in auditing judgements. In particular, motivation to systematically process information, is an intrinsic motivation, and it might positively influence an accountant's processing of quantitative and qualitative information. De Dreu et al. (2008) argued that an individual's motivation to systematically process information can have an effect on the degree to which information is attended to, and the kinds of information that individuals attend to. De Wit et al. (2013) provided more recent evidence on the influence of motivation to systematically process information on mediating the effects of relationship conflict and task conflict on the ability to process information. They found that when participants perceived the presence of relationship conflict and task conflict, they reduce the utilisation of information that others had shared with the group; De Wit et al. also found, however, that the motivation to systematically process information reduced the effect of relationship and task conflict on information processing. That is, highly-motivated decision-makers were less affected by relationship and task conflict when they were processing information they received from other members of the group within which they were making the decision.

The scarce literature on motivation to systematically process information provides some indication that this aspect of intrinsic motivation may have a positive effect on the processing of quantitative and qualitative information in an auditing-judgement task. The theoretical framework developed in De Dreu et al. (1999) provides a frame of reference through which to measure and examine the effects of motivation to systematically process information on auditors' materiality judgement.

3.3.3.4 The Level of Involvement

Involvement is defined as a "person's perceived relevance of the object based on inherent needs, values, and interests" (Zaichkowsky, 1985: 342). Involvement is considered to vary between individuals and is associated with the motivation to process information systematically (Chaiken, 1980; Burnkrant & Sawyer, 1983; Celsi & Olson, 1988). In particular, people who are more involved with a product or an issue are more motivated to systematically process information and are more interested in acquiring and processing information about the subject of their decision than those who are less involved (Zaichkowsky, 1985).

Stanovich and West (2000) reported several experiments in which cognitive ability significantly moderated the gap between how people made decisions in their everyday life, and how perfectly rational individuals would make decisions (also referred to as the descriptive-normative gap). They demonstrated that the various biases affecting decision-making are significantly mitigated by individual cognitive differences, such as the level of involvement.

Cheng and Wu (2010) examined the effect of involvement on mitigating the framing effect. In particular, Cheng and Wu (2010), provided participants with information about an electronic translator and framed the accuracy of its translation either positively or negatively. The positively-framed translator accuracy stated that the electronic translator provided a two-way translation with up to 80 percent accuracy, while the negatively-framed accuracy statement read that the two-way full text translation would result in only a 20 percent error rate. They found that participants with a low level of involvement were more susceptible to framing effects than participants with a high level of involvement. This indicated that people with a high level of involvement could process information more diligently, in particular, being able to comprehend information more thoroughly, and therefore that they could make higher-quality judgements and decisions. Research in areas like advertising shows that high involvement leads to more elaborate processing of all available information and that decision-makers with high involvement have greater motivation to increase cognitive processing and effort (Petty et al., 1983).

In summary, the level of an individual's involvement mitigates a number of common biases in judgement and decision-making. It is effective, for instance, in reducing framing effects. Additionally, involvement increases cognitive processing and effort and leads to processing of all available information. In the area of accounting and auditing, the effects of the personality variable, that is, level of involvement, has not been examined. In relation to information processing, particularly, in relation to the processing of quantitative and qualitative information, the level of involvement might have a significant effect that may translate into higher-quality judgements and decisions. Prior literature in areas such as psychology and consumer research provides the theoretical framework that enables this study to examine the impact of this important personality variable on auditing judgements.

3.4 THEORY AND HYPOTHESES DEVELOPMENT

3.4.1 Preference for Quantitative Information and Utilisation of Quantitative versus Qualitative Information in Auditors' Materiality Judgement (H1)

In decision making, a person processes and integrates sequentially-presented information, making an initial judgement and then adjusting the initial judgement by integrating new pieces of information until a final decision is reached (Tversky & Kahneman, 1974). In this process, a number of factors can influence the adjustment of the initial judgement, including presentation order of new information, credibility of the source of information, and type of information. The two most common types of information are quantitative information and qualitative information.

There is evidence to suggest that quantitative information is more persuasive than qualitative information (Anderson et al., 2004; Kadous et al., 2005). Kadous et al. (2005) examined the effects of quantitative information on the persuasiveness of investment proposals. They hypothesised that quantitative information within investment proposals would influence persuasion by increasing the perceived competence of the person presenting the proposal and by enhancing the perceived plausibility of a favourable outcome. In support of their hypothesis, their findings indicated that quantitative information was more convincing than qualitative information. These findings accentuated the notion that when decision-makers are forced to consider multiple information cues, there is a tendency to lean toward quantitative information and away from qualitative information (Agarwal et al., 1992). Similar findings have also emerged on the utilisation of performance measures, whereby externally oriented, quantitative measures of performance receive greater emphasis than internally oriented, qualitative measures in balance-scorecard-based performance-measurement systems (Ittner et al., 2003).

It is often argued that quantitative information possesses qualities that gives it greater integrity, objectivity, and credibility compared to qualitative information (Yalch & Elmore-Yalch, 1984; Kadous et al., 2005). Vollmer (2007) shares similar sentiments about quantitative information; in particular, she argues that the common place assumption about numbers is that on some level numbers represent economic reality. Furthermore, decisions made by numbers appear to be impersonal and fair, and using quantified information to make decisions gives an impression of objectivity in judgement (Porter, 1995). These perceived qualities of quantitative information suggest that quantitative information is perceived as being superior to qualitative information.

Joe et al. (2014) examined the extent to which quantitative information enhanced an auditor's reliance on clients' fair-value estimates. In an experiment, they presented auditors with a report containing varying degrees of quantitative information, prepared by a fair-valuation specialist. Then, the auditors were tasked with specifying the level of substantive testing they would perform on a client's fair-value estimates in that client's financial statements. Joe et al.'s findings supported the notion that the level of quantitative information in fair-value specialist reports directly influences the level of audit testing the auditors would perform. When the level of quantitative information was high in the fair-value specialist report, auditors placed greater reliance on the report and reduced the extent of audit testing they performed on the fair-value estimates in the financial statements.

In another study, Ang and Trotman (2015), explored the utilisation of quantitative and qualitative information in managerial decisions at both the individual and group levels. The study aimed to understand the effect of quantitative information and its utilisation in decision-making in a group decision-making scenario, and whether quantitative information mitigated common information bias. The results showed that while individual decision makers generally preferred the utilisation of quantitative information, there were no significant differences in the discussion and utilisation of quantitative and qualitative information in a group setting.

Prior research suggests that the ability and motivation to utilise quantitative information in decision-making is also important and central to understanding the differences between usage and reliance on quantitative and qualitative information. Dilla and Stone (1997) required auditors to make risk judgements for a hypothetical client. They found that when information cues were presented as numbers rather than words, the time required to express the judgement decreased. They concluded that information processing is quicker when the input information cues are quantitative rather than qualitative. These effects are also found in consumer research. Stone and Schkade (1991), for example, argued that certain operations, such as comparisons, can be performed much more easily on quantitative information because of quantitative's precise nature. Their study found that quantitative labels were easily compared, and that processing times were shorter as well. Similarly, Viswanathan and Childers (1997) found support for the rationale that less effort and time was required to process quantitative information. Their study revealed that quantitative information was processed faster and also recognised faster by decision-makers. Jaffe-Katz et al. (1989) argued that the utilisation of quantitative information is influenced by its precise nature, and that faster comparisons can be made between pairs of quantitative probability expressions compared to verbal expressions.

Quantitative information also seems to have the benefit of being less open to interpretation compared to qualitative information. In an experiment with stock market participants, Burton et al. (2006) examined group polarisation in response to stock market receipt of qualitative information. Their results revealed that stock prices were most heavily influenced by extreme beliefs about qualitative information. The study provided support for the notion that qualitative information induces varying beliefs within the market because the interpretation is affected by recipients' knowledge. Quantitative information, on the other hand, is more objective, and the effect of such information on market prices could be determined more objectively. Additionally, there is evidence to suggest that quantitative information is also less subject to framing effects compared to qualitative information (Chang et al., 2002). Chang et al. (2002) examined framing effects in capital budgeting decisions, and found that framing effects were only present when information that was provided to participants could easily be simplified. They found that information presented quantitatively was harder to simplify and was processed at a more complex level, which reduced the effects of framing.

The studies reviewed so far indicated that quantitative information has a number of advantages over qualitative information. In terms of information processing, quantitative information can be processed faster (Dilla & Stone, 1997), and recognised faster and with more accuracy (Viswanathan & Childers, 1997; Kadous et al., 2005; Ang & Trotman, 2015). In terms of decision-making, quantitative information enhances persuasiveness (Anderson et al., 2004; Kadous et al., 2005), enhances reliability of specialist reports (Joe et al., 2014), and is utilised more in individual decision-making scenarios (Ang and Trotman, 2015). Research generally supports the notion that different cognitive processes are elicited by quantitative information compared to qualitative information, and this leads individuals into making different judgements. However, the literature on the effect of quantitative information is not conclusive. For example, some studies show that individual decision-makers show significant leaning toward quantitative information in decision-making, but such proclivities are not observable when decisions are made in groups (Ang & Trotman, 2015), while other studies do not report significant results on the impact of quantitative information (Anderson et al., 2004). This could suggest that there are differences, for example, between individual decision-makers' personality traits that could explain their utilisation of quantitative information in decision-making.

Viswanathan (1993) predicted that a basic preference for quantitative information might induce bias in the utilisation of qualitative versus quantitative information in decision-making. There is evidence to support the proposition that differences between individuals' ability and willingness to utilise quantitative information influences their understanding, utilisation, and integration of such information in the decision-making of various groups of participants from the general population (Peters et al., 2006; Liberali et al., 2012). Yalch and Elmore-Yalch (1984) also noted that because different individuals have differing abilities and willingness to process information, only those who possess the motivation to utilise quantitative information would utilise such information.

To examine the effects of preference for quantitative information on the utilise of quantitative versus qualitative information in the context of auditors' materiality judgements, a task is selected in which participants have to assess the materiality of a misstatement that necessitates the utilisation of both quantitative and qualitative information to reach an appropriate judgement. ISA 450 *Evaluation of Misstatements Identified During the Audit*, paragraphs 10-11 include principles on determination of materiality of misstatements that mandate the utilisation of both quantitative rules of thumb and qualitative factors. The paragraphs A11-A18 of ISA 450 further specify examples of quantitative information, and qualitative information that should be taken into consideration by accountants. Quantitative information, for example, includes the percentage impact of the misstatement on the current period net income, the percentage impact of the misstatement on the total assets, or the percentage impact of the misstatement on total revenue (IAASB, 2014). Qualitative information includes, among others, consideration of issues such as the effect of the misstatement on profitability trends, the potential impact of the misstatement on the company’s compliance with debt covenants or other contractual arrangements, or whether the misstatement (if not corrected) has the potential to increase compensation payments for management (IAASB, 2014).

The materiality-judgement task in this study presents a misstatement of the provision for a doubtful-debts scenario. The values for the five quantitative rules of thumb are presented within the case scenario. These five quantitative rules of thumb are: the percentage effect of the misstatement on the current period net profit; the percentage effect of the misstatement on total assets; the percentage effect of the misstatement on net assets; percentage effect of the misstatement on total revenue; and the percentage effect of the misstatement on earnings before interest, tax, depreciation, and amortisation. Additionally, five qualitative factors are also provided in the case scenario. The first qualitative information is the impact the misstatement will have on the firms’ compliance with debt covenants and other contractual arrangements. The second qualitative information is the impact the misstatement has on earnings and other trends. The third qualitative factor is the impact of the misstatement on management compensation. The fourth qualitative factor is the impact of the misstatement on the performance ratios of the firm. The fifth qualitative factor is the significance of the misstatement with regard to the auditors’ understanding of known previous communications to users, such as forecast earnings.

This study predicted that when auditors assess the materiality of a misstatement, they would utilise the information available to them. The study posited that auditors who have a high preference for quantitative information would utilise more quantitative than qualitative information in their judgement compared to accountants who have a low preference for quantitative information, who were predicted to utilise more qualitative than quantitative information. Accordingly, in the context of the materiality judgement for a misstatement, it was expected that auditors with a high preference for quantitative information would find the five pieces of quantitative information cues more useful, while auditors with a low preference for quantitative information would find the five qualitative information cues more useful. Therefore, the following hypothesis was formulated:

H1: Auditors with a high preference for quantitative information will utilise more quantitative than qualitative information when making materiality judgements compared to auditors with a low preference for quantitative information.

3.4.2 Effect of Utilisation of Quantitative versus Qualitative Information on Auditors' Materiality Judgements (H2)

Based on theory for H1, auditors who have a high preference for quantitative information could unknowingly ignore relevant qualitative information in their decision-making process, and focus predominantly on quantitative information. This implies that their preference for quantitative information can influence their judgement. The role of qualitative information in judgements is important, as it provides the context within which decisions are to be made (Agarwal et al., 1992; Perkins, 2001; Toivonen et al., 2006). Quantitative and qualitative information on their own often provide limited information about a phenomenon. When they are combined in judgement, they provide much richer insights and an inclusive framework to make decisions and judgements.

In the context of this study, the focus is on auditors' materiality judgement in relation to a misstatement that is detected by the auditor during the course of an audit. This misstatement was communicated to the management, who refused to correct the financial statements, arguing that the misstatement was immaterial. In this scenario, the auditor had to reassess the materiality of the misstatement before making a decision on how it would impact the audit opinion that they would issue. Where the materiality decision was predominantly based on quantitative factors, the auditor would assess the size of the misstatement relative to a relevant base amount, such as total revenue, net profit, or total assets. Auditors could decide on the relevant bases that they wanted to utilise in assessing materiality. The auditing literature indicated that most audit firms utilise a certain percentage of the most common bases as thresholds beyond which misstatements would be considered material. For example, most firms utilise five percent of the current period net profit, or one percent of total revenue, as thresholds (Eilifsen & Messier, 2015).

Bias can manifest in materiality decisions based on quantitative thresholds when auditors opportunistically select bases that they utilise to determine materiality. Several studies provided evidence that auditors' choice of relevant bases and methods of assessing quantitative materiality are opportunistically motivated (Brody et al., 2003; Nelson et al., 2005). Brody et al. (2003) show how Enron's US$51million misstatement in its 1997 financial statements was not corrected even though the company reported net income of only US$105million in that year. Under conventional materiality thresholds, a US$51million adjustment would have been considered material against US$105million in net income.

Enron and its auditors utilised “normalised income” to assess the misstatement rendering it immaterial.

Additionally, quantitative assessment of materiality generally requires the misstatement be expressed as a percentage of the relevant base; that is, materiality is evaluated relatively rather than as an absolute amount. Recent research shows that the numerical format in which information is presented can have an impact on judgements and decisions (Nelson & Rupar 2015). Nelson and Rupar (2015) examined the scenario in which an investor’s assessment of a firm’s commodity price risk in which that investor was provided with a sensitivity analysis that disclosed the decrease in earnings that would occur if the price of a key commodity used by the firm in production increased. They found that when the decrease in earnings was expressed in dollar format, investors perceived high risks compared to when the decrease in earnings was presented in percentage format. Prior research in psychology also provides evidence of ratio bias, whereby decision-makers view ratios presented in terms of small numbers (e.g., 4/100) as smaller than equivalent ratios presented in terms of large numbers (e.g., 40,000,000/1,000,000,000) (Denes-Raj & Epstein, 1994). In the general population, Brase (2002) found that people judge the severity of a disease to be greater when the mortality associated with the disease is presented in terms of the number of lives that are lost rather than the percentage of lives lost. This further implies that the materiality of a misstatement may be judged differently using quantitative information, depending on how the magnitude of the misstatement is presented.

In the context of this study, the materiality of the misstatement of $650,000 was evaluated using five quantitative cues and five qualitative cues. All of the five quantitative cues were presented in the experimental materials as lower than the thresholds beyond which they are considered to be material, in accordance with the auditing pronouncements and standard audit practices (Eilifsen & Messier, 2015). Additionally, because auditors traditionally evaluate the materiality of a misstatement using ratios of the misstatement to net assets or net income, the misstatement would appear smaller than if it was evaluated in absolute amounts. The five qualitative cues that were presented in the experimental materials provided additional insights into the effects of the misstatement. All the five qualitative information cues indicated that the misstatement was material. Therefore, auditors who utilised more quantitative information than qualitative information when making their materiality judgement would end up with a biased materiality judgement compared to auditors who utilised more qualitative than quantitative information cues. Accordingly, this study proposed the following hypothesis:

H2: Auditors who utilise more quantitative than qualitative information will make a biased materiality judgement compared to auditors who utilise more qualitative than quantitative information.

3.4.3 Effect of Simple Intervention in the Form of a Warning on Auditors' Materiality Judgement (H3)

Research in auditing and psychology provides mixed evidence of the efficacy of simple intervention techniques to reduce judgement errors and bias (Bonner, 2008). In particular, simple interventions, like requiring an explanation of the judgement or decision, has been shown to not improve the quality of judgements and decisions. On the other hand, counter-explanation requirements and the consideration of alternatives has been shown to improve judgements and decisions.

A less-used simple intervention technique in auditing is warnings. A simple intervention to focus an auditor's attention on factors that are considered important for reaching materiality judgement may be more efficient than a decision aid, as auditors are usually working under time pressure and face constraints on time and resources. Therefore, a simple remedy for errors in judgement would be cost-effective. A simple intervention can also be provided in the form of a warning message about the possibility of a decision bias. Simple interventions, such as a warning, are less-intrusive de-biasing techniques because they provide additional information to decision makers, but do not require them to perform additional procedures (Cheng & Wu, 2010).

Simple interventions in the form of warnings are similar to regulatory staff alerts issued by regulators such as ASIC and PCAOB, speeches (such as that delivered by Levitt (1998) on the misuse of materiality), and audit-firm inspection reports that remind auditors of the areas that the regulators focused on in their independent audit-firm inspections. It was expected that auditors who received a warning message about their potential bias would engage in reasoning that was conscious, effortful, and logical, thus mitigating the effects of auditors' preferences for quantitative information, and leading to unbiased materiality judgement. Kennedy (1995) argued that hardwired cognitive biases required cognitive remedies, while effort-related cognitive biases could be reduced through interventions that encouraged decision-makers to work harder.

Prior studies in auditing find that simple interventions in the form of engaging auditors in self-review was effective in reducing the "curse of knowledge" (Earley et al., 2008). This result was consistent with results from psychology finding that intervention prompts decision-makers to engage in reasoning that is slower, conscious, effortful, explicit, and logical, and can mitigate judgement errors (Milkman et al., 2009). Furthermore, Babcock et al. (1997) provided evidence that reminding litigants to think about the weaknesses in their own case is effective in reducing self-serving judgements.

In the context of the current study, auditors have been shown to be biased toward the utilisation of quantitative information to evaluate materiality. While auditing pronouncements now emphasise the need for auditors to consider both quantitative and qualitative information to evaluate materiality, most still rely on quantitative information only. There is a need to get auditors to consider qualitative information also in their assessment of materiality. Therefore, this study devised a simple intervention in the form of a warning to make auditors consider both quantitative and qualitative information in their judgements. The simple intervention in this study prompted the participants with a warning message before they recorded their materiality judgement. The warning message told the participants that the auditing standards required them to utilise both quantitative and qualitative information in materiality judgements and that auditing standards in Australia are legally enforceable. Adding the context that within Australia auditing standards are legal instruments makes the warning message stronger.

It is argued that the simple intervention via a warning can play an important role in enhancing the ability of accountants to utilise both quantitative and qualitative information when making the materiality judgement. The expectation was that accountants who were provided with the warning message would be motivated to increase effort in the task and that this would also increase their cognitive processing, given the warning message would create the stimulus to search for and utilise all of the quantitative and qualitative information.

On the other hand, accountants who do not receive the warning message before they made their materiality judgement might not search for and/or utilise all of the quantitative and qualitative information cues. Additionally, the accountants with a high preference for quantitative information who do not receive a warning message might inadvertently utilise only quantitative information to make their materiality judgement. Consequently, it was expected that the simple intervention in the form of a warning would mitigate the effect of preference for quantitative information and the general proclivity of accountants toward quantitative information. Accordingly, the following hypothesis was formulated:

H3: Auditors provided with a simple intervention are likely to utilise both quantitative and qualitative information in their materiality judgement, thereby making an unbiased judgement compared to auditors not provided with a simple intervention.

3.4.4 Effect of a Decision Aid on Auditors' Materiality Judgement (H4)

Prior literature documents positive effects of a decision aid on auditors' materiality judgements. In particular, prior studies show that a simple decision aid in the form of a materiality-calculation worksheet has been shown to improve judgements of auditors on materiality (Ng & Tan, 2003; DeZoort et al., 2006). Materiality-calculation worksheets focus primarily on assisting auditors with the utilisation of quantitative information in their materiality judgements. The need to incorporate more qualitative information in materiality judgements necessitates the development and testing of a more comprehensive decision aid that can assist auditors in incorporating both quantitative and qualitative information in their judgements. As such, a decision aid that decomposes the overall materiality judgement, whereby auditors first evaluate materiality using quantitative information and then further by evaluating the impact of qualitative information, followed by an aggregation of the two judgements into an overall judgement, is more appropriate.

Prior literature documents several benefits of a decision aid that employs a task-decomposition strategy, including (1) it forces the decision-maker to consider all relevant information; (2) it helps the decision-maker to combine relevant information correctly; and (3) it reduces cognitive strain (Jiambalvo & Waller, 1984). Task decomposition also allows decision-makers to focus on small subsets of information, thereby mitigating the effects of short-term memory limitations (Bonner, 2008). It also reduces task complexity, by reducing the amount of information to be processed at a given time.

Several studies in auditing have examined the effectiveness of a decision aid based on task-decomposition strategy. Jiambalvo and Waller (1984) examined auditors' test of details risk assessment made either globally or through the audit risk model (which decomposes the task into components). Jiambalvo and Waller (1984) found no difference between global and decomposed judgement obtained from the audit risk model (where component judgements were combined intuitively by the decision-maker). However, significant differences were noted between decomposed judgement combined intuitively and decomposed judgement combined mechanically. The analysis revealed that auditors did not use the audit risk model correctly. On the other hand, Libby and Libby (1989) found that auditors who made a judgement based on a decision aid that decomposed the task and combines the component judgements mechanically had higher judgement quality, measured by agreement of judgement with expert panel's judgement. Similarly, Bonner et al. (1996) reported that auditors made better judgements using a decision aid that decomposed the task into components and then combined the component judgements mechanically.

Eining et al. (1997) provided auditors with a decomposition decision aid for fraud-related judgements. They found that auditors provided with a decision aid were better at discriminating between fraud and non-fraud cases than were auditors who were not provided with a decision aid or were provided with a list-type decision aid. Zimbelman (1997) investigated the effect of decomposition decision aid on planning work for accounts receivables. Auditors with the decision aid spent more time reading the case and information but did not seem to be more sensitive to differential fraud risk when planning audit tests and budgeting hours for test work.

Butler (1985) examined the sampling-risk judgements of auditors. He provided auditors with a decision aid that required them to explicitly assess factors relevant to sampling risk but were most often ignored. Although he did not find significant differences between the sampling-risk assessment of the decision-aid group and the non-decision-aid group; the decision to accept or reject an account balance was more frequently correct for the decision-aid group. In another study, Kachelmeier and Messier (1990) examined sample-size decisions of auditors provided with a decision aid against those not provided with one. They showed that auditors who received a decomposition decision aid to assist in the sample-size decision chose larger sample sizes than unaided auditors did. The results are attributed to auditors considering all relevant factors in choosing a sample size when a decision aid is provided.

In general, results of accounting studies employing a decomposition decision aid are similar to those in psychology (Bonner, 2008). Such decision aids tend to improve judgement quality. However, given accountants might work around such aids, and decomposition decision aids can also operate like lists (Bonner, 2008), they may not always result in better judgements.

As discussed earlier, materiality judgements for misstatements require the consideration of quantitative and qualitative information. Auditors have to combine both types of information to make an unbiased judgement. The theory underpinning H1 and H2 predicts that materiality judgements of auditors with a high preference for quantitative information may be biased because of the utilisation of more quantitative than qualitative information compared to auditors with a low preference for quantitative information, who would be expected to utilise more qualitative than quantitative information.

Therefore, a decomposition decision aid was developed and tested in this study. The decision aid decomposed the materiality judgement into two parts. The first part required auditors to consider quantitative rules of thumb to assess materiality of a misstatement. The quantitative rules of thumb were presented as a calculation worksheet that enabled participating auditors to calculate thresholds for various bases beyond which amounts of misstatements would be considered material. The worksheet contained five commonly utilised bases and percentages to be applied to the bases for calculation of the materiality threshold. These bases and percentages were adopted from auditing standards and prior literature (e.g., Eilifsen & Messier, 2015). In the second part, auditors were presented with a list of qualitative information that auditing standards and prior literature identified as important for consideration of materiality. Auditors were then asked to consider the impact of each of the qualitative information on the materiality of the misstatement. Finally, auditors combined their judgement from both parts into a combined materiality judgement. The combination was made intuitively rather than mechanically.

It was expected that when making materiality judgements, the decision aid would assist auditors in considering both quantitative and qualitative factors compared to auditors who did not receive a decision aid. This expectation was based on the notion that when auditors are provided with an appropriate decision aid, their cognitive processing will increase, because this aid will allow them to include pertinent information regarding materiality, leading to an unbiased judgement. Accordingly, the following hypothesis was posited:

H4: Auditors provided with a decision aid on materiality are likely to utilise both quantitative and qualitative information in their materiality judgement, thereby making an unbiased judgement compared to auditors not provided with a decision aid.

3.4.5 Effect of Motivation to Systematically Process Information on Auditors' Materiality Judgement (H5)

Systematic information processing involves comprehensive and analytical cognitive processing of judgement-relevant information (Chen et al., 1999). According to De Dreu et al. (2008), individuals' motivation to systematically process information is determined by their epistemic motivation as well as their social motivation. Epistemic motivation is defined as the willingness to expend effort to achieve a thorough and accurate understanding of the task at hand. Social motivation is defined as an individual's preference for particular distributions of outcomes for the self-versus others. This model postulates that epistemic motivation drives the degree to which information is attended to, whereas social motivation drives the kind of information that individuals attend to. Social motivation, for example, may determine whether decision-makers focus primarily on information supporting their preferred alternative, or on information that could integrate different decision alternatives (De Dreu et al., 2008).

Prior research shows that more biased information processing could be caused by reduced motivation for processing information systematically (Scholten et al., 2007). The evidence from De Wit et al. (2013) further supports the notion that decision makers with lower motivation to systematically process information engage in biased information processing.

In the context of the current study, auditors' materiality judgements requires processing of both quantitative and qualitative information. This is based on the requirements of the relevant auditing pronouncements such as ISA 450. As it has been suggested, motivation to systematically process information can influence decision makers' utilisation of quantitative and qualitative information and consequently the judgement of auditors.

To examine how motivation to systematically process information influences auditors' materiality judgement, this study draws on the notion a higher motivation to systematically process information is consistent with decision-makers searching for and thoroughly using all available information. Consequently, it was predicted that accountants with higher motivation to systematically process information would be more likely to utilise both quantitative and qualitative information and make unbiased materiality judgements compared to accountants with lower motivation to process information. Accordingly, the following hypothesis was formulated:

H5: Auditors with a higher motivation to systematically process information are likely to utilise both quantitative and qualitative information in their materiality judgements, thereby making an unbiased judgement compared to auditors with a lower motivation to systematically process information.

3.4.6 Effect of Level of Involvement on Auditors' Materiality Judgement (H6)

"Involvement" is defined as a person's perceived relevance of the object based on inherent needs, values, and interests (Zaichkowsky, 1985). Individuals may be involved with an issue for various reasons, including its personal relevance (Petty & Cacioppo, 1979), its intrinsic importance (Sherif & Hovland, 1961), or because of the significant consequences it may have on their lives or work (Apsler & Sears, 1968).

As involvement significantly affects motivation and capacity to process relevant information (Igartua et al., 2003), it governs individuals' information processing (Petty & Cacioppo, 1979). Individuals who are less involved with an issue are likely to engage in less-motivated and less-effortful information processing (Yoon & Tinkham, 2013). On the other hand, highly involved individuals tend to engage in motivated systematic information processing, they scrutinise information in detail, and they base their judgements on the perceived diagnosticity of data and information (Burnkrant & Sawyer, 1983; Celsi & Olson, 1988; Meyers-Levy & Malaviya, 1999).

Level of involvement has also been shown to mitigate framing effects in individuals (Cheng & Wu, 2010). Framing effects is a cognitive bias that causes decision makers to adopt cognitive shortcuts to simplify the complex task of making judgements (Tversky & Kahneman, 1981). It has been argued that framing effects can be attributed to a lack of attention and that framing bias can be mitigated if individuals thought more carefully about their choices. Individuals with low involvement are more vulnerable to information framing because they tend to exert less cognitive effort in processing information than do those with high involvement. Therefore, decision-making biases may be significantly mitigated by individual differences related to level of involvement. Further, it is argued that framing should have less impact on high involvement individuals, as such individuals exert the cognitive effort required to evaluate all forms of information, and from different perspectives (Donovan & Jalleh, 1999).

With this understanding, it can be inferred how level of involvement may influence an individual's information processing. Auditors with a high level of involvement would engage in more systematic and effortful processing of all available information to determine the materiality of misstatements, while auditors with low involvement would engage in cognitive shortcuts or adopt heuristic principles that simplify the decision task. In the case of the current study, auditors with lower involvement may focus more on quantitative benchmarks and percentages, and ignore more complex qualitative factors that they need to consider to make unbiased materiality judgements, compared to auditors with higher involvement.

To examine how the level of involvement influences auditors' materiality judgement, this study drew on the notion of a higher level of involvement being consistent with more systematic and effortful processing of all available information. Consequently, it was predicted that accountants with a higher level of involvement would be more likely to utilise both quantitative and qualitative information, and make unbiased materiality judgements, compared to accountants with a lower level of involvement. Accordingly, the following hypothesis was formulated:

H6: Auditors with a higher level of involvement are likely to utilise both quantitative and qualitative information in their materiality judgements, thereby making an unbiased judgement compared to auditors with a lower level of involvement.

3.5 RESEARCH METHOD

3.5.1 Participants

The participants were professional accountants from the Big 4 and non-Big 4 accounting firms in Australia. Initial contacts were made with all the Big 4 and randomly selected non-Big 4 accounting firms in Australia. The accounting firms that agreed to allow their employees to participate in the experiment were sent the experimental instruments. The instruments were randomly distributed to individuals who held professional accounting qualifications and were members of one or more of the three professional accounting bodies: CPA Australia or Chartered Accountants of Australia and New Zealand (CAANZ) or Institute of Public Accountants (IPA). Therefore, in all cases, the respondents had been exposed to the ISAs/ASAs, although their knowledge and experiences varied.

The 77 accountants who participated in the experiment were randomly assigned to one of three different experimental conditions. A control group, a simple-intervention group, and a decision-aid group each were randomly assigned about 25 participants.

3.5.2 Experimental Design

This study used a between-subjects experimental design to test the hypotheses. The first independent variable, preference for quantitative information, was a between-subjects measured variable. A 20-item inventory from Viswanathan (1993) was used to measure each participant's preference for using quantitative information. Each of the 20 questions evaluated a diverse set of elements or aspects including the extent to which people enjoyed using quantitative information, liking for quantitative information, perceived need for quantitative information, usefulness, importance, perceived relevance, satisfaction, and attention or interest in using quantitative information. The response format was a seven-point Likert scale (1 to 7; where 1 denoted "strongly disagree" and 7 denoted "strongly agree"). For each participant in this study, the preference for quantitative information (PQI) was calculated by summing their responses to all the 20 questions. A higher total score on the 20-item inventory indicated a higher preference for quantitative information. This scale had Cronbach's alpha in excess of 0.75, indicating a high degree of reliability (Nunnally, 1967).

The second independent variable in this study was the availability of a simple intervention in the form of a warning, and this was manipulated between-subjects, who were either provided with the simple-intervention treatment (simple-intervention group) or not provided with the simple-intervention treatment (control group). The third independent variable was the availability of a decision aid, and this was also manipulated between-subjects who were either provided with the decision-aid treatment (decision aid group) or not provided with the decision-aid treatment (control group).

The participants in the control group made the materiality judgement without the assistance of the simple intervention in the form of a warning and the decision aid. The participants in the simple-intervention group were provided with a warning message just before they were required to make their materiality judgement. The simple-intervention message was as follows:

> The auditing standard, ASA 450 *Evaluation of Misstatements Identified during the Audit*, requires auditors to consider both quantitative and qualitative factors when

determining the materiality of uncorrected misstatements. Auditing standards in Australia are legally enforceable.

Participants in the decision-aid group were provided with a materiality task decomposition decision aid. This decision aid decomposed the overall materiality judgement into two components. The first component focused on the materiality judgement, using quantitative information; the first part of the decision aid was a materiality-calculation worksheet that allowed participants to assess the materiality of the misstatement against the five quantitative-materiality thresholds. The second component of the decision aid assisted auditors in assessing the materiality of the misstatement, using qualitative information. Finally, participants were to aggregate their component judgements into an overall materiality judgement intuitively rather than mechanically.

The fourth independent variable, motivation to systematically process information, was a between-subjects measured variable. A three-item inventory from De Dreu et al. (1999) was used to measure each participant's motivation to systematically process information. The first item elicited whether participants considered all possible perspectives when making the judgements, through the following question: "I tried to take into consideration all possible perspectives", with responses measured on a five-point Likert scale (1 to 5; where 1 denoted "rarely" and 5 denoted "very much"). The second question elicited whether participants made a thorough judgement, through the following question: "I tried to make judgements and decisions as thorough as possible", measured on a five-point Likert scale (1 to 5; where 1 denoted "absolutely disagree" and 5 denoted "absolutely agree"). The third question elicited participants' level of thinking before making the judgement, through the following question: "I thought deeply before making a decision", where the response was recorded on a five-point Likert scale (1 to 5; where 1 denoted "seldom" and 5 denoted "all the time"). For each participant in this study, the motivation to systematically process information was calculated by summing their responses to all the three questions. A higher total score on the three-item inventory indicated a higher motivation for systematically processing information. This scale had Cronbach's alpha in excess of 0.75, indicating a high degree of reliability (Nunnally, 1967).

The fifth independent variable, level of involvement, was a between-subjects measured variable. A 10-item personal-involvement inventory from Zaichkowsky (1994) was used to measure each participant's level of involvement. Participants were asked to provide ratings for materiality judgement on a seven-point semantic differential scale related to 10 pairs of words that each measured a different aspect of the participants' personal involvement with the concept of materiality in accounting (items on the left were scored (1) low involvement to (7) high involvement). These 10 pairs of words were important-unimportant*, boring-interesting, relevant-irrelevant*, exciting-unexciting*, means nothing-means a lot, appealing-unappealing*, fascinating-mundane*, worthless-valuable, involving-uninvolving*, and not needed-needed. The pairs of words marked with an asterisk (*) were reverse scored. For each participant in this study, the level of involvement was calculated by summing their responses to all the 10 items. A higher total score on the 10-item inventory indicated a higher level of involvement. This scale had a Cronbach's alpha in excess of 0.75, indicating a high degree of reliability (Nunnally, 1967).

3.5.3 Research Instrument

The experimental material was developed with extensive consultation with accounting academics of Macquarie University, Australia. The experimental task was pre-tested with five accounting academics from Macquarie University and five senior professional accountants. Problems with the experimental task were identified and rectified to enhance readability and comprehension. Particular care was taken in designing the experiment to ensure its internal validity, and to enable variations in judgements of professional accountants to be attributable to the manipulations and measurements.

The task included information about an audit client (Dax Ltd.), which was involved in the manufacturing and retailing of air-conditioning and refrigeration equipment. Dax Ltd. is a former market leader in the air-conditioning and refrigeration-equipment market. In the face of intense competition and poor performance, it was trying to boost retail sales by decentralising credit control decisions to the branch level, and offering customers better credit terms. This background information was held constant across treatments. Participants were told that while performing the audit, they were to evaluate the company's controls over credit sales, cash collections, prior experience on debt collection, financial status of the customers, general economic conditions. They also were told the estimated provision for doubtful debts was $650,000 over and above what the client had recorded. Furthermore, participants were told that this was brought to the attention of the company's management, who refused to adjust the financial reports.

"Quantitative information" useful to materiality judgements was presented to the participants. Both the prior literature and audit firm manuals indicate that the most commonly utilised quantitative information for assessing materiality was ratios of the amount of misstatement to the amount of net profit, total assets, total revenue, net assets, and total equity (Messier et al., 2005; Eilifsen & Messier, 2015). The task included extracts of Dax Ltd.'s financial reports, which enabled calculation of the ratios.

"Qualitative information" identified as useful to materiality judgements in ASA 450 was also provided to the participants. Firstly, the participants were told that Dax Ltd. had to meet two debt covenants (debt-to-equity ratio below 2.5:1 and profitability ratio above 10 percent), and if the misstatement of $650,000 were corrected, then the firm would not be able to meet the debt covenant requirements. Second, Dax Ltd. had been consistently reporting profits and beating analysts' consensus forecasts in the past five years. If the firm were to correct the misstatement, the current profit would turn into a loss, and Dax Ltd. would also fail to beat the analysts' consensus forecast. The third piece of qualitative information presented to the participants was the impact that the correction of the misstatement would have on senior-management compensation. In particular, participants were told that the senior management received a performance bonus if the return on assets (ROA) were above 10 percent. In this task, if the misstatement of $650,000 were corrected, then the ROA will fall below 10 percent and senior management would not receive the performance bonus. The fourth piece of information was the impact that the misstatement had on ratios used in measuring Dax Ltd.'s performance, and the fifth piece of qualitative information was the significance of the misstatement to the auditor with regard to previous communications to the users of the financial reports. In summary, each participant received five quantitative information cues and five qualitative information cues, equalling 10 cues in total.

3.5.4 Dependent Variables

The first dependent variable was information utilisation. The participants were asked to rate the usefulness of each of the 10 pieces of quantitative and qualitative information presented in the task. Responses were collected on a 10-point Likert scale (1 to 10; where 1 denoted "not useful at all" and 10 denoted "very useful").

The utilisation of quantitative versus qualitative information was calculated by first summing the usefulness of the five quantitative information cues and the five qualitative information cues and then subtracting the value for qualitative information from the value for quantitative information. The participants were required to indicate the usefulness of each piece of quantitative and qualitative information to their materiality judgement on a 10 point Likert scale (where 1 indicated that the information was "not useful at all" and 10 indicated the information was "very useful"). Therefore, the minimum possible value for the utilisation of quantitative versus qualitative information was -45 and the maximum possible value was 45, where positive values indicated that the participant utilised more quantitative than qualitative information and negative values indicated that the participant utilised more qualitative than quantitative information. This variable is relevant to H1.

The second dependent variable was the auditors' materiality judgement. The participants were asked to provide a judgement on the materiality of the $650,000 misstatement by providing a response on a seven-point Likert scale (1 to 7; where 1 denoted "not material at all" and 7 denoted "extremely material"). This variable is relevant to H2, H3, H4, H5, and H6.

3.5.5 Procedures

All respondents received the same instruction and background information, and in the same format. All the relevant instructions were provided in a cover letter or prior to each of the sections. The research instrument consisted of three sections. The first section of the instrument required participants to provide demographic data such as gender, age, level of formal education, ethnicity, experience, and employer details. Additionally, respondents were also asked to provide information concerning their level of familiarity with the relevant auditing standards. The second section consisted of the experimental task. The task was based on a misstatement identified during the audit and required the exercise of professional judgement to determine the materiality of the amount of misstatement to the financial reports of the firm. The judgement was based on principles contained in ASA 450 *Evaluation of Misstatements Identified during the Audit* and ASA 320 *Materiality in Planning and Performing an Audit.* The third section consisted of the 20-item inventory to measure preference for quantitative information, 3-item inventory to measure motivation for systematically processing information, and the 10-item inventory for measuring the level of involvement.

3.5.6 Pre-testing

To obtain an indication of the most unbiased judgement on the materiality of the misstatement in the experimental task, a pre-test was conducted with five senior academics from Macquarie University in Australia and five senior professional accountants in Sydney, Australia. Each participant in the pre-test group was provided with the experimental task that contained the decision aid, and they made their judgement on the basis of the information provided.

ISA 450 *Evaluation of Misstatements Identified During the Audit* requires the consideration of both the quantitative and qualitative factors when determining the materiality of a misstatement. As specified in paragraph 11, “The auditor shall determine whether uncorrected misstatements are material, individually or in aggregate. In making this determination, the auditor shall consider: (a) The size and nature of the misstatements, both in relation to particular classes of transactions, account balances or disclosures and the financial report as a whole, and the particular circumstances of their occurrence” (IAASB, 2014: 10). According to the information provided in the experimental materials, the misstatement is not material when only quantitative information cues are considered, as none of the five quantitative materiality thresholds exceed the 5 percent benchmark. However, when any one of the five qualitative cues are also considered, the misstatement of $650,000 is material. Since auditing pronouncements require that auditors consider both quantitative and qualitative information when evaluating materiality, the most unbiased judgement in the case is that the misstatement is material.

The mean score of the judgement made by all participants in the pre-test was used to determine whether the misstatement was material or immaterial. The mean score for their judgements was 5.9 (untabulated), which indicated that the misstatement was material. This study used the consensus in the judgement of the panel of experts as a proxy for the unbiased materiality judgement.

Since the misstatement on which materiality judgement is required in the case is material only when qualitative information cues are considered, qualitative cues provided in the experimental materials should be useful in the determination of an unbiased materiality judgement. This study used the ratings provided by the panel of experts in the pre-test for each of the five quantitative and five qualitative cues as to how useful they were to making their judgement. The mean score for the five quantitative cues was 5.52, while the mean score for the five qualitative cues was 7.1, indicating that qualitative cues were more useful in the unbiased materiality judgement. Overall, the pre-test participants utilised more qualitative (mean = 35.5) than quantitative (mean = 27.6) information to arrive at the unbiased materiality judgement.

3.6 RESULTS

3.6.1 Manipulation Checks

The first manipulation check question was included in Section 2 of the experimental instrument of those in the simple-intervention group. The participants were asked to indicate if the auditing standards in Australia are legally enforceable. The statement "Auditing Standards in Australia are legally enforceable" was part of the simple-intervention warning provided to participants. The wording in the question mirrored the wording in the simple intervention provided in the task. Two participants answered this manipulation check question incorrectly. These participants were excluded from the analyses. All the analyses were rerun based on the full sample (i.e., including participants who failed the manipulation check), and the results remain inferentially equivalent.

The second manipulation check question was included in Section 2 of the experimental instrument of those in the decision aid group. This question asked participants: "Please indicate the extent to which the decision aid enabled you to make a better judgement" on a seven-point Likert scale (1 to 7; where 1 indicated "not at all" and 7 indicated "to a great extent"). The mean response for this question from all participants in the decision aid group was 5, indicating that participants who received a decision aid used the decision aid, thereby enabling them to make a better judgement.

3.6.2 Demographic Details of Participants

Table 3.1 presents the demographic details for the 75 participants who passed all manipulation checks. The mean age of the respondents in the control group was 32 years; 33 years in the simple-intervention group; and 31 years in the decision-aid group. On average, the number of years in formal education in each group was 17 years. The average professional experience level was 5.94 years for the control group, 8.76 years for the simple-intervention group, and 9.5 years for the decision-aid group. As shown in Table 3.1, of the 25 respondents in the control group, 44 percent were males and 66 percent were females; of the 25 respondents in the simple-intervention group, 72 percent were males and 28 percent were females; and of the 25 respondents in the decision-aid group, 48 percent were males and 52 percent were females.

<Insert Table 3.1 about here>

The first step in the analysis was to test whether there were differences in the judgements of professional accountants that were explained by demographic variables. Studies investigating the judgements of professional accountants have shown that variables such as gender, age, length of education, and years of professional experience might also affect the judgements of accountants. Analysis of these variables showed that gender, age, length of education, and years of professional experience did not significantly influence the judgements of accountants (untabulated results, at $p > 0.05$).

3.6.3 Tests of Hypotheses

3.6.3.1 Effect of Preference for Quantitative Information on the Utilisation of Quantitative versus Qualitative Information in Auditors' Materiality Judgement (H1)

H1 was tested using a correlation analysis between the individual preference for quantitative information of professional accountants and their utilisation of quantitative and qualitative information while making materiality judgements. Table 3.2 presents the results of the correlation analyses.

<Insert Table 3.2 about here>

H1 predicted that professional accountants who exhibited a higher preference for quantitative information would utilise more quantitative than qualitative information when making materiality judgements than did professional accountants who exhibited a lower preference for quantitative information. In the context of this study, it was expected that a higher preference for quantitative information would be associated with the tendency to utilise more quantitative than qualitative information.

As expected, the findings indicated that there was a significant positive correlation between preference for quantitative information and the utilisation of quantitative versus qualitative information by professional accountants (Pearson's $r = 0.196$, one-tailed $p = 0.046$; Kendall's tau = 0.167, one-tailed $p = 0.020$; and Spearman's rho = 0.238, one-tailed $p = 0.020$). These results showed that professional accountants who exhibited a higher preference for quantitative information were likely to utilise more quantitative than qualitative information than were accountants with a lower preference for quantitative information, consistent with the prediction of H1.

To further examine the effect of preference for quantitative information, H1 was tested using a one-way analysis of variance (ANOVA), where preference for quantitative information (high-preference and low-preference) was the independent variable, and the utilisation of quantitative versus qualitative information by professional accountants was the dependent variable. The participants were dichotomised into either a high-preference group or low-preference group using a median split of the preference for quantitative information scores. That is, participants whose scores on the Viswanathan (1993) PQI scale were above the median score were classified into the high-preference group, while those with PQI scores below the median score were classified into the low-preference group. The descriptive statistics and ANOVA results are presented in Table 3.3.

<Insert Table 3.3 about here>

Following the prediction of Hypothesis 1, it was expected that professional accountants within the high-preference group would utilise more quantitative information than would qualitative information compared to professional accountants in the low-preference group.

As expected, the findings suggested that professional accountants in the high-preference group utilised more quantitative than qualitative information (mean = 4.282) than did their counterparts in the low-preference group (mean = -3.361, $F = 9.335$, $p = 0.003$). Overall, these results suggest that professional accountants with a high PQI tend to utilise more quantitative information than qualitative information, providing further support for H1.

3.6.3.2 Effect of Utilisation of Quantitative versus Qualitative Information on Auditors' Materiality Judgements (H2)

H2 predicted that the materiality judgement of professional accountants who utilise more quantitative than qualitative information would be biased compared to the judgements of those accountants who utilised more qualitative than quantitative information. In the context of this study, the judgement of a panel of experts obtained in the pre-testing is used as the unbiased materiality judgement.

H2 is tested using a one-way ANOVA, where information utilisation (high quantitative and low quantitative) was the between-subject independent variable, and the auditors' materiality judgement was the dependent variable. The participants were dichotomised into either a high-quantitative group or low-quantitative group using the aggregate scores on their utilisation of quantitative and qualitative information in their materiality judgement. That is, participants whose aggregate scores for quantitative information exceeded their aggregate scores for qualitative information were classified into the high quantitative group, while those whose scores for quantitative information were less than their scores on qualitative information were classified into the low quantitative group. The descriptive statistics and ANOVA model are presented in Table 3.4.

<Insert Table 3.4 about here>

As predicted, the findings suggest that professional accountants in the low quantitative group evaluated the misstatement as significantly more material (mean = 5.302) than did professional accountants in the high quantitative group (mean = 4.250, F = 13.353, p = 0.000). Overall, this indicates that professional accountants who utilised more qualitative information assessed the materiality of the misstatement higher than those who utilised more quantitative information. This result provides support for H2.

3.6.3.3 Effect of a Simple Intervention in the Form of a Warning on Auditors' Materiality Judgement (H3)

H3 predicted that a simple intervention in the form of a warning would be likely to mitigate the bias arising from individual auditors' preference for quantitative information when they made a judgement on the materiality of a misstatement requiring utilisation of both quantitative and qualitative information.

H3 was tested using a one-way ANOVA, where the availability of a simple intervention in the form of a warning was the between-subject independent variable (simple intervention group and control group), and the auditors' materiality judgement was the dependent variable. The descriptive statistics and the ANOVA model are presented in Table 3.5.

<Insert Table 3.5 about here>

As predicted, the findings suggest that professional accountants who were provided with the simple intervention in the form of a warning evaluate the misstatement as significantly more material (mean = 5.200) compared to professional accountants in the control group who did not receive the simple intervention in the form of a warning (mean = 4.400, F = 4.683, p =

0.035). Overall, the results suggest that a simple intervention in the form of a warning is effective in directing the attention of auditors to utilise more qualitative information, based on which they assess the misstatement as more material compared to those who do not receive the simple intervention. The results in Table 3.5 provide support for H3.

3.6.3.4 Effect of a Decision Aid on Auditors' Materiality Judgement (H4)

H4 predicted that a decision aid would be likely to mitigate the bias introduced from participants' preference towards quantitative information and draw their attention to both quantitative and qualitative information in their judgement processes, leading to a more unbiased materiality judgement.

H4 was tested using a one-way ANOVA, where the availability of a decision aid was the between-subject independent variable (decision aid group and control group), and the auditors' materiality judgement was the dependent variable. The descriptive statistics and the ANOVA model are presented in Table 3.6.

<Insert Table 3.6 about here>

Contrary to the prediction, the findings do not indicate a statistically significant difference between the materiality judgement of the professional accountants who were provided with a decision aid (mean = 4.960) and those who did not receive a decision aid (mean = 4.400, $F = 2.383$, $p = 0.129$). Overall, the results suggest that the task-decomposition decision aid did not effectively direct the attention of auditors to utilise more qualitative information; thus, it did not lead to a significant improvement in the materiality judgement of those who received the decision aid compared to those who do not receive the decision aid.

3.6.3.5 Effect of Motivation to Systematically Process Information on Auditors' Materiality Judgement (H5)

H5 predicted that participants who had higher motivation for systematically processing information would utilise both quantitative and qualitative information; therefore, making a more unbiased materiality judgement compared to participants who had lower motivation for systematically processing information.

H5 was tested using a one-way ANOVA, where motivation to systematically process information was the between-subject independent variable (high motivation and low motivation), and the dependent variable was the auditors' materiality judgement. The participants were dichotomised into either a high-motivation group or low-motivation group using a median split of the motivation for systematically processing information scores. That is, participants whose total score on the De Dreu et al. (1999) three-item motivation for systematically processing information scale were above the median were classified into the high-motivation group, while those with motivation for systematically processing information scores were below the median score were classified into the low-motivation group. The descriptive statistics and ANOVA results are presented in Table 3.7.

<Insert Table 3.7 about here>

Contrary to the prediction, the findings did not indicate a statistically significant difference between the materiality judgement of the professional accountants in the high-motivation group (mean = 4.921) and their counterparts in the low-motivation group (mean = 4.784, F = 0.197, p = 0.659). This result does not support H5.

3.6.3.6 Effect of Level of Involvement on Auditors' Materiality Judgement (H6)

H6 predicted that participants who had a high level of involvement in the decision would utilise both quantitative and qualitative information equally, therefore, making an unbiased materiality judgement compared to participants who had a low level of involvement.

H6 was tested using a one-way ANOVA, where level of involvement was the between-subject independent variable (high involvement and low involvement), and the dependent variable was the auditors' materiality judgement. The participants were dichotomised into either a high-involvement group or low-involvement group using a median split of the scores for level of involvement. That is, participants whose total score on the Zaichkowsky (1994) 10-item level-of-involvement scale were above the median score were classified into the high-involvement group, while those with level-of-involvement scores below the median score were classified into the low-involvement group. The descriptive statistics and ANOVA results are presented in Table 3.8.

<Insert Table 3.8 about here>

Contrary to the prediction, the findings did not indicate a statistically significant difference between the materiality judgement of the professional accountants in the high-involvement group (mean = 4.902) and their counterparts in the low-involvement group (mean = 4.794, F = 0.121, p = 0.729). The results do not provide support for H6.

3.7 CONCLUSIONS AND IMPLICATIONS

This study examines whether professional accountants who have a high preference for quantitative information utilise more of such information in materiality judgements compared to auditors with a lower preference for quantitative information. The study further examined if the utilisation of more quantitative information than qualitative information leads to biased judgements compared to judgements based on consideration of more qualitative than quantitative information.

Consistent with the prediction, the findings suggest that professional accountants who have a higher preference for quantitative information utilise significantly more quantitative than qualitative information compared to professional accountants with a low preference for quantitative information. Additionally, the results show that auditors who utilise more quantitative information than qualitative information to support their materiality judgement make a more biased judgement compared to auditors who utilise more qualitative than quantitative information.

The results also support the hypothesis that a simple intervention in the form of a warning is effective in mitigating the bias introduced by an individuals' preference for quantitative information. In particular, the warning successfully directed participants to utilise both quantitative and qualitative information when making materiality judgements, leading to an unbiased judgement on the materiality of a misstatement.

These finding shed new light on the factors that influence the utilisation of quantitative and qualitative information in judgement and decision-making; therefore, there are several important implications. First, this study contributes to the growing theoretical framework and literature on the utilisation of quantitative versus qualitative information in judgement and decision-making tasks. The amount and type of information we face in everyday life and in particular in auditing is increasing. Auditors have to regularly deal with both quantitative and qualitative information when they are evaluating audit evidence or the results of their analytical procedures, or when they are evaluating management-provided information and explanations. All these can contain varying degrees of quantitative or qualitative information. This study establishes that the relative utilisation of quantitative versus qualitative information is influenced by a specific personality trait of the decision maker: the preference for quantitative information. This implies that depending on the preference of an auditor, that auditor may be influenced by varying degrees of quantified information, and they might unknowingly ignore relevant qualitative information when making judgements and decisions.

Second, management might opportunistically present information with varying degrees of quantitative and qualitative information to influence the decisions of the auditors. This has the potential to lead to inconsistent judgements and decisions and consequently, lower the quality of judgements overall. Third, a simple intervention in the form of a warning is effective in mitigating the effects of the preference for quantitative information on judgements and decisions. The effectiveness of a simple intervention in the form of a warning suggests that it is important for accounting firms to regularly communicate to their staff the regulatory alerts and enforcement agency warnings, such as those issued by ASIC.

The above conclusions should be considered in light of some potential limitations of the study. First, the experimental materials used in this study have been developed depicting real-world auditing tasks and is representative of the types of decisions auditors encounter in practice. However, it cannot not represent all possible combinations and varying degrees of quantitative and qualitative information that auditors will encounter in practice. Second, this study only elicits judgement on materiality of a misstatement and how quantitative and qualitative information affects this judgement. This potentially limits the generalisability of the results to other audit tasks where auditors may encounter quantitative and qualitative information. Future research can examine the potential effects of the personality variable examined in this study in other audit tasks where the environmental factors may differentially influence the relationship between preference for quantitative information and utilisation of quantitative versus qualitative information.

Table 3.1
Demographic Data of the Respondents

Demographic Data	Control Group	Simple Intervention Group	Decision Aid Group
Number of participants	25	25	25
Firm type:			
Big 4	8	9	2
Non-Big 4	17	16	23
Gender:			
Male	11	18	12
Female	14	7	13
Age (Mean)	32	33	31
Level of formal education in years (Mean)	17	17	17
Level of professional experience in years (Mean)	5.94	8.76	9.5

Table 3.2
Results of Correlation Analysis between Preference for Quantitative Information (PQI) and Utilisation of Quantitative versus Qualitative Information

	Utilisation of Quantitative versus Qualitative Information		
Variable	Correlation	Coefficient	p-value (one-tailed)
Preference for Quantitative Information n=75	Pearson	0.196	0.046*
	Kendall	0.167	0.020*
	Spearman	0.238	0.020*

*Significant at $p < 0.05$

Table 3.3
Descriptive Statistics and ANOVA results for the Effect of Preference for Quantitative Information (PQI) on Utilisation of Quantitative versus Qualitative Information in Auditors' Materiality Judgements

Preference for Quantitative Information	Mean	Standard Deviation	F	p-value
High PQI n = 39	4.282	11.055	9.335	0.003*
Low PQI n = 36	-3.361	10.567		

*Significant at $p < 0.05$

Table 3.4
Descriptive Statistics and ANOVA Results for the Effect of Utilisation of Quantitative versus Qualitative Information on Auditors' Materiality Judgement

Information Utilisation	Mean	Standard Deviation	F	p-value
High Quantitative Group n = 32	4.250	1.414	13.353	0.000*
Low Quantitative Group n = 43	5.302	1.080		

*Significant at $p < 0.01$

Table 3.5
Descriptive Statistics and ANOVA Results for the Effect of Simple Intervention in the Form of a Warning on Auditors' Materiality Judgement

Group	Mean	Standard Deviation	F	p-value
Simple Intervention Group n = 25	5.200	1.354	4.683	0.035*
Control Group n = 25	4.400	1.258		

*Significant at $p < 0.05$

Table 3.6
Descriptive Statistics and ANOVA Results for Effect of Decision Aid on Auditors' Materiality Judgement

Group	Mean	Standard Deviation	F	p-value
Decision Aid Group n = 25	4.960	1.306	2.383	0.129
Control Group n = 25	4.400	1.258		

Table 3.7
Descriptive Statistics and ANOVA Results for Motivation to Systematically Process Information on Auditors' Materiality Judgement

Motivation to Systematically Process Information	Mean	Standard Deviation	F	p-value
High Motivation n = 38	4.921	1.343	0.197	0.659
Low Motivation n = 37	4.784	1.336		

Table 3.8
Descriptive Statistics and ANOVA Results for the Effect of Level of Involvement on Auditors' Materiality Judgement

Level of Involvement	Mean	Standard Deviation	F	p-value
High Involvement n = 41	4.902	1.463	0.121	0.729
Low Involvement n = 34	4.794	1.175		

CHAPTER 4:

(PAPER 3)

The Impact of Client Pressure and Client's Financial Condition on Auditors' Judgements to Report KAMs in the Auditor's Report

ABSTRACT

New requirements for the reporting of KAMs is one of the most significant changes to audit reports in the last four decades. This study examines the effects of client pressure and client's financial condition on auditors' judgements to report KAMs. The results indicate that, when presented with a mix of equally significant positive and negative KAMs, there is a tendency to report more negative than positive matters in the auditor's report. There is also a tendency to report negative before positive KAMs. Furthermore, the study finds that client pressure not to report negative KAMs has a significant effect on auditor judgement. Specifically, auditors who face high client pressure present fewer negative KAMs compared with auditors who face no client pressure. Finally, the study suggests that, due to auditor concerns with litigation risk, the findings indicate that auditors with clients in poor financial condition would report more negative KAMs than auditors with healthy financial condition clients. The findings are significant to national and international auditing standard-setters, accounting firms, and those who rely on audit reports.

Key Words: Key audit matters, negative KAM, positive KAM, client pressure, client's financial condition.

4.1 INTRODUCTION

In recent years, the form and content of the auditor's report had received considerable attention from national and international regulatory authorities responsible for auditing standards, such as the AUASB and the IAASB. After almost a decade of deliberation and consultation, key reforms were implemented that attempted to improve the auditor's report (IAASB, 2015a; AUASB, 2016). The presentation of KAMs in the auditor's report is considered the most significant and controversial change to the auditing profession in the last four decades (Montgomery, 2014). According to the IAASB, KAMs are matters of most significance arising from the audit of financial statements (IAASB, 2015b). The purpose of including KAMs in the auditor's report is to communicate auditor insights and audit-specific information to investors and other interested parties concerning significant and difficult audit issues and respond to user demands for more relevant and insightful information concerning the audit (IAASB, 2015a).

KAM proponents attest to their informational and communicative value; however, other stakeholders, such as national accountancy bodies and accounting firms, are sceptical. There are concerns that, over time KAMs will become boilerplate statements and lose their informational value (AUASB, 2013; ICAA, 2013; The World Bank, 2013). There are also concerns that presentation of KAM information may either be too expansive or too limited, depending on auditor perceptions of their exposure to legal liability from KAM disclosure (AUASB, 2013; ICAA, 2013). Furthermore, there is the issue of inconsistent KAMs. Stakeholders, such as professional accountancy bodies and national auditing standard-setters raised concerns about local and global consistency of KAM presentation (ICAA, 2013). AUASB (2013) raised the important issue of negotiation which may occur between the auditor and the client on KAM wording and influence matters chosen to be presented in the auditor's report.

Recent studies examined issues associated with the presentation of KAMs and can be summarised into three different areas: auditor liability, impact on investor decisions and capital-market reactions. Behavioural studies examining juror assessment of auditor liability when sued for negligence report that KAM information either reduces or fails to influence auditor liability (Brasel et al., 2016). On the other hand, Gimbar et al. (2016) report that disclosure of KAM information can increase auditor liability under two conditions: first, when auditors report a KAM that specifically relates to the litigation issue and the accounting standards are precise with respect to that issue; and second, when the auditor discloses additional procedures performed to address higher risk associated with the KAM issue. Christensen et al. (2014) found that investors who receive KAM information are more likely to change investment decisions than those who receive a standard auditor's report without KAMs. This suggests that KAM information is useful and influences stakeholder decisions. There is also empirical evidence which suggests that client management are less willing to share information with auditors when they know KAMs will be included in the auditor's report (Cade & Hodge, 2014).

Since the presentation of KAMs influence stakeholder decisions and effect juror assessment of auditor liability for negligence, firms and their auditors may have incentive and motivation to opportunistically present KAM information in the auditor's report. According to negativity bias theory, people are more influenced by negative rather than positive information. Negative information endures longer in social transmission and impacts more people than comparable positive information. Therefore, there are incentives for auditors to minimise the presentation of negative KAMs compared with positive KAMs. Furthermore, since negative KAMs reflect negatively on companies, there are incentives for management to pressure auditors to non-disclose negative KAMs. Client pressure for non-disclosure of negative KAMs can influence auditor judgement on KAM presentation in their report. In addition, the financial condition of the client can also influence auditor judgement on KAM presentation because poorly performing companies have a higher likelihood of failing, and this could lead to litigation against auditors who appear in breach of their fiduciary obligations. As such, auditors of clients whose financial condition is poor may have different incentives with respect to KAM presentation than auditors of clients whose financial condition is healthy.

There is a lacuna in current research exploring the impact of the KAMs initiative, particularly with respect to how the various factors discussed above might influence the disclosure of KAMs in the auditor's report. Theoretical concepts from psychology and prior studies in accounting and auditing suggest it is necessary to consider how the issues raised above may impact KAM presentation. It is also important to systematically examine factors that may impact auditor judgement on KAM presentation because, as noted above, prior research suggests this information impacts audit stakeholders. Inconsistent or biased presentation of KAMs will, as a result, eventually impact investment decisions and capital markets.

The current study uses an experiment to examine if auditor judgement on KAM presentation is influenced by whether the KAM is positive or negative. The study draws on prior research in psychology and auditing which suggests that negative information is frequently underreported (Grote et al., 2001; Rice & Weber, 2012; Nishizaki et al., 2014). Based on prior findings, Hypothesis 1 predicts that auditors will present fewer negative than positive KAMs and present negative KAMs after positive KAMs in the auditor's report.

The study also investigates the impact of client pressure and financial condition on auditor judgement to present negative KAMs. Specifically, the study examines if client pressure in the form of a preference not to present negative KAMs influences auditor judgement concerning negative KAMs presentation. Hypothesis 2 draws on auditing literature concerning client pressure (Hatfield et al., 2011). It predicts that auditors who face high client pressure to non-report negative KAMs will report fewer negative KAMs than auditors who face no client pressure.

The study also draws on literature from accounting and auditing to predict that clients in poor financial condition likely pose significantly higher litigation risks for the auditor, since the company is at risk of failure. Therefore, auditors of poor performing clients will have a greater motivation to present more negative KAMs in the auditor's report. Prior research indicates that KAM disclosures related to financial misstatements (negative KAMs) reduce auditor liability assessments where auditors are sued for negligence (Brasel et al., 2016). Thus, Hypothesis 3 predicts that auditors of clients whose financial condition is poor will disclose more negative KAMs than auditors of clients whose financial condition is healthy.

KAM type, that is, negative and positive KAMs were manipulated for participants in the experiment. Participants were provided with five negative and five positive KAMs. Client pressure not to report negative KAMs was manipulated between-subjects, whereby auditors in the high client-pressure group were informed that the client was strongly opposed to negative KAMs in the auditor's report. Those in the no client-pressure group were informed of the client's lack of opposition to negative KAM reporting. The study also manipulated information concerning client's financial status, whereby, auditors in the healthy financial condition group, were informed that client's financial performance was very good, and participants in the poor client financial condition group were provided with information indicating very poor company performance.

There are three key findings concerning the presentation of KAMs in the audit reports. First, that negative KAMs were reported more than positive KAMs and negative KAMs were reported before positive KAMs. Second, the findings provide evidence that client pressure not to present negative KAMs influenced KAM presentation such that auditors in the high client pressure group reported fewer negative KAMs compared to auditors in the no client pressure group. Third, the study found that more negative KAMs were reported for poor financial condition clients compared to clients with healthy financials.

This study contributes to recent literature on KAMs by providing evidence of key factors that may influence the selection of reported KAMs and the order they appear in the auditor's report. Factors that influence auditor judgement concerning KAMs are likely to impact the validity of these disclosures and their overall effectiveness. The findings contribute to the literature on the reporting of positive versus negative information by firms and their auditors, the growing literature on the effects of client pressure on auditor judgement and is important for regulators, auditing standard-setters and users of the audit report.

The paper is organised as follows. Section 4.2 provides the background of the study. Section 4.3 discusses relevant literature and develops the hypotheses tested. Section 4.4 presents the research design followed by the results in Section 4.5. Section 4.6 concludes the paper.

4.2 BACKGROUND

4.2.1 Reporting of KAMs Under ISA 701

KAMs are defined in ISA 701, *Communicating Key Audit Matters in the independent auditor's report*, as 'those matters that, in the auditor's professional judgement, were of most significance in the audit of the financial report for the current period' (IAASB, 2015a, paragraph 8). The standard prescribes that KAMs be selected from matters communicated with the entity and those charged with its governance. Auditors are required to communicate audit matters on a regular basis to TCWG as prescribed in ISA 260, *Communication with those charged with governance*.

ISA 701 prescribes a judgement-based framework for auditors to determine KAMs and identifies the following factors for consideration when selecting KAMs for presentation:

1. Areas of the financial statements where there are higher assessed risk of material misstatement or areas where significant risks have been identified;

2. Areas of the financial statement that required the auditor to make significant judgements and accounting estimates or those that have been identified to have high estimation uncertainty;
3. Effect on the audit of significant transactions and events that took place during the accounting period.

KAMs selected for presentation in the auditor's report should be presented in a new section and each with an appropriate heading. The KAMs should have an introductory standard paragraph as prescribed in ISA 701 (IAASB, 2015b). For each KAM, the auditor should explain why the matter was of most significance (that is, why was it chosen as a KAM) and describe how it was addressed in the audit. There are two exceptions for public disclosure of KAMs in the auditing standard: when the disclosure is prohibited by law or regulation or when the auditor determines that the adverse consequences of disclosure outweigh the benefits (IAASB, 2015b).

4.2.2 Insights into Presentation of KAMs from Early Adopters of ISA 701

In Australia and many other countries, the new ISA 701 standard became applicable for audits conducted after 15 December 2016. However, for certain clients, auditors adopted the new KAM requirements earlier. A review conducted by KPMG reveals that 56 entities in Australia had audit reports with KAMs for the year ending 31 December 2016 (KPMG, 2017). The report found that, on average, the audit report for the entities reporting KAMs was 5.3 pages; the number of KAMs ranged from 1 to 5 (KPMG, 2017). On average, the review found that entities reported 2.8 audit matters and that the largest number of KAMs (25) related to goodwill and intangible assets. Revenue recognition and accounting for acquisitions comprised the second highest number of audit matters with 13 entities reporting KAMs for each of these areas. Accounting for taxation related KAMs were also reported on behalf of 12 entities, a result of the complex nature of accounting for taxes in Australia (KPMG, 2017).

4.2.3 Issues Related to Presentation of KAMs

Stakeholders have raised several issues with respect to KAM presentation. The primary concern is that the KAMs may evolve into standard boilerplate statements and lose their informational value (AUASB, 2013; The World Bank, 2013). Furthermore, there are some stakeholders, specifically, accounting firms, who are concerned that the KAM presentations may divert resources from critical audit tasks and affect audit quality (Deloitte Touche Tohmatsu Limited, 2013). There is also the possibility that, because auditors will try to protect themselves from legal liability, KAMs may become overly detailed and cumbersome, and auditors will disclose information not discussed with management or the board of directors (AICD, 2013).

The AUASB (2013) also raised additional issues concerning KAM presentation, the most contentious of which and, related to this study, is that of consistency where auditors either report excessive or limited information according to their perceptions of exposure to legal liability concerning KAM presentation. Another important issue is that those affected by the presentation of KAMs may try to influence the judgement of auditors. Both the AUASB (2013) and the AICD (2013) note that the presentation of KAMs may eventually be determined by negotiation between the auditor and the client management team.

4.3 RELEVANT LITERATURE AND HYPOTHESES DEVELOPMENT

4.3.1 Reporting of Positive versus Negative Information

A large body of literature indicates that positive and negative information influences judgements and decisions differently. For instance, there is evidence that negative information has processing advantages over positive information (Baumeister et al., 2001). Negative information is also detected more quickly than positive information (Dijksterhuis & Aarts, 2003). Furthermore, negative information exerts a greater influence on impression formation (Peeters & Czapinski, 1990). Negative information also more strongly influences evaluations made by people than comparable positive information (Kanouse & Hansen, 1971; Skowronski & Carlston, 1989). Anderson (1965) examined evaluations made by people using positive and negative traits of differing degrees. The results show that negative traits are given a higher weighting compared to positive traits, and this phenomenon is confirmed by other studies (Feldman, 1966; Fiske, 1980). More recent research shows that in the social transmission of information, negative information endures for longer periods than positive information (Bebbington et al., 2017). These differences in sensitivity towards negative information has been operationalised and known as the ‘negativity bias’ (Ito et al., 1998).

Decision-making literature also indicates the presence of negativity bias. For example, risk-taking research shows that people report a higher level of stress when they lose a given amount of money and this typically exceeds pleasure experienced when they gain the same amount (Kahneman & Tversky, 1984). Tversky and Kahneman (1991) also show that people prefer avoiding a loss over acquiring a gain. In general, an individual's physiological, cognitive, emotional and social responses are greater towards negative rather than positive events and information (Taylor, 1991).

Since negative information has a more cognitive impact and thus more effect on judgement and decisions, information providers are motivated to control its disclosure. Grote et al. (2001) examined the disclosure of negative information in letters of recommendation written by independent referees. Their survey of writers of reference letters revealed that, although the referees claimed to disclose both positive and negative attributes, the references revealed that negative characteristics were rarely described. This result is supported by other psychological studies (Robiner et al., 1997).

In the field of accounting and corporate information disclosure, selective reporting of information is well documented. For instance, Deegan and Gordon (1996) investigated the environmental disclosure practices of Australian companies from 1980 to 1991 and found that firms promoted positive aspects of environmental performance but failed to disclose negative aspects. Comparable results were reported by Guthrie and Parker (1990) who found that firms rarely disclose 'bad news' and, in particular, bad news related to environmental performance. Kothari et al. (2009) provide more recent evidence of managers delaying the release of bad news to investors. They argue that managers have various incentives to delay disclosure. Piotroski et al. (2015) provide further evidence. They examined the stock price behaviour of Chinese listed firms at the time of two significant political events. They found that when politicians and affiliated firms temporarily restricted the flow of negative information, companies experienced fewer falls in stock price. However, stocks fell when the information was made available to the market.

There is evidence that auditors suppress the disclosure of negative information. Rice and Weber (2012) studied the disclosure of internal control weaknesses by U.S. listed firms. They examined a sample of firms required to restate their financial reports where the restatements were directly associated with internal control weaknesses. They found that only a minority of firms acknowledged internal control weaknesses during the misstatement period. They also found that the proportion of firms acknowledging internal control weaknesses declined over time. Nishizaki et al. (2014) studied the disclosure rate of internal control weaknesses in the first two years of the introduction of this requirement in Japan. They reported that in comparison to the U.S. the disclosure rate of internal control weaknesses by Japanese firms (only 1.9 percent) was far lower. Overall, incidence of adverse reports on internal control weaknesses has declined over time.

Another aspect of auditor reporting concerning negative information is going-concern modified audit opinions. Evidence indicates a tendency to supress the issuance of going-concern modified audit opinions to the effect that, on average, only 50 percent of firms that declared bankruptcy had previously received an going-concern modified audit opinion (Hopwood et al., 1989; Geiger & Raghunandan, 2001; Carcello et al., 2009; Feldmann & Read, 2010). This rate increased in the U.S., for instance, after large-scale corporate failures and the enactment of SOX in 2001; but declined from 2004 onwards (Feldmann & Read, 2010).

Overall, evidence from psychology, accounting and auditing suggests a general tendency to supress the disclosure of negative information and events. There is also evidence that the propensity to disclose negative information and events increases in the aftermath of large-scale corporate failures and the introduction of significant legislation. However, the disclosure rate quickly declines.

4.3.2 The Presentation of Positive versus Negative KAMs in the Auditor's Report

In the context of the current study, it is argued that the auditor judgement on KAM reporting will differ according to whether the KAM is positive or negative. This study draws on empirical evidence from research in psychology which shows that people tend to report more positive information than negative (Grote et al., 2001). Studies in accounting also provide evidence that more positive than negative information is disclosed. In particular, evidence shows that bad news is supressed while positive information is readily disclosed by companies (Deegan & Gordon, 1996; Kothari et al., 2009; Piotroski et al., 2015). Similar findings apply to auditing where evidence shows a tendency of auditors to supress the disclosure of negative information such as internal control deficiencies and going-concern modified audit opinions (Feldmann & Read, 2010; Rice & Weber, 2012).

As noted earlier, the study also draws upon negativity bias theory which provides empirical evidence that negative information is detected faster than positive information, exerts greater influence on impression formation and strongly influences the evaluations made by decision-makers (Skowronski & Carlston, 1989; Peeters & Czapinski, 1990; Dijksterhuis & Aarts, 2003). Based on these findings, companies and their auditors may have incentives to supress the disclosure of negative information. In general, based on findings from prior literature, the study assumes that auditors will present more positive than negative KAMs in the auditor's report. Furthermore, even when negative KAMs are disclosed, it is more likely they will be disclosed after positive KAMs to reduce their impact.

To determine whether auditor judgements on KAM reporting are influenced by whether they are positive or negative, an experiment was conducted in which the nature of the KAMs provided to participants was manipulated. Participants were provided with a combination of positive and negative KAMs. Köhler et al. (2016) examined how users reacted to positive and negative KAMs. Their manipulation of KAMs entailed changes to the wording to reflect positive and negative tendencies, and a similar method is applied in the current study.

Participants were provided with ten KAMs, five negative and five positive. It was anticipated that auditors would choose to present fewer negative than positive KAMs in their report. Furthermore, based on the preceding discussion, the study predicts that auditors will present negative KAMs after positive KAMs. This leads to the following hypotheses:

H1a: Auditors will present fewer negative KAMs than positive KAMs in the auditor's report.

H1b: Auditors will present negative KAMs after positive KAMs in the auditor's report.

4.3.3 Client Pressure

DeZoort and Lord (1997: 47) define client pressure as "the pressure to yield to clients wishes or influence whether appropriate or not". Clients can impose significant pressure on auditors that impact judgement and decision making and these effects are greater where judgements and decisions are more discretionary, or accounting and auditing standards are vague (Nichols & Price, 1976).

Given the inherent difficulties in recreating pressure effects in experimental settings, earlier studies have indirectly examined the impact of client pressure on auditors. Early studies on the impact of client pressure examined whether users of financial statements perceived auditors as more accepting of their clients' position on financial reporting issues when subjected to pressure by the client for an outcome (Knapp, 1985; Gul, 1991; Hackenbrack & Nelson, 1996). Knapp (1985) observed that auditors are more responsive to client management power when the client provides a considerable proportion of auditor income. Similarly, Gul (1991) found that bank-loan officers perceive auditors less able to withstand client pressure when the auditor provides both audit and non-audit services to the client. These studies indicate that third parties believe that auditors succumb to pressure when clients are economically significant.

More recent studies examined the direct impact of client pressure on auditors. Felix et al. (2005) use data collected by surveys of 74 separate audit engagements and examined the impact of client pressure, the provision of non-audit services and external auditor reliance on the internal auditor's work. They found that client pressure had a greater influence on the external auditor's decision to accept the internal auditor's work when the client purchased significant amounts of non-audit services. This indicates that a significant economic bond between the auditor and the client increases the impact of client pressure on auditor judgements. Hatfield et al. (2011) also examined the impact of client pressure on auditor judgements. They investigated the extent to which client pressure influenced the auditor judgement on the extent of the proposed audit adjustment. They found that auditors in the high pressure group proposed a significantly smaller audit adjustment than auditors in the low-pressure group. This study provides direct evidence that client pressure can influence auditor judgements and decisions.

An alternative theory explored the counter-effects of salient client pressure on auditor judgement. Koch and Salterio (2017) argue that auditors who face salient client pressure may likely default to ingrained professional responses to deal with these challenges. This behaviour is highly probable under circumstances where pressure triggers 'reasonableness constraint'. This constraint may be triggered in auditors who perceive very high levels of client pressure. The reasonableness constraint occurs when auditors go along with client-preferred accounting treatment to the extent they can construct a case that makes them believe an impartial third party would perceive the auditor acted in a professional manner. However, if client pressure is such that auditors cannot create such a case, they will not adhere to client-preferred accounting treatment. Consistent with their theory, Koch and Salterio (2017) find that, at least for some auditors, the perception of very high client pressure leads auditors to propose larger adjustments to accounting records contrary to client preference.

In summary, the literature suggests that client pressure works in several ways to influence auditor judgements. Some studies show that when auditors face high client pressure, they tend to comply with client-preferred accounting treatment; others show that when faced with very high client pressure, the auditor's reasonableness constraint is triggered to resist client preference.

4.3.4 The Impact of Client Pressure on Presentation of Negative KAMs in the Auditor's Report

Prior studies have typically used motivated reasoning theory to predict the effects of client pressure on auditor judgement. Kunda (1990) describes motivated reasoning as the tendency for people to search, process and interpret information to arrive at a specific decision. This is achieved variously; for instance, people committed to directional goals, conduct biased searches for information and give greater weight to the information that supports preferred conclusions (Lundgren & Prislin, 1998). In addition, they adopt statistical decision rules, construct new beliefs so that desired conclusions are achieved (Kunda, 1990) and more sceptical regarding information inconsistent with preferred conclusions (Ditto et al., 1998). Several auditing studies provide evidence that auditors are motivated reasoners because they tend to exploit ambiguity in accounting standards to justify client-preferred accounting treatment when their directional goals align with this decision (Lord & DeZoort, 2001; Ng & Tan, 2003; Hatfield et al., 2011).

The current study predicts that auditors who face pressure not to present negative KAMs will have a directional goal and be motivated to fulfil that goal compared to auditors without client pressure. Although professional auditing standards identify processes and criteria to determine KAM reporting, they adopt a judgement-based framework for KAM selection and presentation, and there is potential for discretion.

To test this prediction, the level of client pressure was manipulated in this study. Participants were either allocated to a high client pressure condition—where they were informed that the clients' Chief Executive Officer (CEO), Chief Financial Officer (CFO) and Chairman were all strongly opposed to disclosing negative KAMs—or a no client pressure condition, where these pressures did not apply. Each participant was provided with five negative KAMs, and this was constant across the two client pressure conditions. It was predicted that auditors who face high client pressure will disclose fewer negative KAMs than those who face no client pressure. This led to the following hypothesis:

H2: Auditors who experience high client pressure not to present negative KAMs will present fewer negative KAMs in the auditor's report compared to auditors who face no client pressure.

4.3.5 Client's Financial Condition

Prior research provides evidence of a strong relation between the financial condition of a client and auditor judgement. Knapp (1985) is a seminal study in this area and provides indirect evidence on the relation between the financial condition of a client and auditor judgement. Knapp (1985) examined bank-loan officer perceptions on whether auditors comply with client-preferred accounting treatment and whether the financial condition of the client plays a role in this process. He observed that bank-loan officer perceptions on whether the auditor complies with the client-preferred accounting treatment was stronger when the client was in a healthy financial condition. The findings suggest that bank-loan officers perceive that auditor judgements are compromised when the client is in a healthy financial condition as they are more likely to comply with client wishes.

Several studies examined client financial condition and auditor propensity to issue a modified going-concern audit opinion. For example, Citron and Taffler (1992) found that the weaker the financial position of the client, the higher the likelihood that the client will receive a going-concern modified audit opinion in the auditor's report. Similarly, Raghunandan and Rama (1995) examined the issuance of going-concern modified audit opinions for 362 non-bankrupt and 175 bankrupt companies. They found that auditors were more likely to issue a going-concern modified audit opinion for financially distressed companies after the implementation of the Statement of Auditing Standard (SAS) 59 in the U.S. SAS 59 was issued to guide auditors on the assessment of an entity's ability to continue as a going-concern. Louwers (1998) analysed 808 financially distressed firms between 1984 and 1991 and found that firms whose financial condition was poor were more likely to be issued a going-concern modified audit opinion.

More recent studies, such as Hudaib and Cooke (2005) and Basioudis et al. (2008) also provide evidence that auditors are more likely to issue modified audit opinions to firms whose financial condition is poor compared with firms whose financial condition is healthy. For instance, Hudaib and Cooke (2005) examined the audit reports of 247 listed U.K. companies for the period 1987 to 2001 and found that financially distressed companies were more likely to receive a going-concern modified audit opinion. Similarly, Basioudis et al. (2008)

examined audit reports of financially stressed U.K. companies and found that the likelihood of auditors issuing going-concern modified audit opinions to financial stressed clients was higher when the audit fees were high.

In summary, results from previous studies show that the financial condition of a client influences auditor judgements. The evidence suggests a greater likelihood of auditors resisting client-preferred accounting treatment for clients in poor financial condition. Additionally, the evidence suggests that the likelihood of auditors issuing clients with going-concern modified audit opinions is greater when the client is financially stressed. However, only a very small number of studies have examined the relation between a client's financial condition and auditor judgement, and the impact of a client's financial condition on a wider range of auditor judgement tasks is required to understand its influence.

4.3.6 The Impact of Client's Financial Condition on Presentation of Negative KAMs in the Auditor's Report

In the context of the current study, it is argued that the financial condition of the client will influence auditors' judgement on KAM reporting in the auditor's report. More specifically, the study argues that poor client financial condition motivates and incentivises auditors to disclose more negative KAMs compared with healthy client financial condition.

This study draws on the literature in auditing on the relation between client financial condition and auditor litigation risk. Stice (1991) reports that client financial condition and auditor litigation risk are inversely related, that is, as a client's financial condition deteriorates, the auditor's litigation risk increases. Carcello and Palmrose (1994) and Bonner et al. (1998) also report this result. Auditors of clients with poor financial condition are more exposed to litigation than auditors of clients with healthy financials (Farmer et al., 1987; Palmrose, 1987). Auditor litigation risk is a strong motivator to encourage independent and objective reporting by auditors because litigation can have detrimental effects on their reputation and increase legal costs.

Carcello and Palmrose (1994) showed that disclosure of a going-concern modified audit opinion for financially distressed clients reduces the likelihood of litigation against auditors. Their findings showed that disclosure of negative information prior to firm failure protected auditors from potential litigation. Similarly, this study argues that auditors will be motivated to disclose more negative KAMs for poorly performing clients as the litigation risk would be greater. Furthermore, negative KAMs would be related to the more contentious areas of the financial statements and non-disclosure of KAMs related to these areas would more likely attract the attention of litigants. Therefore, auditors of poorly performing clients are more likely to disclose all relevant negative KAMs in the auditor's report compared with auditors of clients in a healthy financial condition where litigation risk is minimal.

To investigate the impact of client's financial condition on auditors' judgements related to negative KAM disclosure, the financial condition of the audit client was manipulated in the experimental task of this study. Auditors with clients in financial stress were informed that the overall financial condition of the client was very poor; that all solvency and profitability ratios compared unfavourably to industry averages and that net income had continually declined over the past five years. Auditors with clients in a healthy financial condition were informed of this; that all solvency and profitability rations compared favourably with industry averages and that the company had experienced steady growth over the past five years. Each participant was provided with five negative KAMs, and this was constant across both groups. The relation between client's financial condition and auditor's legal liability suggested that auditors with poor financial condition clients are less likely to yield to internal and external pressures or client-preferred reporting. With respect to disclosure of KAMs, auditors are more likely to report more negative KAMs to avoid potential litigation resulting from client failure. Therefore, the following hypothesis was formulated:

H3: Auditors whose client is in poor financial condition will present more negative KAMs compared to auditors whose client is in a healthy financial condition.

4.4 RESEARCH METHOD

4.4.1 Participants

Participants in this study were professional auditors drawn from the Big 4 and non-Big 4 accounting firms in Australia. Participants were recruited using Qualtrics, a survey software and research firm. The instruments were randomly distributed to individuals who held professional accounting qualifications and members of one or more of three professional accounting bodies (CPA Australia, ICAA or IPA). Therefore, in all cases, respondents had been exposed to the ISA/ASA, though their knowledge and experiences varied.

The 112 auditors who participated in the experiment were randomly assigned to four different experimental treatment groups. The high client-pressure group had 27 participants; the no client-pressure group had 30 participants; the healthy financial condition group had 27 participants; and, the last group, the poor financial condition group, had 28 participants.

4.4.2 Experimental Design

The study employed a mixed experimental design to test the hypotheses. The first independent variable, KAM type, was manipulated within-subjects with the two types of KAM: positive and negative. The second independent variable was client pressure and manipulated between-subjects who were either provided with a high client pressure condition (the high client-pressure group) or a no client pressure condition (no client-pressure group). The final independent variable in the study was client's financial condition and manipulated between-subjects who were either provided with a healthy financial condition (the healthy financial condition group) or a poor financial condition (the poor financial-condition group).

In the high client pressure condition group, experimental materials informed participants that the CEO, the CFO and the company Chairman were all strongly opposed to disclosing any negative issue encountered during the audit as a KAM in the auditor's report. In the no client pressure condition group, experimental materials informed participants that client CEO, CFO, and Chairman did not oppose the disclosure of any negative issue encountered during the audit as a KAM in the auditor's report.

In the healthy financial condition group, the experimental materials informed participants that overall the client's financial condition is very good; that the firms' solvency and profitability ratios compared favourably with industry averages and net income has shown modest but steady growth over the last five years. In the poor financial condition group, the experimental materials informed participants that the clients overall financial condition was very poor; the firms' solvency and profitability ratios compared unfavourably with industry averages and net income has shown modest, but steady decline over the last five years.

4.4.3 Research Instrument

The experimental material was developed by extensive consultation with accounting academics at Macquarie University, Australia. The experimental task was pilot-tested with five accounting academics from Macquarie University and five senior professional accountants. Problems with the experimental task were identified and rectified to enhance readability and comprehensibility. Care was taken in designing the experiment to ensure internal validity and enable variations in the judgements of professional accountants to be attributable to the manipulations.

The task included information about an audit client (Mantaka Industries) involved in the manufacturing of large and small products for industrial applications and well as engaging in large-scale construction projects. The audit engagement history for Mantaka Industries seldom produced major auditor-client disagreements. This background information was held constant across treatments. Participants were told that while performing the current-period audit, they encountered several audit issues communicated to the Mantaka audit committee in accordance with the relevant auditing standard. They were informed that commencing from the current accounting period; the audit firm would be disclosing the most significant audit issues as KAMs in the auditor's report. They were provided with a list of ten of the most significant matters encountered during the audit of the current financial statements. To ensure that each of the ten matters were of most significance to the audit, matters used in the experiment were adapted from actual disclosures made for similar Australian firms who were early adopters of the new audit report requirements.

Of the ten matters, five were positive, and five were negative. The first positive audit matter related to the recognition of deferred tax assets. Participants were informed that the company had recorded deferred tax assets of $38.3m for the financial year and this amount was material with respect to the audited financial statements. To give this audit matter a positive aspect, the materials provided stated that the audit found the tax balance was appropriately calculated and presented in the financial statements and that no adverse issues were identified during the audit. The second positive audit matter related to the valuation of financial instruments. Participants were informed that the company entered into various financial instruments whose value was significant and material to the audited financial statements. In addition, the valuation of financial instruments was imbued with complexities. To give this audit matter a positive aspect, the final sentences of the material stated that the company employed robust internal risk management procedures and internal controls with respect to financial instruments. Furthermore, that the findings of the audit revealed that valuations and key assumptions and estimations were reasonable and the risk of any material misstatements in the balances of financial instruments was very low.

The third positive audit matter dealt with a company acquisition which presented the challenges of a complex process involving significant judgement of valuations and accounting. The acquisition and its accounting also required significant management judgement in relation to valuations. To give this audit matter a positive aspect, participants were informed that the valuations and allocations of the purchase consideration to assets acquired and goodwill were reasonable and supported by independent analyses. Furthermore, that disclosures with respect to the acquisition were also considered adequate.

The fourth positive audit matter related to the level of automation and information technology (IT) integration within the company. IT systems were considered a significant part of the audit because of their complexity and the importance of the system to the reliability of financial data. To give this audit matter a positive aspect, participants were informed that internal controls and procedures within the IT system were operating effectively and the audit found no significant issues. In addition, when the company migrated to the new IT systems in the current period, data migration from the old system was well controlled and performed appropriately. The fifth positive audit matter related to the valuation of trade receivables. To give this audit issue a positive aspect, the materials informed participants that doubtful debt estimates were assessed to be adequate and that the valuation of the trade receivables balance was reasonable.

The first negative audit matter related to the impairment of the property plant and equipment (PPE) balance. The amount of PPE was considered material to the financial statements and involved a major asset class on the balance sheet. To give this audit matter a negative aspect, the experimental materials informed participants that the audit team had discovered some cash flow projections used in the PPE valuation were not reasonable and that sensitivity analyses were not performed for various calculations involved in determining value-in-use for the calculation of the recoverable amount. In addition, the materials stated that very small changes in key assumptions concerning the determination of the recoverable amount could lead to significant and material impairment write-downs. The second negative audit matter related to internal controls on reporting intercompany transactions. The company processed a considerable number of intercompany transactions per month. To give this audit matter a negative aspect, the wording was manipulated to indicate there were no internal control procedures in place to ensure that reconciliations were performed on intercompany transactions and that the risk of material misstatement of the intercompany balances was very high.

The third negative audit matter related to accounting for legal claims. The experimental materials indicated that the company's provisions relating to the outcome of litigation claims did not adequately reflect the financial penalties it may face if judgements were not in the company's favour. Furthermore, the disclosures in the notes to the financial statements with respect to pending legal claims were considered inadequate. The fourth negative audit matter was associated with revenue recognition. To give this audit matter a negative aspect, the experimental materials informed participants that the audit found several instances where revenue recognition from construction contracts was not consistent with accounting standards. The fifth negative audit matter was based on the valuation of inventory. The material nature of the value of inventory and the complexity involved in determining inventory quantities and their valuation made this a key audit issue. To give this matter its negative aspect, the experimental material stated that the audit found inventory quantities were not determined in accordance with established company procedures and that significant variances were discovered in inventory quantity reports.

4.4.4 Dependent Variables

The first dependent variable in this study was auditor judgement on KAM presentation in the auditor's report. Participants were asked to indicate 'Yes' or 'No' as to whether they would present the matter in the report. The second dependent variable was the order in which the KAMs would be presented in the report. After the participants recorded their judgement on the presentation of KAMs, they were asked to rank selected KAMs in the order in which they would present them. Thus, the first KAM presented was given a presentation order rank of 1, the second, a presentation order rank of 2, and so on, until all selected KAMs were ranked by order of presentation. Those audit matters participants had not selected for presentation were not given a presentation ranking.

4.4.5 Procedures

It was important that all respondents received the same instruction and background information in a consistent format. All the relevant instructions were provided in a cover letter or prior to each of the three sections in the research instrument. The first section of the instrument required participants to provide demographic data such as gender, age, level of formal education, ethnicity, experience and employer details. In addition, respondents were also asked to provide information concerning their level of familiarity with relevant auditing standards. The second section comprised the experimental task. The third section comprised a list of common audit issues and required participants to indicate the significance of these to audits they conducted in practice.

4.5 RESULTS

4.5.1 Manipulation Checks

Several manipulation check questions were included in the research instrument. To test whether the manipulation of client pressure in the form of client preference not to report negative KAMs had the intended effect of influencing participants' judgement, one question prompted participants to indicate: 'Do the CEO, CFO and the Board Chairman oppose or do not oppose the presentation of negative KAMs in the auditor's report?'. Responses were given on a seven-point Likert scale (where 1 indicated 'Do not oppose' and 7 indicated 'Strongly opposed'). As such, lower scores would indicate no client pressure and higher scores, high client pressure. A one-way ANOVA analysis revealed that responses of participants in the 'no client pressure' condition were significantly lower (mean = 2.467) than those in the 'high client pressure' condition (mean = 5.296, $F = 39.835$, $p = 0.000$, two-tailed). This suggests that the client pressure manipulation was successful.

To test whether the manipulation of client's financial condition had the intended effect of influencing participant judgement, one question prompted participants to indicate: 'How would you assess your client's financial condition?' on a seven-point Likert scale (1 to 7; where 1 indicated 'Very poor' and 7 indicated 'Very good'). As such, lower scores indicated a poor financial condition and the higher scores, a healthy financial condition. A one-way ANOVA analysis revealed that the responses of participants in the 'poor financial condition' group were significantly lower (mean = 3.786) than the responses by participants in the 'healthy financial condition' treatment (mean = 4.963, $F = 12.998$, $p = 0.001$, two-tailed). This suggests that the manipulation of the client's financial condition was successful.

4.5.2 Demographic Details of Participants

Table 4.1 presents demographic details for the 112 participants. The mean age of respondents in the healthy financial-condition group was 36 years; 35 years in the poor financial-condition group; 40 years in the high client-pressure group; and 45 years in the no client-pressure group. In each group, the average number of years of formal education was 17. The average professional experience level was 8.78 years for the healthy financial-condition group; 10.89 years for the poor financial-condition group; 8.93 years for the high client-pressure group;

and 20 years for the no client-pressure group. As shown in Table 4.1, of the 27 respondents in the healthy financial-condition group, 52 percent were male and 48 percent female; of the 28 respondents in the poor financial-condition group, 43 percent were male and 57 percent female; of the 27 participants in the high client-pressure group, 48 percent were male and 52 percent female; and, of the 30 respondents in the no client-pressure group, 57 percent were male and 43 percent female.

<Insert Table 4.1 about here>

The first step in the analysis was to test whether there were differences in the judgements of professional accountants explained by demographic variables. Studies investigating professional accountants have shown that variables such as gender, age, extent of education, and years of professional experience might affect their judgements. An analysis of these variables in the current study showed that gender, age, education, and years of professional experience did not significantly influence judgements in the study (untabulated results, at $p > 0.050$).

4.5.3 Tests of Hypotheses

4.5.3.1 The Presentation of Positive versus Negative KAMs in the Auditor's Report (H1a and H1b)

H1a predicted that professional accountants will present more positive than negative KAMs in the auditor's report. In the context of this study, participants were provided with a combination of five positive and five negative KAMs and their judgement as whether to present each of the ten KAMs was recorded.

H1a was tested using a repeated-measures ANOVA where KAM type (positive or negative) is the within-subject independent variable and the judgement to present or not to present the KAMs is the dependent variable. The descriptive statistics and ANOVA results are presented in Table 4.2.

<Insert Table 4.2 about here>

As reported in Table 4.2, auditors chose to present more negative (mean = 4.143) than positive KAMs (mean = 2.607, $F = 53.517$, $p = 0.000$, two-tailed).[9] This result, therefore, does not support H1a. This result could be explained by the legal risk facing auditors for failing to disclose negative KAMs. Previous studies show that when auditors disclose KAMs related to misstatement that disclosure reduces juror assessment of auditor liability when auditors are sued for negligence (Brasel et al., 2016). Therefore, auditors may be motivated to disclose more negative KAMs in the auditor's report.

H1b predicted that auditors will present positive KAMs before negative KAMs in the auditor's report. As noted previously, after making a judgement on presentation of KAMs, participants were asked to record the order in which they would present selected KAMs by ranking them numerically. They were asked to give a presentation order rank of 1 to the KAM they would present first, presentation order rank of 2 to the KAM they would present second, presentation order rank of 3 to the KAM they would present third and so on.

Participants had 10 KAMs to select from. For this analysis, the presentation order rank was used to determine presentation order rank scores, with KAMs of higher ranking obtaining higher scores. Scores for each participant were totalled for positive and negative KAMs and determined as follows. A KAM given a presentation order rank of 1 received a score of 10; a KAM with a presentation order rank of 2 received a score of 9; a KAM with a presentation order rank of 3 received a score of 8; and so on. KAMs not selected for presentation received a zero score.

This study used both parametric and non-parametric tests to compare positive and negative KAM scores. First, a repeated-measures ANOVA was performed where KAM type (positive or negative) is the within-subject independent variable, and the presentation order rank score was the dependent variable. The descriptive statistics and ANOVA results are presented in Table 4.3.

<Insert Table 4.3 about here>

[9] Mean values were calculated based on participant judgment on five positive and five negative KAMs. Participants could choose to present a maximum of five negative or positive KAMs. The mean value of 4.143 for negative KAMs indicates that, on average, participants decided to present 4.143 out of the 5 possible negative KAMs included in the experimental material. The mean value of 2.607 for positive KAMs indicates that, on average, participants decided to present 2.607 out of 5 positive KAMs included in the experimental material.

As reported in Table 4.3, auditors chose to present negative KAMs (mean = 29.893) before positive KAMs (mean = 15.546, F = 69.807, p = 0.000, two-tailed).[10] This result, therefore, does not support H1b. The explanation for this effect is the same as the H1a result. Litigation risk and threat of legal liability may influence auditor judgement to present negative KAMs first.

Second, a Wilcoxon signed rank test was used to compare positive and negative KAM presentation order rank scores. This non-parametric test is the most applicable because it is designed for use with repeated measures and allows the comparison of two scores for each participant.

Similar to the results from the repeated-measures ANOVA, negative KAMs achieved higher scores than positive KAMs indicating that overall, negative KAMs were ranked for presentation before positive KAMs (untabulated Z = -6.641, Asymp. Sig = 0.000, one-tailed).

4.5.3.2 The Impact of Client Pressure on Presentation of Negative KAMs in the Auditor's Report

H2 predicted that auditors who face high client pressure will present fewer negative KAMs than auditors who face no client pressure. H2 was tested using a one-way ANOVA where client pressure not to disclose negative KAMs (high client pressure and no client pressure) is the independent variable and the judgement to present or not to present negative KAMs is the dependent variable. However, the ANOVA result violated the assumption of Levene's test for homogeneity of variances (untabulated Levene's statistic = 8.663, p = 0.005). Consequently, the Welch test was applied to assist in conducting the ANOVA. The descriptive statistics and ANOVA results are presented in Table 4.4.

<Insert Table 4.4 about here>

---

[10] The mean values are calculated based on participant presentation order rank score for positive and negative KAMs. Since each participant had a total of five positive and five negative KAMs, the maximum possible presentation order rank score for positive KAMs is 40 (that is, if a participant chooses to present all five positive KAMs and gives the five positive KAMs a presentation order rank of 1, 2, 3, 4 and 5. This would translate into presentation order rank scores of 10, 9, 8, 7, and 6, giving a total presentation order rank score of 40). The same ranking applies to negative KAMs. The mean value of 29.893 for negative KAMs indicates that, on average, the total presentation order rank score was 29.893 out of 40. The mean value of 15.546 for positive KAMs indicates that, on average, the total presentation order rank score for positive KAMs was 15.546 out of 40.

Consistent with the prediction of H2, it was expected that auditors in the high client-pressure group would present fewer negative KAMs compared to auditors in the no client-pressure group.

As expected, the findings suggest that auditors in the high client-pressure group disclosed fewer negative KAMs (mean = 3.778) than their counterparts in the no client-pressure group (mean = 4.533, F = 5.360, p = 0.026).[11] Overall, these results suggest that auditors who face high client pressure disclose fewer negative KAMs than auditors with no client pressure, providing support for H2.

4.5.3.3 The Impact of Client's Financial Condition on Presentation of Negative KAMs in the Auditor's Report

H3 predicted that auditors with clients in poor financial condition will present more negative KAMs than auditors with clients in a healthy financial condition. H3 was tested using a one-way ANOVA where client's financial condition (healthy financial condition and poor financial condition) is the independent variable and the judgement to present or not to present negative KAMs the dependent variable. However, the ANOVA result violated the assumption of Levene's test for homogeneity of variances (untabulated Levene's statistic = 7.441, p = 0.009) and the Welch test was applied to assist in conducting the ANOVA. The descriptive statistics and ANOVA results are presented in Table 4.5.

<Insert Table 4.5 about here>

Consistent with the prediction of H3, it was expected that auditors in the poor financial condition group will present more negative KAMs compared with auditors in the healthy financial condition group.

As expected, the findings suggest that auditors in the poor financial condition group disclose more negative KAMs (mean = 4.429) than their counterparts in the healthy financial

[11] Mean values are calculated based on participant judgment on each of the five negative KAMs in the high client- pressure and no client-pressure groups. The mean value of 3.778 for the high client-pressure group indicates that, on average, participants in that group decided to present 3.778 out of 5 negative KAMs included in the experimental materials. The mean value of 4.533 for the no client-pressure group indicates that, on average, participants in that group decided to present 4.533 out of 5 negative KAMs included in the experimental materials.

condition group (mean = 3.778, F = 5.073, p = 0.030).[12] Overall, the results, therefore, support H3.

4.6 CONCLUSION AND IMPLICATIONS

This study examined the judgement of auditors related to the presentation of KAMs and the factors that may influence this including whether the KAM is negative or positive and the effects of client pressure and financial condition.

An experiment conducted with 112 professional auditors revealed that, contrary to predictions, auditors present more negative than positive KAMs in the auditor's report and present negative KAMs before positive KAMs. The findings also suggest that auditors who face high client pressure not to present negative KAMs present fewer negative KAMs than those auditors without client pressure. Finally, the results show that auditors in the poor financial condition group present more negative KAMs than those whose client financial condition is healthy.

The findings have important policy implications for auditing standards and the standard-setters. This study provides empirical evidence that certain factors can influence the judgement of auditors concerning KAM presentation and, consequently, there will be inconsistencies among entities and auditors. This can lead to wide variations in KAM disclosure among companies operating in similar industries and, therefore, inconsistent and non-comparable audit reports across a given industry sector. The study also implies that audit report users must rely on KAM information influenced by subjective decisions. Since the KAMs initiative is portrayed as a significant improvement to the auditing profession and the auditor's report, it is important that factors potentially reducing the value of this information be considered in the design of auditing standards and subsequent reforms. The IAASB claims that KAMs will provide users with useful insights into an audit; however, these insights will be compromised if the judgements concerning KAM presentation are affected by factors identified in this study.

[12] Mean values are calculated based on participant judgment on each of the five negative KAMs in the healthy and poor client-financial condition groups. The mean value of 4.429 for the poor financial condition indicates that, on average, participants in that group decided to present 4.429 out of 5 negative KAMs included in the experimental materials. The mean value of 3.778 for the healthy financial condition indicates that, on average, participants in that group decided to present 3.778 out of 5 negative KAMs included in the experimental materials.

The findings also have practical implications. The impact of client pressure on auditor judgement implies that clients can influence KAM presentation. Although findings from prior literature on the effect of client pressure is mixed, and theory suggests that client pressure can operate variously to influence auditor judgement, the findings in this study are consistent with Hatfield et al. (2011). Satisfying client demands may signal that the independence of the auditors is compromised. Therefore, the study presents empirical evidence that accounting firms should implement policies and procedures to ensure that auditors can deal with these pressures.

The limitations of this study are as follows. First, while the study provides evidence that the nature of KAMs, client pressure and financial condition can influence KAM presentation, the findings are limited to those factors. Auditing literature, for example, Bonner (2008) and Nolder and Riley (2014), suggests that other factors such as culture and an auditor's personality can also influence auditor judgement. Further empirical research could examine whether these factors influence the auditor judgements of KAM presentation and thereby reveal further reporting inconsistencies between companies in a particular country.

In addition, the findings are limited to a single country (Australia) and cross-country differences related to the extent of litigation risk may also influence auditor judgement of KAM presentation. Culture may drive both intra- and cross-country differences in auditor judgements because globalisation means that multi-cultural audit teams are common (Nolder & Riley, 2014). The effects of cultural differences are important as they reduce cross-border comparisons of companies based on audit reports. Further research could examine whether cross-country factors influence auditor judgement of KAM presentation and provide further insight into factors causing inconsistent KAM disclosure.

Table 4.1
Demographic Data of Respondents

Demographic Data	High Client Pressure	No Client Pressure	Healthy Financial Condition	Poor Financial Condition
Number of participants	27	30	27	28
Firm type:				
Big 4	4	1	3	8
Non-Big 4	23	29	24	20
Gender:				
Male	13	17	14	12
Female	14	13	13	16
Age (Mean)	40	45	36	35
Level of formal education in years (Mean)	17	17	17	17
Level of professional experience in years (Mean)	8.93	20.00	8.78	10.89

Table 4.2
Descriptive Statistics and Repeated Measures ANOVA Results for Presentation of Positive versus Negative KAMs in the Auditor's Report

KAM Type	Mean	Standard Deviation	F	p-value
Positive KAM n = 112	2.607	1.947	53.517	0.000*
Negative KAM n = 112	4.143	1.169		

*Significant at 1 percent level of significance.

Table 4.3
Descriptive Statistics and Repeated Measures ANOVA Results for Presentation Order of Positive and Negative KAMs in the Auditor's Report

KAM Type	Mean	Standard Deviation	F	p-value
Positive KAM n = 112	15.546	11.471	69.807	0.000*
Negative KAM n = 112	29.893	8.792		

*Significant at 1 percent level of significance.

Table 4.4
Descriptive Statistics and ANOVA Results for Impact of Client Pressure on Presentation of Negative KAMs in the Auditor's Report

Client Pressure	Mean	Standard Deviation	F	p-value
High Pressure Condition n = 27	3.778	1.528	5.360	0.026*
No Pressure Condition n = 30	4.533	0.776		

*Significant at 5 percent level of significance.

Table 4.5
Descriptive Statistics and ANOVA Results for Impact of Client's Financial Condition on Presentation of Negative KAMs in the Auditor's Report

Client's Financial Condition	Mean	Standard Deviation	F	p-value
Healthy Financial Condition n = 27	3.778	1.340	5.073	0.030*
Poor Financial Condition n = 28	4.429	0.690		

*Significant at 5 percent level of significance.

CHAPTER 5:

(PAPER 4)

The Impact of Director Liability Regime, National Culture and the Quality of the Audit Environment and Enforcement of Accounting Regulations on Audit Fees

ABSTRACT

This study examines the impact of three prominent macro-level variables on audit fees paid by firms for external auditing services. In particular, the effect that differences in director liability regimes, national culture and the quality of the audit environment and the enforcement of accounting standards may have on audit fees. These effects are investigated across a sample of firms from thirteen Asia-Pacific countries for the period 2009 to 2013. Director liability regimes are the collective set of laws that hold directors of companies legally responsible for their acts and omissions. The results indicate that firms located in countries with stronger director liability regimes pay lower audit fees compared to firms located in countries with weaker director liability regimes. In addition, the findings provide partial support for an association between national culture and audit fees. The results suggest that firms located in countries where uncertainty avoidance and power distance is higher pay higher audit fees. Lastly, the third variable of interest, the quality of the audit environment and enforcement of accounting regulations is inversely associated with audit fees. That is, firms located in countries with higher quality of the audit environment and stronger enforcement of accounting regulations pay lower audit fees compared to firms located in countries with lower quality of the audit environment and weaker enforcement of accounting regulations. This study has important implications for policy makers, regulators and legislators in the area of financial reporting and auditing.

Keywords: Director liability regime; national culture; quality of the audit environment and enforcement of accounting regulations; audit fees.

5.1 INTRODUCTION

In the last fifteen years, the role of directors in the governance of corporations has received significant attention from legislators and regulators across many countries. The heightened regulatory interests were a response to large-scale corporate failures. The Asia-Pacific region has not been immune to corporate scandals and failures. Australia, for instance, faced the failures of HIH Insurance and One.Tel; in Japan, there was the revelation of the Kanebo, Livedoor and Olympus scandals; and in India, there was the Satyam Computer Services scandal, which was dubbed India's Enron. In the aftermath of these corporate scandals and failures, corporate regulators and legislators implemented more stringent standards for director responsibilities and duties. The stringent standards have been achieved through the CLERP in Australia, the enactment of the Financial Instruments and Exchange Law, or J-SOX, in Japan (the Japanese version of the Sarbanes-Oxley Act, which was enacted in the U.S. following the failure of Enron in 2002) and the enactment of the Companies Act (2013) in India. These reforms are just a small example of the changing landscape of corporate regulations and legislations, many of which have had a significant impact on the liability of corporate directors.

Prior research has predominantly examined how the requirements on the independence, diligence and expertise of the board of directors and members of the audit committee influences audit fees (see for example, O'Sullivan, 1999; Tsui et al., 2001; Carcello et al., 2002a; Abbott et al., 2003; Goodwin-Stewart & Kent, 2006; Griffin et al., 2008; Zaman et al., 2011; Wu, 2012; Chan et al., 2013). The impact that the independence, diligence and expertise of the board and audit committees have on audit fees provides important insights, as audit fees are perceived to reflect audit quality, which in turn has an impact on earnings quality (Francis, 2004). Generally, the findings are mixed with respect to the impact of the board and audit committee independence, diligence and expertise on audit fees. For instance, a positive association is reported between the board and audit committee independence, diligence and expertise (see for example, Carcello et al., 2002a; Abbott et al., 2003; Goodwin-Stewart & Kent, 2006; Zaman et al., 2011). Conversely, O'Sullivan (1999) reports no statistically significant influence of the board's independence, expertise and board member's tenure on audit fees. Tsui et al. (2001) report a negative association between board independence and audit fees while Chan et al. (2013) finds a negative association between independent audit committee members' board tenure and audit fees. Two other studies report negative associations between corporate governance quality and audit fees (Griffin et al., 2008; Wu, 2012).

Apart from there being mixed findings on the effects of the attributes of the board of directors and audit committee members on audit fees, the majority of the studies are based on firms from a few countries, such as the U.S., the U.K. and Australia. There are very few studies from other countries around the world (see for example, Tsui et al., 2001; Wu, 2012). Tsui et al. (2001) use firms from Hong Kong while Wu (2012) use firms from China. Interestingly, there are mixed findings between the attributes of the board of directors and audit committee members and audit fees across countries as well. Tsui et al. (2001) and Wu (2012) both report findings that are different from results reported by studies from the U.S., U.K. and Australia as discussed in the preceding paragraph.

The mixed findings on the impact of the attributes of the board of directors and audit committee members on audit fees across countries could be an indication that there are country-level legal, institutional and cultural factors that may explain the observed differences across countries. Since extant corporate governance and audit fee studies are conducted in single-country settings, they have not been able to examine the various legal, institutional and cultural factors that may affect audit fees. In addition, very few studies have examined differences in the audit fees paid by companies across countries and the causes of these differences. Those that have examined differences in audit fees across countries (see for example, Taylor & Simon, 1999; Fargher et al., 2001; Chung & Narasimhan, 2002; Choi et al., 2008) provide evidence that audit fees are different for firms across country borders. However, these studies were conducted prior to the introduction of major corporate reforms and legislations, such as Corporate Law and Economic Reform Program in Australia and the Financial Instruments and Exchange Act in Japan. Taylor and Simon (1999) use data from fiscal years 1991 to 1995 while Fargher et al. (2001) use data for the fiscal year 1994. Chung and Narasimhan (2002) use data from fiscal years 1989 to 1995 while Choi et al. (2008) use data from fiscal years 1996 to 2002. The legal and institutional landscape has changed significantly with respect to the responsibilities and duties of public company directors and the institutional environment for financial reporting, thus, warranting a study with more recent data.

Furthermore, prior studies examining the relationship between the attributes of the board of directors and audit committee members and audit fees make an assumption that more independent, diligent and proficient boards and audit committees will purchase differentially higher audit quality to avoid legal liability (Carcello et al., 2002a; Abbott et al., 2003; Zaman et al., 2011). The prior literature has not directly measured and examined the impact of director liability regime.[13] Rather, the prior literature infers that a positive association between the attributes of directors and audit fees is partly a function of the directors seeking to reduce their litigation risk and legal liability. This study intends to provide new evidence on this assumption by examining the effect of variations in director liability regimes on audit fees.

In addition, this study also examines the impact of two other very important variables, national culture and the quality of the audit environment and enforcement of accounting regulations[14] on audit fees. The differences in national culture across countries could potentially influence the hiring of more knowledgeable and higher quality auditors (see for example, Hope et al., 2008). National culture can also potentially influence the interactions between the management, the board and the auditor. In particular, dimensions of accounting culture, such as secrecy, could influence how much information is readily shared between the management, the board and the auditor, which could directly affect audit risk and audit fees. Furthermore, there are significant differences between countries with respect to the institutional environment for financial reporting. These differences, such as those related to the presence of independent auditor oversight boards, independent audit inspection programs and independent surveillance of financial reporting, may have a significant impact on audit fees of companies across countries.

This study examines the impact of three macro-level variables on audit fees. In particular, it examines how differences in director liability regimes, national culture and the quality of the audit environment and enforcement of accounting regulations influence audit fees across

[13] This study defines director liability regime as the collective set of laws that hold directors of companies legally responsible for their acts and omissions. It is measured using the director liability index reported by *The World Bank* which measures it as a plaintiffs' ability to hold directors of a company liable for damages to the company.

[14] This study uses a measure of the quality of the audit environment and enforcement of accounting regulations from Brown et al. (2014). It measures the differences between countries in relation to the institutional setting for financial reporting. It takes into consideration factors such as whether auditors must be licensed, requirements for ongoing professional development for auditors, presence of an oversight body to apply sanctions against auditors for deficient conduct, requirements for rotation of audit firm or audit partner, whether there is a securities market regulator or other body which monitors financial reporting, the powers of the body to set accounting and auditing standards, independent body to review financial statements and so on.

thirteen countries in the Asia-Pacific region using data for the period 2009 to 2013.[15] The first independent variable, director liability regime, is predicted to influence audit fees in different ways. First, from a demand perspective, directors faced with a strong director liability regime can persuade management to hire more knowledgeable auditors and an auditor with a greater reputation to ensure higher quality financial reporting as a means to avoid legal liability and protect their reputational capital (Carcello et al., 2002a). Alternatively, directors can demand more effort from the existing auditor. Prior studies provide evidence that directors are involved in the audit scope negotiation process (see for example, Carcello et al., 2002b), as such, they will be able to influence the selection of a more knowledgeable and reputable auditor or demand more effort from the auditor. These actions will lead to higher audit fees.

Second, from a risk perspective, when faced with a stronger director liability regime, corporate directors would have incentives to perform their financial reporting oversight role more diligently to reduce exposure to litigation risk. As such, directors may undertake actions to enhance internal monitoring and governance, for example, by implementing more robust internal control systems and structures. Such actions will reduce the overall audit risk as more robust internal control structures have been found to enhance financial reporting quality (Chan et al., 2008; Nagy, 2010) and reduce the client business risk facing the auditor (Cohen & Hanno, 2000; Sharma et al., 2008). From an auditor's perspective, lower audit risk translates into less effort and lower fees. The preceding discussions suggest that there are countervailing relations between director liability regimes and audit fees. As such, the impact of director liability regimes on audit fees will be dependent on which perspective has the dominant effect. Therefore, Hypothesis 1 predicts a non-directional association between director liability regimes and audit fees.

Hypothesis 2 examines the association between the second independent variable, national culture and audit fees. It is predicted that the accounting cultural value of secrecy will be positively associated with audit fees. Secrecy reflects a preference for confidentiality and the restriction of disclosure of information about the business to only those who are closely involved with its management and financing (Gray, 1988). It is argued that management and directors of firms located in more secretive countries will not readily share information with the auditors compared to firms located in less secretive countries. This will increase audit

[15] The thirteen countries are: Australia, China, Hong Kong, Indonesia, India, Japan, Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand and Taiwan.

risk for the auditor, as such, increases audit fees. Since Gray (1988) hypothesises that the two national cultural dimensions of uncertainty avoidance (UA) and power distance (PD) from Hofstede (1980) are positively associated with the accounting cultural value of secrecy, this study hypothesises a positive association between these two national cultural dimensions and audit fees. Furthermore, since Gray (1988) predicts a negative association between the cultural dimensions of individualism (IND) and masculinity (MAS) and the accounting cultural value of secrecy, this study predicts a negative association between these two national cultural dimensions and audit fees. The measure of the four dimensions of national culture is adapted from Hofstede et al. (2010). Hofstede et al. (2010) report the national cultural scores on each of the four dimensions of national culture based on an extensive study conducted to collect data on cultural values across employees of the firm IBM and from other subsequent studies.

The third hypothesis examines the association between the final independent variable of this study, the quality of the audit environment and enforcement of accounting regulations and audit fees. A higher quality audit environment and stronger enforcement of accounting regulations may entail more independent oversight of auditors, inspections of audits and surveillance of financial reporting. In such an environment, auditors would face a higher risk of litigation and legal liability, as well as, greater risk of reputational damage from sanctions of independent oversight boards if they conduct deficient audits. As such, it is more likely that auditors would expend more effort to avoid litigation risk, legal liability and reputational damage in a country where the quality of the audit environment is higher, and enforcement of accounting regulations is stronger compared to countries with a low quality of audit environments and a weaker enforcement of accounting regulations. Since auditors would expend more effort in countries with a higher quality of audit environments and stronger enforcement of accounting regulations, audit fees would also be higher in these countries. This study uses a measure of the quality of the audit environment and enforcement of accounting regulations from Brown et al. (2014). Hypothesis 3 predicts a positive association between the quality of the audit environment and enforcement of accounting regulations and audit fees.

The hypotheses are tested using a regression of audit fees on the three independent variables, corporate governance related control variables, firm-level control variables and country-level control variables. The regression model is adapted from Choi et al. (2009). The natural log of the director liability index reported by the World Bank's Doing Business Indicators and based on a methodology developed in Djankov et al. (2008) is included in the regression model as a measure of the first independent variable, director liability regime. In addition, the four dimensions of national culture, uncertainty avoidance, power distance, individualism, and masculinity scores from Hofstede et al. (2010) are included as the measures for the second independent variable, national culture. Finally, the quality of the audit environment and enforcement of accounting regulations measured by Brown et al. (2014) is included as the third independent variable in the audit fee regression model. The dependent variable is the natural log of the total audit fees paid for external auditing services. The audit fees are regressed on the independent variables, firm-specific control variables and country level control variables using robust standard errors and clustering at the firm level. Data for the regression analysis was obtained from Worldscope and DataStream (Thompson Reuters ASSET 4 Environment, Social and Governance (ESG)) databases. The final sample of the audit fees analysis contained 3,215 firm-year observations for 872 different companies from thirteen countries in the Asia-Pacific region for the period 2009 to 2013.

There are three major findings in this study. First, the negative association between director liability regimes and audit fees suggests that firms located in countries with stronger regimes pay lower audit fees compared to firms located in countries with weaker regimes. This indicates that the risk perspective is dominant in explaining the impact of the director liability regime on audit fees. The second finding relates to the impact of national culture on audit fees. This study only finds partial support for the association between the accounting value of secrecy and audit fees. Third, the findings suggest that the audit fees for firms located in countries with higher quality audit environments and stronger enforcement of accounting regulations are lower than the audit fees of firms located in countries with lower quality of audit environments and weaker enforcement of accounting regulations.

This study makes a number of key contributions. First, by providing empirical evidence on the relationship between director liability regimes, national culture, the quality of the audit environment and enforcement of accounting regulations and audit fees, this study contributes to an emerging strand of literature in auditing that documents the effect of cross-country differences on audit fees and audit quality. Second, this study contributes to the literature on corporate governance and audit fees by providing empirical evidence on the impact of director liability regimes. Prior research on the attributes of the board of directors and audit committee members and audit fees assumes that directors will demand differentially higher assurance because of legal liability. Third, the findings on the impact of national culture also contributes to our understanding of how cultural differences can influence audit fees for firms across countries. Fourth, this study provides initial evidence on how the quality of the audit environment and enforcement of accounting regulations influence audit fees. This finding is important as it provides policy makers, regulators and legislators with empirical evidence on the impact that the implementation of higher quality oversight for auditors, independent audit inspection programs, independent financial reporting surveillance and stronger enforcement of accounting and auditing standards have on one particular cost - audit fees that firms pay their external auditors.

This paper is organised as follows. The next section provides the background to this study. Section 5.3 discuses relevant literature and develops the hypotheses. Section 5.4 outlines the research method including sample selection and the empirical models. Section 5.5 presents the results and Section 5.6 concludes the paper.

5.2 THE DIRECTOR LIABILITY REGIME, NATIONAL CULTURE AND THE QUALITY OF THE AUDIT ENVIRONMENT AND ENFORCEMENT OF ACCOUNTING REGULATIONS IN THE ASIA-PACIFIC REGION

5.2.1 The Director Liability Regime

In the corporate governance structure, the board of directors plays a very important role; they act as the middlemen between the owners and the managers and as such they have a relationship of trust with the owners (Monks & Minow, 2008). To ensure that corporations are managed in the best interest of the owners, the law imposes fiduciary duties and responsibilities on directors. The Corporations Act, stock exchange listing rules (for listed companies) and in some jurisdictions industry-specific statutes collectively outline the specific duties and responsibilities imposed on corporate directors (Loos, 2010). In addition, the common law also sets precedents for director's duties and liabilities (Skinner, 2006); and directors also have to comply with an increasing number of duties and responsibilities outlined in occupational health and safety, employment, environmental, taxation and privacy legislation.

Broadly defined, the fiduciary duties of company directors include the duty of care and the duty of loyalty. The duty of care involves directors taking reasonable care and applying the necessary skills to execute their duties (Kaplan & Harrison, 1993). Directors in possession of special skills will have to apply them to fulfil their functions, and those who possess below average skills and capabilities are expected to satisfy the standard of skill expected of an average director (Skinner, 2006). Duty of loyalty involves directors acting bona fide and for the benefit of the company (Kaplan & Harrison 1993). Directors have to exercise their powers for the proper purpose and act impartially by avoiding situations where there is a conflict between what they ought to do for the company and what they might do for themselves (Loos, 2010).

Directors who breach their duties under the law may be subjected to criminal or civil liabilities (Kaplan & Harrison, 1993; Skinner, 2006; Anderson, 2009; Loos, 2010). The Corporations Act and other legislation prescribe penalties for breach of directorial duties. Directors face three types of possible personal liability litigation: third party civil suits, shareholder derivative actions and criminal prosecution (Kaplan & Harrison, 1993). While the board of directors is a collegiate body, the liability is attached to individual directors and not the board (Gerner-Beuerle et al., 2013). In addition, there are grey areas with respect to how board decisions that constitute a breach of duty translate into liability of directors who participated in the decision by either voting in favour or against the decision or of those directors who were absent but later participated in the implementation of the board's decision (Gerner-Beuerle et al., 2013).

Directors have various options to shield themselves from litigation. Depending on the availability in specific jurisdictions, directors can protect themselves through ex ante authorisation of certain types of conduct by shareholders, indemnification and through director liability insurance (Gerner-Beuerle et al., 2013; Khan & Wald, 2015). However, neither indemnification nor insurance can shield directors from certain breaches of directorial duties, such as those related to self-dealing. In addition, a greater threat from litigation is to the reputation of a director; therefore, even if insurance covers costs and out-of-pocket liability of directors their reputational capital cannot be protected through insurance. In addition, in recent years, despite directors having director and officer's insurance, corporate directors have incurred significant out-of-pocket settlements amounting to millions of dollars (Black et al., 2006). For example, directors of Enron and WorldCom had to payout almost \$40m for settlements from their own pockets (Black et al., 2006). Therefore, director liability still serves as a strong deterrence mechanism in the corporate governance structure of the company form of business organisation.

Director liability laws have changed substantially in the last fifteen years, with many jurisdictions undertaking significant reforms after revelations of major financial scandals or large-scale corporate failures (Skinner, 2006). Consequentially, board of directors are held to higher standards of behaviour and face a greater risk of litigation. The heightened litigation risks are reflected in the growth of class-actions and derivative actions filed against directors. Within the Asia-Pacific region, in countries like Australia, China, Taiwan, South Korea, Hong Kong, India and Singapore there has been a significant increase in litigation cases against directors (Wood et al., 2011; Allens, 2015). For instance, class-actions against directors in Australia has doubled since 1999 (Allens, 2015).

5.2.2 Differences in Director Liability Regimes between Countries in the Asia-Pacific Region

While there are similarities between director liability regimes between countries, there also exists significant differences (Anderson, 2009). The 13 countries in the sample are all located in the Asia-Pacific region within close proximity of each other; however, there are significant differences in the legal system, institutions, culture and corporate governance systems between these countries.

La Porta et al. (1998) provides indirect evidence of international differences in director liability based on assessment of differences in shareholder protection across countries. They argue that the origins of the legal system of a country significantly influences shareholder protection accorded in law. Countries are categorised into two broad legal traditions: civil law and common law. The civil law legal tradition is the oldest, most influential and the most widely distributed around the world (La Porta et al., 1998). Civil law uses statutes and comprehensive codes as the primary means of ordering legal material. However, common law includes the law of England and laws modelled on the English law (La Porta et al., 1998). Under common law, precedents from judicial decisions shape law. Over time laws have been amended and civil law countries have incorporated some common law rules while common law countries have incorporated some civil law influences. However, classification of countries as either civil or common law is on the basis of the origin of the initial laws adopted rather than the revisions (Reynolds & Flores, 1989; La Porta et al., 1998). Countries with legal systems originating from the English common law offer the strongest protection for investors while French civil law countries accord the weakest investor protection laws. The German and Scandinavian civil law countries offer moderate levels of protection to investors

(La Porta et al., 1998). Australia, Hong Kong, India, Malaysia, New Zealand, Singapore, and Thailand are English common law countries; Indonesia and the Philippines are French civil law countries while Japan, Korea and Taiwan are German civil law-based countries. Based on La Porta's propositions this study finds that the director liability index is, on average, higher for the English common law group of countries compared to the French and German civil law group. Specifically, findings indicate that English common law countries, in the sample, have a stronger director liability regime index (mean = 6.8, untabulated) compared to German civil law countries (mean = 4.7, untabulated) and French civil law countries (mean = 4, untabulated).

The legal environment also differs across countries, with some more hospitable to litigation against directors than others. Multiple features of the legal system contribute towards differences in the legal liability of directors. The cost associated with legal action, including who eventually pays for legal costs is one factor that either encourages litigation against directors or supresses such litigation actions (Cheffins & Black, 2006). Cheffins and Black (2006) demonstrate this by examining the rules that courts apply to legal costs and find that countries differ significantly on this factor. In some countries, the losing party in a legal action is required to at least pay part of the successful party's legal costs while there are countries where regardless of the outcome of the legal action, parties pay for their own legal expenses and court costs. Potential litigants against directors can be deterred from pursuing legal action when faced with the prospect of covering legal and courts costs of the offending party if they are not successful (Knutsen, 2010). To contrast this within the sample of Asia-Pacific countries, Australia and Singapore, for instance, have a legal system that requires the losing party to pay legal and court costs for the successful party, but in Japan, each party pays its own legal and court fees.

Another factor that can influence director liability is the availability and ease of class action lawsuits and the derivative lawsuits. Most securities lawsuits against directors are framed as class actions and allow shareholders owning a small percentage of shares to launch proceedings against directors (Cheffins & Black, 2006). Derivative suits allow any shareholder to bring proceedings on behalf of the corporation against a director for violating duties owed to the corporation. However, different countries impose different rules and procedures that need to be followed for derivative suits to be filed against corporate directors. To contrast within the sample of Asia-Pacific countries, Australia, Singapore and China, for instance, allow class action suits, but Hong Kong does not. These factors contribute to the ease with which shareholders can bring up a legal claim against directors who breach their fiduciary and other duties and responsibilities.

Finally, this study conducts a more direct examination of the various laws and regulations that specify liability for corporate directors across a number of selected countries from the sample of Asia-Pacific countries. Table 5.1 provides a summary of the most important differences in some of the common legislations. The summary in Table 5.1 indicates that there are differences in the liability that corporate directors face in different countries in the sample. For example, in China, which has the lowest director liability regime index in the sample, there are no potential liabilities or penalties prescribed for a breach of anti-trust laws or environmental and health and safety laws. On the other hand, Hong Kong and Singapore, both with stronger director liability regimes prescribe strict penalties and liabilities for the breach of such laws. Additionally, there are differences in defences available to corporate directors across countries, which alters their legal liability. Some countries, in their company law, offer restrictions and limitations on director liability while others do not. For example, directors in Australia cannot be exempted from their liability, but companies can indemnify their directors. In Singapore, it is not possible to restrict or limit the liabilities of corporate directors. In Japan, the company law allows directors to be exempted from liabilities if all shareholders approve.

<Insert Table 5.1 about here>

The preceding discussions on differences between legal procedures and penalties, legal systems and results of law studies, such as Cheffins and Black (2006) and Anderson (2008), suggest that there is a substantial difference between director liability regimes in different countries. In particular, directors are subject to different legal systems, some of which are more hospitable to litigation against directors while others are not. Furthermore, there are differences in penalties for directors failing to uphold their duties and responsibilities. This provides a basis for the use of director liability regime in the current study in postulating the hypotheses.

5.2.3 National Culture across the Asia-Pacific Region

Culture is defined as "the collective programming of the mind that distinguishes the members of one group or category of people from others" (Hofstede et al., 2010: 6). This definition stresses shared values, norms, beliefs, and expected behaviours that are deeply embedded, unconscious and often irrational (Hofstede, 2001). These shared values define what is acceptable or desirable behaviour and help members of a group to decide and judge decisions of others (Hooghiemstra et al., 2015).

In an extensive cross-cultural survey, Hofstede collected data about values from the employees of a multinational corporation located in more than 50 countries. Subsequent analyses of this data revealed that countries could be positioned along four underlying societal value dimensions: uncertainty avoidance, power distance, individualism-collectivism and masculinity-femininity. Hofstede (1980) computes and reports country-specific scores for the four dimensions. A fifth dimension, Confucian dynamism or long term orientation, was later developed and added by Hofstede and Bond (1988).

Gray (1988) identified several accounting values that are linked to Hofstede's (1980) cultural values. These accounting values are professionalism, uniformity, conservatism and secrecy. The framework was expanded by Radebaugh and Gray (2002) to reflect the development in Hofstede's cultural dimensions. According to Gray (1988), professionalism indicates a preference for the exercise of individual professional judgement and the maintenance of professional self-regulation as opposed to compliance with prescriptive legal requirements and statutory control. Uniformity implies a preference for uniform accounting practices both between companies and over time while conservatism refers to a preference for caution with respect to measurement so as to cope with the uncertainty of future events. The final accounting value of secrecy reflects a preference for confidentiality and the restriction of disclosure of information about the business to only those who are closely involved with its management and financing. Several studies have subsequently tested Gray's theory, and evidence indicates strong associations between Hofstede's (1980) cultural dimensions and accounting values (Doupnik & Tsakumis, 2004).

Since the focus of the current study is auditing, in particular, the demand and pricing of audit services, the accounting dimension of secrecy is the most relevant dimension. Secrecy is most closely related to uncertainty avoidance. It is also related to power distance, individualism and masculinity. Uncertainty avoidance is the degree to which members of a society are uncomfortable with uncertainty and ambiguity (Hofstede, 1980). Societies strong on uncertainty avoidance maintain rigid codes of behaviour and are not tolerant towards people with deviant ideas. Power distance reflects the extent to which members of a society accept unequal distribution of power. People in large power distance societies accept hierarchical structures, on the contrary, people in small power distance societies demand equalisation of power (Hofstede, 1980). Gray argues that a preference for secrecy is consistent with strong uncertainty avoidance because of the need to supress disclosures to avoid conflict of interest and competition and ensure security. Furthermore, high power distance is usually characterised by restriction of information by those in power to preserve power inequalities (Gray, 1988). Thus, Gray (1988) theorises that the dimensions of uncertainty avoidance and power distance are both positively correlated with secrecy while individualism and masculinity are negatively associated with secrecy.

5.2.4 Cultural Differences in the Asia-Pacific Region

The 13 countries in the study are scattered in a geographical area spanning from New Zealand to Japan, China, India and Australia. Thus, it is not unusual to observe significant differences in culture between countries in the sample. The differences between the countries are evident from the Hofstede (1980) cultural study. The indices reported by Hofstede et al. (2010) and summarised in Table 5.2 on the four societal values are as follows. In the dimension of uncertainty avoidance, within a range of 8 to 112, Japan scores 92 and is the country with the highest level of uncertainty avoidance while Singapore scores 8 with the lowest level of uncertainty avoidance in the sample. Comparatively, Japan, Thailand, Taiwan and Korea are high uncertainty avoiding countries while Singapore, China, India, Indonesia, New Zealand, Malaysia, Philippines and Hong Kong can be categorised as low uncertainty avoiding societies. Australia is the only country that falls close to the median value and as such, is neutral towards uncertainty avoidance compared to other countries. The indices for power distance range from 11 to 104 with Malaysia scoring the highest of 104 and New Zealand the lowest of 22. Comparatively, China, India, Indonesia, Malaysia, Singapore, Thailand, Philippines and Hong Kong are high power distance societies compared to Australia, New Zealand, Taiwan and Japan. Korea has an index that falls on the median value, thus can be considered neutral for power distance compared to other countries.

<Insert Table 5.2 about here>

The indices for individualism ranges from 6 to 91. Thus, on the dimension of individualism, countries including Australia, India, New Zealand and Japan are more individualistic societies compared to countries, such as China, Indonesia, Malaysia, Singapore, Thailand, Philippines, Taiwan, Hong Kong and Korea. On the final dimension of masculinity, the indices range from 5 to 110 with Australia, China, India, New Zealand, Philippines, Hong

Kong and Japan being more masculine societies compared to Indonesia, Malaysia, Thailand, Taiwan and Korea.

The preceding discussion on Hofstede's cultural dimensions suggests substantial differences in the cultures of different countries in the sample. In particular, there is a significant difference between countries with respect to uncertainty avoidance, power distance, individualism and masculinity suggesting that some countries in the sample are more secretive. This provides a basis for the use of the cultural dimensions to theorise and hypothesise an association between culture and audit fees in the current study.

5.2.5 Differences in the Quality of the Audit Environment and Enforcement of Accounting Regulations across the Asia-Pacific Countries

In accounting, Preiato et al. (2015) adopt a definition of enforcement as "the act of compelling observance of, or compliance with, a law, rule, or obligation". They argue that studies in accounting and finance have adopted this form of the definition of enforcement because generally the measures of enforcement in accounting studies focus on the differences between countries that proxy for the extent to which firms comply with rules and regulations.

Generally, several studies have developed and used different proxies for enforcement. For instance, securities market regulators have defined their enforcement in terms of the actions they take to ensure companies comply with the securities regulations. In tandem, studies have examined the effectiveness of securities market enforcement through the enforcement powers of securities market regulators and how they are used and compared private versus public enforcement activities (see for example, La Porta et al., 2006). Studies in accounting that examine the effects of enforcement on quality of financial reporting have traditionally focused on the general legal setting and their enforcement because there has not been a reliable measure of enforcement of accounting standards and the specific role that independent enforcement bodies responsible for compliance with accounting standards undertake. While there are general differences in the legal setting, laws and regulations, there are also significant differences between countries in how accounting and auditing standards are enforced and the role that independent accounting enforcement bodies play in the enforcement of accounting and auditing standards (Preiato et al., 2015).

This study employs a measure of the institutional setting for financial reporting that captures both, the quality of the audit environment and the enforcement of the accounting regulations.

While there may be significant similarities in the licensing of auditors, professional development requirements for auditors, existence of an oversight body for auditors and other requirements for auditor independence, there are noticeable differences in the enforcement agencies across different countries. For instance, in Australia, ASIC is the independent enforcement agency. Auditors in Australia have to be licensed by ASIC for them to be able to provide auditing services. ASIC also conducts sample based regular inspections of financial statements and audit files through its audit and financial reporting inspection programmes (ASIC, 2014a; 2014b). It also imposes penalties on financial report misstatement and requires restatement of the financial statements. These actions are further publicised through its regular media releases. With these requirements, Australia receives a score of 52 on the quality of the audit environment and enforcement of accounting regulations measure which is amongst the highest in the sample of Asia-Pacific countries (Preiato et al., 2015).

On the contrary, Indonesia is one of the countries with the lowest enforcement score of 14 in the sample (Preiato et al., 2015). There is generally an absence of an independent enforcement agency in Indonesia similar to ASIC in Australia. There is generally an absence of independent audit and accounting inspection programmes in Indonesia compared to Australia. Generally, countries in the sample with a lower quality of audit environments and weaker enforcement of accounting regulations lack independent institutions that enforce accounting and auditing standards and regularly inspect accounting reports and audit files.

The preceding discussions demonstrated the differences in the quality of the audit environment and enforcement of accounting regulations between two counties on the opposite ends of the index. However, they demonstrated the differences that exist between countries in the quality of enforcement. They provided this study with the theoretical basis to examine the impact of cross-country differences in the quality of the audit environment and enforcement of accounting regulations on audit fees.

5.3 RELEVANT LITERATURE AND HYPOTHESES DEVELOPMENT

5.3.1 Audit Fees

Simunic (1980), in a seminal study, presented a production view of the audit process and developed a model of audit fee determination. In a competitive market, audit fees consist of a resource cost component and an expected liability loss component. The resource cost component reflects the level of audit effort while the expected liability loss represents potential litigation and reputational damage associated with audit failure. Audit effort represents the investment of time and labour auditors make during an audit engagement and generally increases with higher levels of assessed audit risk. Expected liability losses decrease with increasing audit effort as more effort is likely to detect misstatements in the financial statements. In a competitive market, auditors will use judgement to assess the expected liability loss from audit failure and invest in the audit to a point where marginal cost of one additional unit of effort equals the marginal reduction in expected future loss and then charge the audit client a fee that covers the investment in effort plus expected value of possible future liability losses (Simunic, 1980).

Hay et al. (2006) and Hay (2013) performed meta-analysis of studies on audit fees and report that subsequent to Simunic's (1980) study, a plethora of studies have examined the impact of firm-specific variables as proxies for audit effort and risk in audit fees. Firm-specific variables, such as client size, client complexity and proxies for client-specific risks, are able to explain variations in audit fees between firms in a single country-setting (Simunic, 1980; Firth, 1985; Stice, 1991; Hackenbrack & Knechel, 1997). More recent studies have examined unique factors, such as the introduction of new and more complex accounting standards, like IFRS (Kim et al., 2012; De George et al., 2013; Ettredge et al., 2014; Goncharov et al., 2014; Yao et al., 2015). Other studies take advantage of unique regulatory requirements and investigate the impact of factors, such as audit partner signature on the audit report and joint audits (Carcello & Li, 2013; Audousset-Coulier, 2015; Ittonen & Tronnes, 2015). Studies also report associations between auditor attributes and audit fees. For example, studies on auditor size and audit fees report that the Big 4 audit firms charge a "premium" (Francis & Simon, 1987; Basioudis & Francis, 2007), and specialist auditors charge higher audit fees compared to non-specialists (Carson & Fargher, 2007; Huang et al., 2007; Carson, 2009; Fung et al., 2012).

Furthermore, some studies have also found evidence of audit fee discounting in the initial years of an audit engagement (Simon & Francis, 1988; Ettredge & Greenberg, 1990; Desir et al., 2014). Both Simon and Francis (1988) and Ettredge and Greenberg (1990) examined audit fee discounting for a sample of U.S. firms during the period 1979 to 1987 and report discounts of up to 25 percent. Desir et al. (2014) examined initial-year audit fee discounting for U.S. firms in the period 2007 to 2010 and reports that audit fee discounting continues after the implementation of legislations, such as SOX. However, other studies, such as

Craswell and Francis (1999) and Huang et al. (2009), did not find evidence of initial-year audit fee discounting. Craswell and Francis (1999) examined initial-year audit fee data for Australian companies during a period similar to Simon and Francis (1988) and Ettredge and Greenberg (1990) and found no evidence of discounting. They argue that because audit fees were publicly disclosed in Australia in the 1980's, it deterred audit firms from discounting audit fees. Audit fees were not required to be publicly disclosed in the U.S. audit market in the 1980's. Huang et al. (2009) investigated initial-year audit fee discounting for U.S. firms immediately before and after the implementation of SOX, a period in which audit fees became publicly available in the U.S. They find evidence of audit fee discounting of up to 24 percent in the pre-SOX period (that is, the year 2001) but in the post-SOX period (that is, the years 2005 to 2006) they find initial-year audit fee premiums increased up to 16 percent rather than any discounts. Overall, the findings on audit fee discounting in the initial year of an audit engagement remains inconclusive and mixed.

5.3.2 Attributes of Directors and Audit Fees

The heightened focus on the role of directors in the governance of firms has, in the last fifteen years, lead to an increase of studies that examine the impact of various board and audit committee related attributes on audit fees. O'Sullivan (1999) examined the effect of board and audit committee characteristics on audit fees using U.K. firms in the post-Cadbury period. He found no evidence that board and audit committee characteristics influence audit fees. Carcello et al. (2002a) examined how board characteristics, such as independence, expertise and diligence impacts audit fees for U.S. firms using data for the period 1992-1993. They argue that to protect their reputational capital, avoid legal liability and promote shareholder interest, a more independent and diligent board of directors will purchase increased audit effort, resulting in higher audit fees. Consistent with their predictions, they report a positive association between the three board characteristics and audit fees. Since the audit committee is closely involved with the auditor, Carcello et al. (2002a) re-examined the relationship between board characteristics and audit fees after controlling for audit committee independence, expertise and diligence. They find that in the presence of board variables, there is no significant relationship between audit committee characteristics and audit fees. Later, Abbott et al. (2003), using data for U.S. firms for the year 2001, found that audit fees are higher for firms with fully independent audit committees and audit committees with at least one accounting or finance expert. One possible reason for the difference in the result obtained between Carcello et al. (2002a) and Abbott et al. (2003) can be the different time period being studied. Abbott et al. (2003) used data from a more recent time when audit committees likely took a more proactive role in the audit scope negotiation process compared to the time period studied by Carcello et al. (2002a).

Lee and Mande (2005) examined the relationship between audit committee characteristics, audit fees and non-audit fees. They argue that audit and non-audit fees are simultaneously determined and using single equation regressions will lead to biased estimates. Consistent with Abbott et al. (2003), they find that audit fees are positively associated with independent and diligent audit committees. Corporate governance and audit fees studies have predominantly focused on U.K. and U.S. firms, but Goodwin-Stewart and Kent (2006) used Australian listed firms for the year 2000. Their results are consistent with prior U.S. based studies, the existence of an audit committee, more frequent audit committee meetings and increased use of internal audits are positively associated with audit fees. However, audit committee expertise is associated positively with audit fees only when the meeting frequency and proportion of independent audit committee members is low. Zaman et al. (2011) was able to replicate these findings but only for larger firms in the U.K. for the years 2001 and 2004.

The existing literature also shows that corporate governance quality can lead to lower audit effort and fees. Bedard and Johnstone (2004) examined the effect of corporate governance risk on audit fees. Their findings suggest that corporate governance risk is positively associated with audit effort and billing rates, that is, firms with greater governance risk or lower governance quality incur higher audit fees than firms with lower governance risk or higher governance quality. Tsui et al. (2001) find that the existence of an independent board of directors is negatively associated with audit fees using a sample of firms from Hong Kong. Krishnan and Visvanathan (2009) re-examined the relationship between audit committee characteristics and audit fees using U.S. firms for the period 2000 to 2002. They find that contrary to Abbott et al. (2003), audit fees are negatively associated with audit committee expertise. The results are consistent with the proposition that auditors account for audit committee quality as it reflects client risk related to internal controls. Griffin et al. (2008) also report that better corporate governance reduces the cost of auditing. Their study used data from U.S. firms from the pre-SOX and post-SOX era (2000-2006) to examine the countervailing relations between corporate governance quality and audit fees. Similarly, Wu (2012) reports a significant negative relationship between corporate governance quality and audit fees using the sample of firms listed on the Shanghai Stock Exchange. Finally, Chan et al. (2013) examined whether independent audit committee member's board tenure affects audit fees. Their results support the notion that longer audit committee board tenure is negatively associated with audit fees.

Overall, the results on the impact of various board and audit committee attributes on audit fees are mixed. There are differences in the results between time periods and jurisdictions being studied. An implication of these mixed findings is that there are macro-level variables that potentially have a more significant impact on audit fees and the relationship between attributes of directors and audit fees. In particular, differences in the findings could be driven by cross-country differences in the legal liability regimes affecting corporate directors and the national cultural environment within which directors operate. In addition, the quality of the audit environment and enforcement of accounting regulations may also have an impact on audit fees.

5.3.3 Legal Liability Regime and Audit Fees

A very limited number of studies have examined the impact of the legal liability regime facing auditors in regards to audit fees. Seetharaman et al. (2002) exploited the difference in the legal liability regime between the U.K. and the U.S. and examined if U.K. companies listed on U.S. markets pay differentially higher audit fees compared to companies only listed in the U.K. They argue that since the U.S. is more litigious than the U.K., firms that cross-list in the U.S. face a significantly stricter legal liability regime. This leads to an increased litigation risk for the auditor, and they adjust the audit fees to reflect the higher litigation risk. Consistent with their predictions, Seetharaman et al. (2002) find that U.K. firms cross-listed in the U.S. pay significantly higher audit fees compared to firms only listed in the U.K. or cross-listed in countries other than the U.S.

Choi et al. (2008; 2009) provided additional evidence on the relationship between auditors' legal liability regime and audit fees. Choi et al. (2008) examined the joint impact of auditors' legal liability regime and auditor size on audit fees. The study used an index reported by Wingate (1997) that measures the litigation risk of doing business as an auditor. This index was developed by an insurance underwriter as a means of pricing professional indemnity insurance premiums for audit firms across countries. They report a positive association between the strictness of the legal liability regime and the level of audit fees. In addition, they find that in weak legal liability regimes, Big 4 audit firms charge significantly higher audit fees than non-Big 4 audit firms, but this difference disappears in countries with a stronger legal liability regime. Choi et al. (2009) re-examined the association between legal liability regimes and audit fees using an alternative approach by comparing audit fees of firms that are cross-listed on a foreign stock exchange with firms that are only listed domestically. They also compared audit fees for firms that are cross-listed in stronger legal liability regime countries with firms cross-listed in countries whose legal liability regimes are not stronger than that of their home country. This approach yields similar results to Choi et al. (2008), that is, firms cross-listed in stronger legal liability regime countries incur significantly higher audit fees compared to firms that are either not cross-listed or are only cross-listed on a stock exchange in a country whose legal liability regime is similar in strength to their home country.

Jaggi and Low (2011) extended these studies to specifically examine the impact of investor protection and securities regulation on audit fees. They find that audit fees are positively associated with securities regulation in weak investor protection countries; however, such a relationship does not exist in strong investor protection countries. They argue that auditors in high investor protection countries expend greater audit effort to reduce audit risk irrespective of the strictness of the securities regulation. However, in low investor protection countries, the strictness of the securities regulation plays an important role in audit pricing.

While these studies provide some evidence on how auditors' legal liability regime is associated with audit fees, the proxy measure for the legal liability regime is outdated and does not reflect the current corporate governance environment. In particular, significant reforms have taken place in the last fifteen years that have transformed the legal liability environment. Additionally, the Wingate litigation index measures legal liability regimes specific to auditors. In this study, the focus is on the legal liability regime facing corporate directors. Therefore, studies that directly examine the effects of director liability regimes are reviewed in the next section.

5.3.4 Director Liability Regime

The extant literature on director liability regimes is scant, particularly, because there has not been a well-developed and widely used measure of the extent of liability that corporate directors face across different countries. Earlier studies exploited opportunities arising from corporate legislation reforms that had an impact on directors' legal liability to examine how it impacted various outcomes. One such reform was the enactment of the Foreign Corrupt Practices Act (FCPA) in 1977 in the U.S., which significantly changed the director liability landscape for American corporate directors. In particular, the new legislation mandated a minimum level of accounting and internal control standards for corporations (Eichenseher & Shields, 1985). Along with this new legislation, other events and common law precedents in the late 1960's had further increased the legal liability of corporate directors. One such common law precedent was set in the 1968 case of *Escott v. BarChris Construction Corp., 283F. Supp. 643* (S.D.N.Y) where the courts imposed liability on all directors for providing misleading information in a prospectus. A key outcome of this and other cases in the late 1960's and early 1970's was the higher standard of care that was attributed to outside directors than what was previously the norm. Eichenseher and Shields (1985) examined the impact of heightened legal liability for corporate directors resulting from the passage of the FCPA and common law precedents on auditor appointment and audit committee formation. Consistent with their predictions, more firms formed audit committees and hired Big 8 (now Big 4) auditors in the post-FCPA period compared to the pre-FCPA period. The results are congruent with the theory that heightened legal liability leads directors to take action to try and improve overall governance and monitoring.

In the mid-1990's another significant legislative reform altered directors' legal liability. However, in this scenario, the Private Securities Litigation Reform (PSLRA) Act had the effect of reducing the threat of legal liability for corporate directors. The PSLRA was enacted in the U.S. and was designed to limit frivolous securities lawsuits (Ali & Kallapur, 2001). Prior to the enactment of PSLRA, plaintiffs could proceed with lawsuits with minimal evidence to support their case and use pre-trial for evidence discovery. The PSLRA makes it difficult for plaintiffs to file frivolous lawsuits by screening out weaker claims early in the litigation process, but it also makes it harder for plaintiffs to file legitimate cases (Ali & Kallapur, 2001), effectively providing a safe harbour for directors and officers (D&O) from legal liability (Johnson et al., 2001). To examine if the reduced threat of legal liability influences voluntary disclosure of information, Johnson et al. (2001) used a sample of 523 Technology firms listed on U.S. stock exchanges. They examined the frequency of firms issuing earnings and sales forecasts and the mean number of times forecasts were issued after the passage of the PSLRA and find that both the frequency and number of forecasts increased in the post-PSLRA period. Similarly, Nagar et al. (2003) also find that firms issued more management forecasts after the enactment of the PSLRA. Management earnings forecasts are voluntary disclosures, and inaccurate or inadequate disclosures can be an issue in shareholder litigation claims (Cao & Narayanamoorthy, 2011). Therefore, firms operating in stronger legal liability regimes may be more sensitive to disclosure of management earnings forecasts, and the findings of both Johnson et al. (2001) and Nagar et al. (2003) confirm that a directors' legal liability regime does influence disclosure of information by firms.

The Delaware court in 1991 in the ruling of *Credit Lyonnais Bank v. Pathe Communications* extended the fiduciary duties of company directors in near insolvent public companies to creditors. Aier et al. (2014) examined the impact of the court decision on earnings conservativeness. Their findings suggest that earnings conservativeness for near insolvent Delaware companies increased significantly in the period following the court ruling. Furthermore, the effect was more pronounced in firms near insolvency with stronger boards (Aier et al., 2014).

More recently, studies have begun using the level of director liability insurance coverage as a proxy to measure the threat of legal liability that directors encounter. Director liability insurance provides protection for corporate directors from out-of-pocket costs; therefore, the higher the coverage, the lower the threat that directors would face. D&O insurance first became available in the 1930's; however, it was not commonly purchased by firms until the 1970's when directors and firms began facing significant personal liability (Chung et al., 2015). Such insurance covers compensatory damages, settlements, judgements and litigation expenses incurred to defend against shareholder suits, regulatory suits or lawsuits from customers or suppliers. However, D&O coverage excludes dishonest, fraudulent and criminal acts (Chung et al., 2015).

In theory, D&O insurance provides firms with a valuable director recruitment and retention tool; however, it can also exacerbate corporate governance risks as it shields directors' personal assets from legal liability. Therefore, it increases the moral hazard problems and encourages more opportunistic behaviour amongst directors (Chung et al., 2015). Prior research confirms that higher D&O coverage leads to greater opportunistic ex-post outcomes (Chalmers et al., 2002; Chung & Wynn, 2008). Since auditors have access to inside knowledge of a firms' operations, internal controls and governance mechanisms, they would factor these into their audit fees (O'Sullivan, 1999; Chung & Wynn, 2014; Chung et al., 2015). Consequently, higher D&O coverage, if it does increase governance risk or encourage opportunistic behaviour should be reflected in higher audit fees. However, D&O coverage can also lead to lower audit fees because shareholders and other potential litigants have one more viable party to sue for damages apart from the auditors if the audited firm fails. This reduces auditors' legal liability; therefore, it should lead to lower audit fees (O'Sullivan, 1999). These countervailing relations can only be empirically examined in jurisdictions where information about D&O coverage is publically disclosed. O'Sullivan (1999) used data from U.K. listed firms from the early 1990's while Chung and Wynn (2014) and Chung et al. (2015) used data from Canadian firms from 2002 to 2008. All three studies (O'Sullivan, 1999; Chung & Wynn, 2014; Chung et al., 2015) reported results congruent with the hypothesis that greater D&O coverage exacerbates corporate governance risk and increases opportunistic behaviour, that is, a strong positive association exists between D&O coverage and audit fees.

Khan and Wald (2015) also investigated the relationship between protection of directors from legal liability and audit fees. However, they used an alternative measure of protection from legal liability. They examined the state laws and firm charters of U.S. listed firms for the period 2000 to 2008 to create a measure of the level of protection directors are accorded in law and by those firms. Their results also support the findings from earlier studies that protection or shielding directors from legal liability leads to higher audit fees reflecting higher corporate governance risks. Khan and Wald (2015) extended their study to examine the effects of director protection on earnings management. Since management of accruals and earnings can lead to litigation and potential liability for directors, it is expected that directors who do not have liability protection will carefully monitor accruals management. Consistent with their prediction, Khan and Wald (2015) reported that firms whose directors are protected from litigation have significantly more accruals management.

The D&O insurance as a proxy variable for director liability regime suffers from a number of problems. First, since the decision to purchase D&O insurance rests with the firm and its directors; the measure is not exogenous. Thus, endogeneity issues arise from its use as a proxy for director liability regime. Second, the level of director liability insurance may be an indicator of the protection that directors have from legal liability within a country; however, it fails to accommodate for cross-country differences in director liability laws. It is the differences in cross-country director liability laws that this study is more interested in, as it offers unique insights into how differences in such laws influence audit fees and consequently audit quality and earnings quality.

5.3.5 The Impact of Director Liability Regimes on Audit Fees

To examine the impact of director liability regimes on audit fees, this study investigates the extent to which audit fees paid by firms located in strong director liability regime countries differ from the audit fees paid by firms located in weak director liability regime countries. This study argues that when faced with a strong legal liability regime, directors, to protect their reputational capital, avoid legal liability and promote shareholder interest. The directors can take two actions related to the external auditor that may result in a higher level of audit assurance and audit fees. First, board and audit committee members can attempt to persuade management to hire a more knowledgeable auditor with a greater reputation (Abbott et al., 2003). Second, the board and audit committees can demand a greater quantity of audit effort from the existing external auditor (Simunic & Stein, 1996).

A number of studies document positive relationships between stronger director liability regimes and actions that are in the best interest of shareholders, such as, the hiring of higher quality audit firms as external auditors and reduction in earnings manipulation (see for example, Eichenseher & Shields, 1985; Khan & Wald, 2015). Prior research documents that the board of directors of public companies play an important role in the selection and appointment of external auditors (National Association of Corporate Directors, 1996). The board of directors can influence both the quantity and the quality of external auditing through formal and informal means (Carcello et al., 2002a; Abbott et al., 2003). Through formal means, the board of directors can collaborate with management when selecting an external auditor and can influence the selection of knowledgeable and reputable auditors, which is then subject to shareholder ratification at the annual general meeting (Abbott et al., 2003). Furthermore, corporate boards play an important role in the audit scope negotiation process (Public Oversight Board, 1994). Directors can demand a greater quantity of audit effort through negotiating an enhanced audit scope (Simunic & Stein, 1996), and since the auditor thinks of the board as its client, it is reasonable to expect that the board reviews the audit scope and proposed audit fees (Public Oversight Board, 1994; Blue Ribbon Commission, 1999; Carcello et al., 2002a). Informally, directors can influence an auditor’s effort by signalling to management and the auditors their expectations (Carcello et al., 2002a). If the board is committed to vigilant oversight, this may signal to the auditors that the expectation placed on the audit firm is very high. If the audit firm understands that the board is of high quality and demanding, then they may perform a higher-quality audit (Carcello et al., 2002a).

A review of audit committee charters and reports by Carcello et al. (2002b) provides evidence that supports the argument that directors and audit committee members are involved in the audit scope negotiation process. The review shows that directors and audit committee members review auditors’ scopes and proposed audit plans. Prior literature also documents directors' demand for high quality auditors proxied by the recruitment of Big 4 audit firms (Abbott & Parker 2000). The preceding discussions and evidence documented in prior literature suggest that directors can directly influence the quality and scope of external auditing. Based on this, it is argued that a director's demand for external assurance quality and scope will both be enhanced through the strictness of the director liability regime that they face. Directors will perceive a higher litigation risk when firms they are directors of are domiciled in strong director liability regimes. This is because they are more likely to be sued for breach of their duties and responsibilities. The fear of litigation can motivate the directors to ensure that any misstatements and fraudulent activities are detected and prevented because the cost of litigation, relative to directors' fees they receive, can be severe. As an example, independent directors of Enron in the U.S., which is considered to be one of the most litigious countries in the world, had to pay out of pocket settlement costs of $1.5million to compensate former employees for failing to prevent loses (Black et al., 2006). Just months after settling the lawsuit with former employees, outside directors of Enron collectively paid $13million to settle the securities class-action lawsuit (Black et al., 2006). Similarly, outside directors of WorldCom had to pay $24.74million as part of the settlement of the class-action lawsuit. Conversely, directors of Centro in Australia, which is a less litigious country than the U.S., faced minimal financial and criminal penalties for their role in the misclassification of information in the annual reports. In particular, the CEO received a fine of $30,000 while the rest of the board did not face any other penalties apart from having a recorded conviction (Knight, 2011).

Given the concern about the risk and cost associated with litigation, directors are likely to take into consideration the director liability regime when executing their duties and responsibilities. In response, directors can call for the appointment of a higher quality auditor and through their involvement in the audit scope negotiation process insist on higher levels of substantive audit testing. These arguments suggest that the stronger the director liability regime, the higher the audit fees will be.

Additionally, directors faced with a stronger director liability regime may undertake actions to enhance internal monitoring and governance, which may reduce the overall audit risk for the external auditor and audit fees. Directors are ultimately responsible for implementing and maintaining the internal controls, and they also have the ultimate responsibility for the financial reporting process and the overall governance framework for an entity. Several studies show that board and audit committee characteristics are related to strong internal controls (e.g., Krishnan, 2005; Zhang et al., 2007; Hoitash et al., 2009; Naiker & Sharma, 2009) and higher financial reporting quality (Beasley, 1996; Dechow et al., 1996; Krishnan & Visvanathan, 2009; Dhaliwal et al., 2010). Directors of firms operating in stronger liability regimes will have more incentives to provide an environment for stronger internal governance and stronger internal control structures to reduce opportunistic behaviour of management, which will lead to reduced risk of material misstatements and enhance financial statement reliability (Laux, 2010). Prior studies provide evidence that auditors do take into consideration the internal governance quality and the levels of risk in a business when setting audit fees (Collier & Gregory, 1996). Enhanced internal governance and improved internal control structures will lead to more reliable financial reporting systems, which auditors can rely on and reduce the extent of substantive testings leading to a reduction in audit fees. This can be achieved through implementation of an effective control environment in the organisation, in particular, over financial reporting processes. A stronger control environment reduces control risk associated with the conduct of an audit. Audit risk is a function of control risk, inherent risk and detection risk (Hogan & Wilkins, 2008). To maintain overall audit risk at an acceptable level, when faced with high control and inherent risk, auditors have to reduce detection risk by increasing substantive audit testing (Hogan & Wilkins, 2008; Jiang & Son, 2015). Thus, if a stronger control environment reduces the control risk, then the auditor can rely more on the control environment to maintain an acceptable level of overall audit risk. Subsequently, this reduces the extent of substantive audit testing and effort, which would translate into lower audit fees (Bedard & Johnstone, 2004).

The preceding discussions suggest that there are countervailing relations between director liability regimes and audit fees. If the demand effect, that is, if the theory that directors in stronger director liability regime countries demand higher quality and quantity of auditing assurance is dominant, then a positive association can be expected between director liability regime and audit fees. However, if the risk effect, that is, the theory that firms in strong director liability regimes would have better internal governance and internal control structures is dominant, then a negative association can be expected between director liability regime and audit fees. The net impact of director liability regimes on audit fees, therefore, will depend on the interplay between the demand and risk perspectives. Since there are countervailing arguments, this study does not make a directional prediction of the association between director liability regime and audit fees. This study proposes that there is an association between director liability regime and audit fees, and this relationship can either be positive or negative. Thus, the non-directional hypothesis stated in the alternative form is as follows:

H1: There is an association between director liability regime and audit fees.

5.3.6 The Impact of National Culture on Audit Fees

Culture is considered an important factor that influences accounting, auditing and corporate governance systems around the world (Nolder & Riley, 2014). While several studies have examined the impact of cultural values on accounting judgements and decisions (see for example, Doupnik & Richter, 2004; Doupnik & Riccio, 2006; Chand et al., 2012) and auditing judgements (see for example, Gul & Tsui, 1993; Ho & Chang, 1994; Patel & Psaros, 2000; Arnold et al., 2001; Patel et al., 2002; Chen et al., 2007), only a handful of studies have explored the influence of culture on corporate governance and audit fees (Hope et al., 2008; Li & Harrison, 2008a; 2008b). Since the focus is on the association between national culture and audit fees, this study reviews research that have examined the impact of culture on auditor choice and audit fees.

Yatim et al. (2006) examined the impact of culture on audit fees in the context of Malaysian companies where the corporate boards are either dominated by Chinese or Malay (Bhumiputra) directors. The Malay controlled firms are argued to have poor corporate governance, which reduces the quality and reliability of the financial reporting process. As monitoring from internal governance is weak, audit risk is high, and auditors have to expend more effort to reduce audit risk to acceptable levels. The higher audit risk and the need to expend more audit effort is predicted to lead to higher audit fees for Malay controlled firms compared to Chinese controlled firms in Malaysia. Contrary to the predictions, the results indicate that audit fees of Chinese controlled firms are higher than Malay controlled firms.

In a similar study, Che Ahmad et al. (2006) investigated the extent to which culture influences auditor choice in Malaysia. Their findings show that the choice of the auditor is strongly related to ethnicity. Firms controlled by Chinese directors opt to appoint Chinese audit firms while firms controlled by Malay directors opt to appoint Malay audit firms. Hope et al. (2008) also investigated the relationship between culture and a firms’ auditor choice. More specifically, they examined whether national culture dimensions of uncertainty avoidance, power distance and individualism collectively through the accounting value of secrecy explains a firms’ choice to appoint either a Big 4 or a non-Big 4 auditor. Their study uses samples from 37 countries and controls for several firm-specific and country-level factors that drive auditor choice. Consistent with their hypothesis, the findings show that firms in more secretive countries are less likely to hire a Big 4 auditor.

To examine the impact of national culture on audit fees, this study investigates the extent to which the audit fees paid by firms located in secretive countries differ from the audit fees paid by firms located in more transparent countries. This study draws on Gray's (1988) relations between national culture and accounting sub-cultural values. Gray's (1988) accounting value of secrecy implies a cautious approach to corporate financial reporting, in particular, a cautious approach to disclosure of information. Even though officers and directors of companies may face incentives to share information and ensure information is fair and accurate, their cultural tendency to be secretive may conflict with such incentives (Hope et al., 2008). From an auditors' perspective, a client located in a secretive culture can translate into higher audit risk as the likelihood that the client may withhold critical information increases (Hope et al., 2008). Several studies show that in countries characterised by secrecy there is less disclosure of information to third parties. Therefore, auditors will adjust audit fees upwards to reflect increased audit risk associated with a particular audit client.

The two national cultural dimensions positively associated with the accounting value of secrecy are power distance and uncertainty avoidance (Gray, 1988). Recall that the concept of uncertainty avoidance concerns how people respond to unstructured and ambiguous situations. Hofstede (1980) states that in high uncertainty avoidance cultures, there is higher reliance on clear procedures and well understood rules to reduce uncertainties. Legitimacy theory suggests that firms seek to operate within societies by conforming to the societal norms, which are reflected in the cultural dimensions (Li & Harrison, 2008a). Thus, cultural norms should shape the corporate governance structures and encourage compliance with those norms. As an example, in high uncertainty avoidance cultures, comprehensive controls are more likely to conform to societal norms than informal controls (Hofstede, 1980). As such, formalised governance structures would provide legitimacy to organisations and conform to societal norms of high uncertainty avoidance.

Power distance as defined earlier is the extent to which the less powerful members of a society expect and accept that power is distributed unequally. High power distance cultures prefer strong authority and steeper hierarchies because they help preserve the existing social order and power distribution (Hofstede, 1980). In high power distance cultures organisations tend to be more centralised and power concentrated in the hands of a few compared to low power distance cultures where organisations tend to be more decentralised (Hodgetts & Luthans, 1993).

Since uncertainty avoidance and power distance are both hypothesised to be positively associated with the accounting cultural dimension of secrecy, and since secrecy is argued to be positively associated with audit fees; these two national cultural dimensions are predicted to be positively associated with audit fees in the current study. The two national cultural dimensions hypothesised to be negatively associated with the accounting value of secrecy are individualism and masculinity. Since these two national cultural dimensions are hypothesised to be negatively associated with the accounting value of secrecy, and since secrecy is argued to be positively associated with audit fees; these two national cultural dimensions are predicted to be negatively associated with audit fees in this study. The current study argues that firms located in countries characterised by a more individualistic culture and a more masculine culture will have lower audit fees compared to companies located in countries characterised by less individualistic and less masculine cultures. The preceding discussions lead to the following general hypothesis between the accounting value of secrecy and more specifically the four national culture dimensions and audit fees:

H2: There is a positive association between secrecy and audit fees.

H2a: There is a positive association between uncertainty avoidance in a firm’s cultural environment and the level of its audit fees.

H2b: There is a positive association between power distance in a firm’s cultural environment and the level of audit fees.

H2c: There is a negative association between individualism in a firm’s cultural environment and the level of audit fees.

H2d: There is a negative association between masculinity in a firm’s cultural environment and the level of audit fees.

5.3.7 The Impact of the Quality of the Audit Environment and Enforcement of Accounting Regulations on Audit Fees

Prior studies in accounting and auditing use several measures of enforcement of legal rules and accounting standards and examine the impact on various accounting outcomes. Leuz et al. (2003) examined the association between legal enforcement (legal rules and their enforcement) and earnings management. They used a legal enforcement measure derived by combining three La Porta et al. (1998) metrics – effectiveness of the judicial system, rule of law and the corruption index. Leuz et al. (2003) report a negative association between the measure of legal enforcement and earnings management. Although the study recognised that enforcement of accounting rules could impact earnings numbers, they did not examine the enforcement of specific accounting rules and instead focused on the legal system as a proxy for investor protection and enforcement of legal rules, which they saw as more fundamental determinants of earnings management. Li (2010) examined the impact of the adoption of IFRS on cost of equity capital. The study found that the adoption of IFRS reduced cost of equity, but this effect was conditional on the strength of legal enforcement. Landsman et al. (2012) find that information content of earnings announcement is higher under IFRS and the effect was greater in countries with stronger legal enforcement. The findings of Landsman et al. (2012) support the findings from Li (2010); however, Landsman et al. (2012) used the rule of law index from Kaufmann et al. (2010) as a measure of legal enforcement. Kaufmann et al. (2010) developed a measure of legal enforcement designed to capture differences between countries with respect to rule of law, regulatory effectiveness, control of corruption, voice and accountability, political stability and government effectiveness. Similarly, Kim and Li (2011) used the Kaufmann et al. (2010) measure of legal enforcement and find that cross-border information flows from earnings announcements were stronger under IFRS but only in countries with strong legal enforcement. Furthermore, Florou and Pope (2012) documented an increase in foreign investment after the adoption of IFRS but only in countries with strong legal enforcement.

Byard et al. (2011) found that analysts forecast errors were lower after firms adopted IFRS but only in countries with strong legal enforcement and where domestic standards differed significantly from the IFRS. Daske et al. (2008) also find that outcomes associated with the IFRS were conditional on the enforcement of accounting standards. They argue that enforcement of accounting standards is an important activity. However, they did not have access to a direct measure of the enforcement of accounting standards. As such, they used the measure of legal enforcement from Kaufmann et al. (2010) to proxy for accounting enforcement.

Barth et al. (2012) investigated whether the application of IFRS by non-US firms results in accounting numbers that are comparable to those resulting from the application of U.S GAAP by U.S. firms. They find that when non-U.S. firms prepare financial information under IFRS, there is greater comparability with accounting numbers of U.S. GAAP firms than when they prepare financial information using the old national accounting standards. Furthermore, the comparability is greater for firms located in countries with stronger legal enforcement. Lax enforcement is likely to result in limited IFRS compliance, which can reduce comparability. An enforcement proxy from La Porta et al. (2006) was used by Barth et al. (2012), in particular, they used the public enforcement index, which was developed through interviews with securities market lawyers. The index specifically examined country-specific supervisor characteristics, rule-making power, investigative power, orders and criminal sanctions (La Porta et al., 2006), as such, the measure was not directly related to enforcement of accounting standards.

Houqe et al. (2012) used a more direct measure of enforcement of accounting and auditing standards from the World Economic Forum to examine the influence of investor protection and IFRS on quality of accounting earnings in 46 countries. Houqe et al. (2012) used the measure of enforcement of accounting and auditing standards as one of the seven proxies for investor protection. Results show that IFRS adoption improves the quality of accounting earnings but only in countries where the enforcement of accounting and auditing standards is stronger. The World Economic Forum's measure of enforcement of accounting and auditing standards contains a range of country-specific measures of institutional environments including the strength of enforcement of accounting and auditing standards, regulation of stock exchanges, protection of minority shareholders' interests and judicial independence. Christensen et al. (2013) examined independent enforcement body activity and whether this was linked to benefits from the IFRS. They found that improvements in liquidity from the adoption of IFRS were limited to firms from five European Union (EU) countries that introduced proactive enforcement of the IFRS, while no benefits related to liquidity was observed in markets that did not improve enforcement even if they had strong legal systems.

Hope (2003) directly examines the impact of enforcement of accounting standards on analyst forecast accuracy and reports a positive association between forecast accuracy and enforcement. Hope argues that strong enforcement of accounting standards encourages managers to follow accounting standards, which reduces uncertainty regarding accounting choices and thereby reducing uncertainty amongst analysts. The measure of enforcement of accounting standards was developed by a factor analysis of the level of audit fees, whether a country had prosecuted a party for insider trading, judicial efficiency, rule of law and anti-director rights index. The last three factors, namely judicial efficiency, rule of law and anti-director rights index were adopted from La Porta et al. (1998). Preiato et al. (2015) investigated the impact of the quality of the auditing environment and enforcement of accounting regulations on a firms' information environment. In particular, they examined errors in analysts' consensus forecasts and the extent of disagreement among analysts. The measure of the quality of the audit environment and enforcement of accounting regulations was adopted from Brown et al. (2014). They find that a higher quality of auditing environments and stronger enforcement of accounting regulations is associated with a lower error in analysts' consensus forecasts and less disagreement amongst analysts. In addition, they provide evidence that the Brown et al. (2014) quality of audit environments and enforcement of accounting regulations measure has a higher explanatory power than measures of legal enforcement. Preiato et al. (2015) conclude that the measure for enforcement of accounting regulations may be more important than previously realised, as accounting researchers have been using more general legal enforcement as proxies for enforcement of accounting regulations.

Overall, the evidence on the impact of legal enforcement and enforcement of accounting and auditing standards suggests that stronger enforcement leads to favourable outcomes in the form of lower earnings management by firms and stronger influence of IFRS on cost of equity, foreign investment and earnings forecast errors. This implies that firms, accountants and auditors are sensitive to the strength of enforcement (whether its enforcement of legal rules or enforcement of accounting and auditing standards).

To examine the impact of the quality of the audit environment and enforcement of accounting regulations on audit fees, this study investigates the extent to which the audit fees paid by firms located in countries with higher quality of audit environments and stronger enforcement of accounting regulations differ from the audit fees paid by firms located in countries with lower quality of audit environments and weaker enforcement of accounting regulations. The quality of the audit environment and enforcement of accounting regulations can, directly and indirectly, influence the level of audit fees. First, a higher quality audit environment and stronger enforcement of accounting regulations can result in higher exposure of auditors to legal liability because of audit failure. For instance, one aspect of the quality of the audit environment is the presence of an auditor oversight board with the power to sanction auditors. In the presence of an independent oversight body that has the power to sanction auditors, it is more likely that auditors will have greater incentives to provide higher quality auditing and exert more audit effort because failure to do so can result in the auditor being sanctioned (with implications for their license to be cancelled or face financial penalties).

Second, with a higher quality audit environment, it is more likely that auditors who conduct lower quality audits will be sanctioned by the independent oversight board. Such sanctions are likely to impair the reputation of the auditor and the audit firm. As such, auditors located in countries with a higher quality audit environment are more likely to expend more audit effort to reduce audit risk and preserve their reputational capital. Davis and Simon (1992) investigated the impact of SEC disciplinary action on an audit firm's ability to charge audit fees to new clients after the disciplinary action. They examined new client audit fees received by auditors subject to SEC disciplinary action versus those of unaffected auditors. They found that new clients of sanctioned auditors received a discount to their fees over and above that normally received by clients switching auditors. The implication of the findings is that impairment of reputation resulting from actions of independent oversight boards leads to lower audit fees charged to new clients; therefore, audit firms have fee related incentives to insure the performance of audits in higher quality audit environments compared to lower quality audit environments. As such, auditors are more likely to expend more audit effort, which would lead to higher audit fees.

This study investigates the direct impact of the quality of the audit environment and enforcement of accounting regulations on audit fees. It is argued that for firms located in countries with a higher quality audit environment and a stronger enforcement of accounting regulations, auditors will face higher litigation risk and legal liability. Therefore, they would increase audit effort to reduce the extent of legal liability leading to higher audit fees compared to firms located in countries with a lower quality audit environment and weaker enforcement of accounting regulations. Furthermore, auditors located in countries with a higher quality audit environment and stronger enforcement of accounting regulations will face greater threats to reputation and would increase audit effort to reduce the extent of audit risk leading to higher audit fees compared to auditors located in countries with a lower quality audit environment and weaker enforcement of accounting regulations. This leads to the following hypothesis between the quality of audit environments and enforcement of accounting regulations and audit fees:

H3: There is a positive association between the quality of the audit environment and enforcement of accounting regulations and audit fees.

5.4 RESEARCH METHOD

5.4.1 Sample Selection

The initial sample consists of all listed firms from the Asia-Pacific countries for which data are available from both the Worldscope and DataStream (Thompson Reuters ASSET4) databases during the five-year period 2009-2013. The financial data are obtained from Worldscope and audit fees, and corporate governance data are obtained from the DataStream (ASSET4) Environmental, Social and Governance (ESG) database. This study uses the DataStream ASSET4 database for audit fee data because Worldscope only provides total auditor fee data, which includes both audit fees and non-audit fees (Kim et al., 2012). Since the independent variables may have different impacts on audit and non-audit fees, this study requires separate data for the audit fees. Furthermore, this study relies on DataStream (ASSET4) for corporate governance data because Worldscope does not provide such data for firms. The year 2009 was chosen as the start of the sample period because, prior to 2009, audit fees and corporate governance data are available only for a small number of firms covered by Worldscope and DataStream (ASSET4).

This study begins with 7610 firm-year observations covered by both Worldscope and DataStream (ASSET4) from 2009 to 2013. To obtain the data for the analysis of the audit fees, 1240 observations from banks and financial institutions are excluded. These observations are excluded because most countries have specific rules and regulations that govern director liability for these institutions. A further 1591 observations without audit fee data and 208 observations with missing financial information for control variables are also excluded. Because this study also controls for corporate governance quality, a further 1356 observations with missing corporate governance data are excluded from the analysis. These procedures result in 3215 firm-year observations for the audit fee analysis. All financial data are downloaded from Worldscope and DataStream in U.S. dollars. Table 5.3 summarises the sample selection process.

<Insert Table 5.3 about here>

5.4.2 Audit Fee Model

This study estimates the following regression model to test the hypotheses. This model is an adaptation of the audit fee model for cross-country samples in Choi et al. (2009).

$$
\begin{aligned}
AUDFEE_{ijt} = \ & \beta_0 + \beta_1\, DLINDEX_i + \beta_2\, UA_i + \beta_3 PD_i + \beta_4 IND_i + \beta_5\, MAS_i \\
& + \beta_6 ENFORCE_i + \beta_7 BDIND_{ijt} + \beta_8 BDMTG_{ijt} + \beta_9 BDEXP_{ijt} \\
& + \beta_{10} ACEXP_{ijt} + \beta_{11} ACIND_{ijt} + \beta_{12} LNTA_{ijt} + \beta_{13} INVREC_{ijt} \\
& + \beta_{14} LOSS_{ijt} + \beta_{15} LEV_{ijt} + \beta_{16} ISSUE_{ijt} + \beta_{17} NGS_{ijt} + \beta_{18} NBS_{ijt} \\
& + \beta_{19} BIG4_{ijt} + \beta_{20} CROSS_{ijt} + \beta_{21} DISCL_i + \beta_{22} B4DO_{it} + \beta_{23} GDP_{it} \\
& + \beta_{24} FDI_{it} + Fixed\_Effects + Error\_Term
\end{aligned} \tag{1}
$$

The model is modified to include the independent variables and additional control variables for corporate governance quality. Prior studies, such as Carcello et al. (2002a) and Abbott et al. (2003) show that the quality of corporate governance has a significant impact on audit fees. The dependent and independent variables used in this study are defined in detail in Table 5.4.

<Insert Table 5.4 about here>

5.4.3 The Dependent Variable

The dependent variable in the audit fee model is the amount of audit fees paid by a firm to its external auditor for the audit of the financial statements consistent with prior audit fee research (see for example, Simunic, 1980; Hay et al., 2006; Hay, 2013). All countries in the sample require listed companies to disclose the amount of audit fees paid for external audit services in the financial statements. The U.S. dollar amount of audit fees is transformed to its natural logarithmic form to remove skewness and kurtosis.

5.4.4 Independent Variables

The first independent variable captures the strength of the director liability regime (DLINDEX) across the thirteen countries in the sample. DLINDEX is measured using the natural log of the director liability index reported by the World Bank's Doing Business project. The director liability index is derived from an assessment of the liability the corporate directors face from the execution of their directorial duties and responsibilities. The methodology used to compute the index is adapted from Djankov et al. (2008). The index was computed by taking into account securities regulations, company laws, civil procedure codes and court rules of evidence. The index ranges from 1 to 10 with Singapore, New Zealand and Malaysia (China) taking the highest (lowest) value of 9 (1) among the sample countries. The coefficient on DLINDEX captures the impact of a country's director liability environment on audit fees. Since this study does not predict a directional association between DLINDEX and audit fees, Hypothesis 1 will be supported if the coefficient on DLINDEX is significant irrespective of the direction.

To test Hypothesis 2, a matrix of four variables is included that captures the four dimensions of national culture that have been hypothesised to be correlated with the accounting cultural dimension of secrecy. This study uses the natural log of the four dimensions of national culture from the cultural theory of Hofstede et al. (2010), in particular, it examines the impact of uncertainty avoidance, power distance, individualism-collectivism and masculinity-femininity on audit fees. Hofstede conducted one of the most comprehensive studies of how workplace values are influenced by culture. Between 1967 and 1973 he analysed a large database of employee value scores collected from within IBM. His study covered more than 70 countries (Hofstede et al., 2010). Initially, results were published for the first 40 countries with the largest group of respondents and afterwards this was expanded to 50 countries. In 2010, results were published for 76 countries, with some results based on replications of the IBM study in other international populations by different scholars (Hofstede et al., 2010). This study uses the UA, PD, IND and MAS scores from Hofstede et al. (2010). The sample in this study consists of Japan with the highest score (92) for UA and Singapore with the lowest score (8) with other countries falling in between these scores. A higher score for UA indicates a stronger preference for UA compared to a lower score. Malaysia has the highest score for PD (104), and New Zealand scores the lowest on PD (22). Similarly, Japan scores the highest for MAS (95) while Thailand scores the lowest (34). Lastly, on the dimension of IND, Australia scores the highest (90), and Indonesia scores the lowest (14).

The third independent variable is a measure of the quality of the audit environment and enforcement of accounting regulations. The quality of the audit environment and enforcement of accounting regulations measure is adopted from Brown et al. (2014). The measure contains a component that captures important features of the audit environment that are likely to impact on the quality of the enforcement of financial reporting requirements. In particular, it captures the institutional settings affecting auditors' incentives to fulfil their role effectively, auditors' exposure to liability, the presence of a quality assurance system and a system of disciplinary sanctions and possible damage to audit firm reputation. The measure also captures the level of activity of independent enforcement bodies. In particular, the index is based on the extent to which the relevant enforcement body reviews listed company financial statements and publicly reports on the review and whether it takes any enforcement action, such as requiring firms to revise and resubmit reports. This measure ranges from 0 to 54 with Australia (Indonesia) taking the highest (lowest) value of 52 (14).

5.4.5 Control Variables

The size of the firm has conventionally been the most significant determinant of audit fees (Simunic, 1980; Hay et al., 2006). As such, this study includes the natural logarithm of total assets in the audit fee model to control for its effect on audit fees. Another significant determinant of audit fees in prior literature is the complexity of the firm (Hay et al., 2006). The first measure of complexity that is included is the ratio of inventories and receivables to total assets. Furthermore, operationally and geographically diverse firms may require more complex audits, as a result, this study includes the natural logarithm of the number of geographical segments and business segments as additional controls for client complexity. Choi et al. (2008) argue that firms that are cross listed on foreign stock exchanges present more complexity and may require more audit work; thus, leading to higher audit fees. Therefore, this study includes an additional dichotomous variable coded 1 for firms that are cross listed on a foreign stock exchange, and 0 otherwise.

Since risks associated with an audit engagement are also expected to influence the level of audit fees, prior audit fee research controls for client related litigation risks borne by the auditor. Auditor litigation often involves financially distressed clients (Palmrose, 1997a; 1997b). While it is difficult to predict firm failure, liquidity issues, excessive leverage and poor financial performance are all indicative of the probability of firm failure (Seetharaman et al., 2002). Three control variables for client-specific risks borne by the auditor are included in the audit fee model. The first is a dichotomous variable coded 1 for firm-years where the client reports a net loss, and 0 otherwise. The second variable is the leverage ratio, which is calculated as total liabilities divided by total assets. Third, expected liability cost arising from audit failure is likely to be higher for those clients who have recently obtained new financing either through debt or equity; therefore, this study includes a dichotomous variable, which is coded 1 for firm-years where the client obtained new financing, and 0 otherwise.

Several prior studies on audit fees reveal that a fee premium is associated with Big 4 auditors (Francis, 1984; Palmrose, 1986; Hay et al., 2006). Choi et al. (2008) also report Big 4 audit fee premiums in a cross-country study on audit fees. Theoretically, Big 4 audit firms are associated with greater expertise, skills and quality, which allows them to command higher audit fees (Seetharaman et al., 2002). Accordingly, this study includes a dichotomous variable, which is coded 1 if the auditor is a Big 4 audit firm and 0 otherwise.

The quality and effectiveness of the board of directors and audit committees can influence the level of audit fees in two ways. First, boards and audit committees can influence the selection of the external auditor (Carcello et al., 2002a). The board and the audit committee may also review the audit scope and proposed fees (Blue Ribbon Committee, 1999). Therefore, an effective board or audit committee, in particular, boards and audit committees made up of more independent directors, directors with more expertise and greater diligence can demand higher quality external auditors or an enhanced audit scope (Carcello et al., 2002a; Abbott et al., 2003). This will lead to an increase in audit fees. Additionally, board and audit committee quality and effectiveness can reduce client-specific risks borne by the external auditor and lead to a reduction in audit fees. Consistent with prior literature, this study includes three board related and two audit committee related control variables in the audit fees model. In line with Carcello et al. (2002a), it includes the percentage of independent directors, number of board meetings and the average number of directorships held in other companies by independent directors' as board related control variables. In line with Abbott et al. (2003), this study includes audit committee independence and audit committee financial expertise as audit committee related control variables.

Lastly, this study includes four country-level control variables that may influence cross-country variations in audit fees. The first country-level control variable represents the level of disclosure mandated for firms in a country. The disclosure level is measured by the extent of the disclosure index reported by the World Bank's Doing Business project. A higher level of disclosure may entail more audit effort; therefore, this study predicts a positive association between the level of disclosure and audit fees. Second, this study includes a measure of Big 4 auditors' dominance, which is a measure of competition in the audit market of a country (Choi et al., 2008). The Big 4 dominance is calculated by taking the difference in the market share of the smallest Big 4 auditor in each country and that of the largest non-Big 4 auditor in the same country. Choi et al. (2008) argue that the monopoly power of the Big 4 auditors could allow them to charge higher audit fees; therefore, this study predicts a positive association between the dominance of the Big 4 auditors and audit fees. The third country-level control variable, the level of gross domestic product (GDP), accounts for cross-country variations in living standards and, thus, the reserve compensation for auditors. Choi et al. (2009) argue that audit fees are likely to be higher in rich countries than poor countries; therefore, this study expects a positive association between GDP and audit fees. The fourth country-level control variable is the level of foreign direct investment (FDI) scaled by total assets. Demand for audit services are likely to be higher in countries with higher levels of FDIs than in countries with lower FDIs; thus, a positive association is expected between the value of scaled FDI and audit fees.

5.5 RESULTS AND DISCUSSION

5.5.1 Descriptive Statistics and Univariate Analyses

Table 5.5 reports the descriptive statistics for the dependent, independent and control variables for each country and the grand mean for all 13 countries in the sample. In addition, the sample countries are partitioned into two groups based on a median split of the director liability index. Then t-tests are conducted for the mean differences between the two partitioned samples. The test results are reported in the last row of Table 5.5.

<Insert Table 5.5 about here>

On average, the natural log of audit fees in the full sample is 6.838. Firms operating in strong director liability regimes have an average natural log of audit fees of 7.337 compared to an average of 6.325 for firms operating in weak director liability regimes. These data suggest that, on average, firms in strong director liability regimes spend significantly more on audit services compared to firms in weak director liability regimes.

Summary statistics for the independent variables, reported in Table 5.5, indicate that the mean director liability index is 4.848 of a total score of 10. The mean score on Hofstede's uncertainty avoidance dimension is 52.921, power distance is 57.773, individualism is 50.068 and masculinity is 64.843. The data reveal significant cultural differences between strong and weak director liability regime sub-samples. In particular, the scores for uncertainty avoidance, power distance and masculinity are higher (lower) in strong (weak) director liability regime countries while the score for individualism is lower in strong and higher in weak director liability regime countries. Furthermore, the mean quality of the audit environment and enforcement of accounting regulations score for the full sample is 42.114.

Firms in countries with strong director liability regimes are, on average, larger in size (LNTA), have more current assets as reflected in a higher INVREC, have more diversified business operations as reflected in NGS and NBS. In addition, firms in strong director liability regimes have lower client-specific risk as reflected in LOSS but higher risk as reflected in LEV compared to firms in countries with weak director liability regimes. Ninety-two percent of all firms in the sample are audited by one of the Big 4 auditors. In the partitioned sample, the Big 4 auditor's audit 96 percent (88 percent) of all listed firms in the countries with strong (weak) director liability regimes. However, the proportion of firms cross listed on foreign stock exchanges is greater on average, in countries with weak director liability regimes than in countries with strong liability regimes. This result is consistent with prior studies that firms in countries with weak general legal liability regimes are more likely to cross list their equity in countries with more developed capital markets (Choi et al., 2008). Finally, countries with strong director liability regimes have a higher level of required disclosures (DISCL), attract more foreign investment (FDI) and have lower Big 4 domination owing to the existence of more non-Big 4 audit firms.

Table 5.6 presents the Pearson correlation coefficients for all variables in the audit fee regression model. The magnitude of none of the pair-wise correlations is greater than 0.8 beyond which multicollinearity issues can affect the results (Wooldridge, 2009), except for between IND and PD. All the variance inflation factors (VIF's) are also below 10 (providing further evidence that multicollinearity is not a problem (Wooldridge, 2009)), except for IND. When the results related to IND are presented, the procedures undertaken to ensure that multicollinearity does not affect the interpretation of the results are discussed.

<Insert Table 5.6 about here>

5.5.2 Regression Results

5.5.2.1 The Impact of Director Liability Regime on Audit Fees (H1)

Tables 5.7 and 5.8 report the regression estimates of the coefficients for the audit fee model (Equation 1), with t-values and level of significance. The t-values are computed using robust standard errors (adjusted for heteroscedasticity) and clustering at the firm level (to control for serial correlations).

To test model reliability, first, the audit fee model is estimated (Choi et al., 2009) without the independent and additional corporate governance control variables using the full sample. As reported in Table 5.7, all variables except LEV, ISSUE and B4DO have the same signs as reported in Choi et al. (2009). In addition, all variables are significant at the conventional level of significance except FDI. Furthermore, the relations between the control variables could vary from country to country, because descriptive statistics in Table 5.5 reveal that sample characteristics are different across the sample countries. To address this issue, the audit fee regression model is estimated for each country without the independent, corporate governance and country-level control variables. This confirms that the regression coefficients estimated from country by country regressions (untabulated) are overall consistent with those reported in Table 5.7. This suggests that the firm-specific control variables are significant and robust across the sampled countries.

<Insert Table5. 7 about here>

H1 predicts an association between director liability regime (DLINDEX) and audit fees (AUDFEE). The prediction is non-directional as the theory predicts that stronger director liability regimes can either lead to lower or higher audit fees. To test H1, this study adds the DLINDEX to the audit fee model and estimates the regression for the full sample. Table 5.8 contains the regression outputs of the relationship between director liability regimes and audit fees. The coefficient on DLINDEX is -0.162 (t = -2.690) in the audit fee model; it is negative and highly significant. Overall, the result supports H1.

<Insert Table 5.8 about here>

The results of the control variables are generally consistent with prior audit fees and cross-country audit fee studies. The size and complexity of the firm (represented by LNTA, INVREC, NGS, NBS, CROSS) is positively correlated with audit fees. The profitability of the firm is also positively correlated with audit fees, and so is the size of the auditor. On the contrary, leverage is negatively correlated with audit fees. The indictor variable for new financing is positively associated with audit fees. The country-level control variables (DISCL, B4DO, GDP and FDI) are all positively correlated with audit fees.

This study has included in the audit fee regression model board and audit committee related control variables to alleviate the endogeneity problems associated with correlated committed variables. The results show that the coefficient on board independence, board expertise, audit committee independence and audit committee expertise are all positively correlated with audit fees; however, only board expertise is significant at the conventional levels. The number of board meetings is negatively correlated with audit fees but is not significant at the conventional levels.

5.5.2.2 The Impact of National Culture on Audit Fees (H2)

H2 predicts that a positive association exists between the accounting cultural dimension of secrecy and audit fees. Furthermore, since the national cultural dimensions of uncertainty avoidance and power distance are hypothesised to be positively associated with secrecy, H2a predicts a positive association between the national cultural dimension of uncertainty avoidance and audit fees. Similarly, H2b predicts a positive association between the national cultural dimension of power distance and audit fees. Finally, since a negative relationship is predicted between the dimensions of individualism and audit fees and masculinity and audit fees; H2c predicts a negative association between the national cultural dimension of individualism and audit fees, and H2d predicts a negative association between masculinity and audit fees.

The regression results in Table 5.8 show that the coefficient on UA is 0.513 ($t = 3.970$) in the audit fee model; it is positive and highly significant. Similarly, the coefficient on PD is 0.612 ($t = 2.360$); it is positive and highly significant. These results provide direct support for H2a and H2b and indirect partial support for H2. Contrary to the predictions, the coefficient on IND is 0.661 ($t = 3.140$) in the audit fee model; it is positive and highly significant. Similarly, the coefficient on MAS is 1.690 ($t = 9.180$); it is positive and highly significant. These results do not support H2c and H2d. However, since the Pearson correlation coefficient between IND and PD was statistically significant and above the conventional level of 0.8, there could be potential multicollinearity problems. Additional analyses indicated that the VIF for IND was above 10. Therefore, to alleviate the problems associated with multicollinearity, IND was removed from the audit fee model and the analyses were rerun. All the results remain similar to the main regression results reported in Table 5.8, except the coefficient on PD becomes statistically insignificant. After removing IND from the audit fee model, none of the VIFs are above 10. Overall, the results only provide partial support for the association between the accounting cultural dimension of secrecy and audit fees.

5.5.2.3 The Impact of the Quality of the Audit Environment and Enforcement of Accounting Regulations on Audit Fees (H3)

H3 predicts a positive association between the quality of the audit environment and enforcement of accounting regulations and audit fees. The coefficient on ENFORCE is -1.426 (t = 3.420) in the audit fee model; it is negative and highly significant. This result indicates that firms located in countries with higher quality audit environments and enforcement of accounting regulations pay lower audit fees. This contradictory result can be explained by the risk hypothesis. In effect, companies located in countries with higher quality audit environments and stronger enforcement of accounting regulations, particularly, where independent enforcement agencies exist to inspect and penalise firms for misstatements in financial statements, there is a likelihood that directors and managers would have greater incentives to ensure that financial reports are free of material errors and misstatements as financial penalties and public disclosure would tarnish their reputation. This will likely reduce audit risk facing the auditor, as a result, lower audit fees could be expected in countries with higher quality audit environments and stronger enforcement of accounting regulations.

5.6 CONCLUSION AND IMPLICATIONS

This study examined the association between director liability regimes, national culture, the quality of the audit environment and enforcement of accounting regulations and audit fees. In particular, it examines how differences in the collective set of laws that hold directors of companies legally responsible for their acts and omissions lead to differences in audit fees that companies pay to their external auditor across countries. It further examines the association between the accounting cultural dimension of secrecy and audit fees through the four dimensions of national culture, namely, uncertainty avoidance, power distance, individualism and masculinity. Finally, it examines the impact of the differences in independent auditor oversight, independent audit inspection programs, independent surveillance of financial reporting and enforcement of accounting and auditing standards that influence audit fees. This is one of the first studies to include and test the effect of a direct measure of legal liability faced by company directors on audit fees. In essence, this study directly tests the assumption made in prior studies that independent directors demand higher assurance from the auditor, partly, to protect themselves from legal liability.

The results suggest that firms located in a country with stronger director liability regimes pay lower audit fees compared to firms located in a country with weaker director liability regimes. Furthermore, the results provide partial support for the predicted association between the accounting cultural value of secrecy and audit fees. In particular, the results show that both uncertainty avoidance and power distance are positively associated with audit fees. However, contrary to the prediction, the association between the quality of the audit environment and enforcement of accounting regulations and audit fees is negative. That is, firms located in countries with higher quality audit environments and stronger enforcement of accounting regulations pay lower audit fees compared to firms located in countries with lower quality audit environments and weaker enforcement of accounting regulations.

The findings of this study have important implications. The negative association between director liability regimes and audit fees implies that when faced with a stronger liability regime, directors tend to perform their financial reporting oversight role more diligently. This provides indirect evidence that internal governance and monitoring is of higher quality, which leads to lower overall audit risk for the auditor, leading to lower audit fees. This signals to financial reporting regulators and legislators that their strategies to strengthen director liability regimes to improve internal governance of firms is working and these improvements are recognised by external auditors in their pricing of external assurance services. This finding is particularly important because financial reporting regulators and legislators undertook significant reforms of legislations after widespread corporate failures and financial scandals as a measure to improve internal governance and performance of corporate directors. The findings provide some evidence of the efficacy of their reform initiatives.

Another important implication of the findings of this study is that the quality of the audit environment and enforcement of accounting regulations plays a crucial role in audit pricing. The findings indicate a negative association between the quality of the audit environment and enforcement of accounting regulations and audit fees. While higher quality audit environments and stronger enforcement of accounting regulations should mean more effort on the part of the auditor, which would lead to higher fees, the negative association implies a number of possibilities. First, higher quality audit environments and enforcement of accounting regulations may initially prompt auditors to increase audit effort to increase the quality of the auditing services provided to clients, but greater audit effort also reduces legal liability facing the auditor, which implies lower audit fees. Second, higher quality audit environments and stronger enforcement of accounting regulations may also lead to directors and managers reducing opportunistic management of accounting numbers and improving the internal financial reporting processes. This is because some features of the audit environment and accounting regulation, such as independent surveillance of financial reporting, means that companies and their directors and managers may also face sanctions for poor quality financial reporting. This may motivate them to improve internal financial reporting processes and reduce opportunistic management of accounting numbers, which reduces the auditor's overall audit risk and leads to lower audit effort and audit fees.

There are a number of limitations of this study that should be considered in the interpretation of the results. First, the sample used in this study is limited to thirteen Asia-Pacific countries. As a consequence, the extent to which the results apply in other jurisdictions and regions of the world is limited. Second, this study includes both firm-level and country-level variables in the audit fee model. The operationalisation of the country-level variables may not be optimal. However, the audit fee model adapted for this study and the control variables included in the model are consistent with prior cross-country studies, such as Taylor and Simon (1999) and Choi et al. (2008; 2009).

Table 5.1
Director Liability Provisions under Various Legislations in Selected Asia-Pacific Countries

Country	Scope of Directors Duties and Liabilities	Liability for Theft, Fraud and Bribery	Liability under Securities Law	Liability under Insolvency Law	Liability under Environment and Health and Safety Laws	Liability under Anti-Trust Law	Limits and Restrictions on Liability (e.g., through D&O Insurance)
Australia	Directors' duties are imposed by statute, at equity and at common law. Directors' duties stem from fiduciary principles and the requirements for a director's loyalty to the company. Duties include the duty to act in good faith in the interests of the company, avoid conflicts and to act for a proper corporate purpose. The statutory duties enshrined in the Corporations Act exist alongside common law duties.	Companies are subject to bribery prohibitions under the Criminal Code Act 1995. These prohibitions apply to the bribery of Australian federal and foreign government officials. A director's conduct may fall under the anti-bribery provisions if the director causes the relevant action.	Directors may be liable for a range of offences related to the issue and transfer of securities. In addition to the directors' duties that may be breached by a director's improper dealings with securities, a number of transaction-specific offences exist. For example: (1) Criminal and civil liability for defective disclosure documents in relation to the issue of securities by a company; and (2) Criminal and civil liability for insider trading.	The Corporations Act sets out the legislative framework for insolvency, including the rights of creditors and the consequences of insolvent trading. Directors have a duty to prevent their company from incurring debts while insolvent. A director is personally liable if he/she fails to prevent the company from incurring a debt when he/she has reasonable grounds for suspecting that either: (1) The company is insolvent. (2) The company will become insolvent because of incurring that debt (or in addition to other debts).	The general principle is that if a corporation commits an environmental offence each director of the corporation is liable for the same offence and is at risk of criminal prosecution. A director may be able to avoid liability if he can rely on a statutory defence, such as the defence of due diligence. The test for prosecution of a criminal offence is one of culpability. However, this is general policy and not enshrined in statute. The link between the director and the company's action does not require intent to be proven and could arise out of negligence.	The Competition and Consumer Act 2010 imposes liability for anti-competitive conduct on corporate entities. Although the liability attaches to the conduct of companies, directors of companies may attract both criminal and civil liability by virtue of their position in the company and the particular anti-competitive conduct involved. Criminal penalties introduced in 2009 may result in directors serving prison sentences for breaches involving making or giving effect to cartel provisions. The types of serious cartel conduct that may attract criminal liability are price fixing, restricting outputs, allocating markets and bid rigging. The law also prohibits a company from indemnifying a director for entering into or procuring a contract that contains an exclusionary provision.	Directors cannot be exempted from liability. A company can indemnify its directors for liabilities incurred in the performance of their roles. Directors can obtain D&O insurance and the company may pay for the insurance premiums. The business judgement rule provides a defence to directors for breaches of the duty to act with due care and diligence.
China	Directors must comply with the provisions of law and administrative regulations, and the articles of association of the company, and bear fiduciary duties towards the company. Directors must not: (1) Abuse their duties and rights; (2) Receive bribes or other illegal income; and (3) Embezzle company assets. A director who violates the provisions of law and	According to the Company Law, a director must not: (1) Misappropriate company funds; (2) Deposit company funds into a bank account opened in his/her name or in the name of others; (3) Use company funds to make loans to others or provide a guarantee for others without the consent of the shareholders' meeting or the board of directors, in violation of the provisions of the	Directors of a listed company as an insider must not buy or sell securities of the company or divulge such information or procure others to buy or sell such securities before the insider information is made public. Directors of a listed company who commit these activities will be ordered to dispose of the securities held illegally and the illegal income will be confiscated. Furthermore, a fine ranging from one to five times the amount of illegal income will be imposed. If there is no illegal	The Enterprise Insolvency Law is the main legislation governing insolvency issues of companies in China. According to the Enterprise Insolvency Law: Where any director of an insolvent enterprise exploits their position of authority for any improper acquisition of income and occupation of enterprise assets from the enterprise, the insolvency administrator will recover the said income and enterprise assets from this director. Unless otherwise approved by the People's Court, no director of an	There is no potential liability for directors.	There is no potential liability for directors.	There is no specific provision in law whether a company or shareholders can restrict or limit the liability of a director. D&O insurance can be obtained but a listed company needs approval from shareholders to purchase it for its directors.

	administrative regulations or the articles of association of the company in his/her performance of powers and functions, causing the company to suffer damages is liable to pay compensation.	articles of association of the company; (4) Enter into contracts with the company or carry out transactions with the company in violation of the provisions of the articles of association of the company or without the consent of the shareholders' meeting; (5) Abuse his/her powers and functions to seize commercial opportunities of the company for himself/herself or others or engage in similar business as the company's on his/her own or with others without the consent of the shareholders' meeting; (6) Pocket commissions for transactions between the company and other parties; (7) Disclose company secrets arbitrarily; and (8) Do any other act, which violates his/her fiduciary duties towards the company. Income received by directors and senior management personnel in violation of the above provisions will belong to the company.	income or the amount of illegal income is below CNY30,000, a fine ranging from CNY30,000 to CNY600,000 will be imposed. Where an act of insider trading causes the investors to suffer losses, the insider is liable to pay compensation in accordance with the provisions of the law.	insolvent enterprise can transfer his/her shares in the enterprise to any third party, during the insolvent period. Any director of an enterprise who violates the duties of loyalty and diligence and causes the insolvency of the enterprise bears civil liability pursuant to the law. A person mentioned above cannot act as a director, supervisor or senior management personnel of any enterprise within three years from the completion of insolvency proceedings.			

Hong Kong	The Companies Ordinance codifies directors' duties of care, skill and diligence. It sets out a mixed objective and subjective test for the standard in carrying out a director's duty to exercise reasonable care, skill and diligence. Therefore, in deciding whether a director has breached the duties, both the general knowledge, skill and experience that may reasonably be expected of a person carrying out the functions of the director of the company (the objective limb) and the general knowledge, skill and experience of that particular director (the subjective limb) have to be considered. This standard also applies to a shadow director. If a director fails to comply with the directors' duties, he/she may be liable to civil or criminal proceedings and may be disqualified from acting as a director.	Criminal liability applies to theft and fraud offences by a director. He/she may also be disqualified as a director and may be personally responsible for all relevant debts of the company where, for example, he/she is involved in the management of a company in contravention of a disqualification order, or he is involved in fraudulent trading, which is discovered in the course of the winding up of a company. In addition, the provisions of the Prevention of Bribery Ordinance (Chapter 201 of the Laws of Hong Kong) also apply to directors of a company. A director will commit an offence if he/she offers or accepts a bribe.	The Companies Ordinance and the Securities and Futures Ordinance impose various liabilities on directors of listed companies in relation to the issue of and dealing in securities and the provision of information relating to securities. These include: Civil and criminal liabilities under the for any untrue statements in a prospectus. Civil and criminal liabilities for engaging in any market misconduct offences. Civil liabilities for failing to get the listed company to make timely disclosure of inside information. Criminal liabilities under the Securities and Futures Ordinance for providing false or misleading representations or information to the regulators. Civil liability under the Securities and Futures Ordinance for making a false or misleading public communication. Criminal liability under the Securities and Futures Ordinance for failing to make proper and timely disclosure for a director's interests in the shares and debentures of the listed company. Directors of listed companies must also observe the relevant requirements under the Listing Rules for dealing in securities.	In the event of a winding-up, whether court-ordered or voluntary, a director will be criminally liable under sections 271 to 275 of the Companies Ordinance if he or she is found to have, among others: Failed to comply with the obligations imposed on him or her during the liquidation of the company. Failed to deliver up the relevant property of the company to the liquidator. Falsified the books of the company with an intention to defraud or deceive any person. Made any material omission or false representation relating to the affairs of the company. Given or concealed property of the company in liquidation with intent to defraud creditors. Failed to keep books for the two years before the winding-up of the company. Engaged in fraudulent trading. If a director engages in fraudulent trading, which is discovered in the course of the winding up, the director may be subject to both civil and criminal penalties, and to a disqualification order. The civil remedy is that a court may, in appropriate circumstances, order that a director who was knowingly a party to the fraud to be personally responsible for all the debts of the company.	***Environment*** Environmental legislation covers a wide number of regulatory controls. These include: Air pollution control. Water pollution control. Waste disposal. Noise control. Ozone layer protection. Dumping at sea. Environmental impact assessment. Any contravention of the above environmental laws may render a director liable if the offence was committed with the consent or connivance of that director, or was attributable to his neglect or omission. ***Health and safety*** A company is liable for health and safety of its employees under common law as well as under various statutes. In particular: The Occupational Safety and Health Ordinance (Chapter 509 of the Laws of Hong Kong) imposes certain obligations on employers or occupiers of premises in relation to the health and safety of those working at a workspace. The Factories and Industrial Undertakings Ordinance (Chapter 59 of the Laws of Hong Kong) also imposes a general statutory duty on employers to ensure the health and safety at work of those persons employed by them at industrial undertakings. When a company is convicted of any offence under either of these ordinances and that offence was committed with the consent or connivance of any of its directors, or was attributed to his neglect, the director will also be guilty of the offence.	The long-awaited Competition Ordinance (Chapter 619 of the Laws of Hong Kong), which introduced a cross-sector competition law regime in Hong Kong, finally came into full force on 14 December 2015. The Competition Commission and the Competition Tribunal were established under the Competition Ordinance in January 2013 and August 2013 respectively. The Competition Ordinance aims to prohibit anti-competitive agreements and concerted practices, and abuse of any substantial degree of market power that have the object or effect of prevention, restriction or distortion of competition in Hong Kong; and anti-competitive mergers that have, or are likely to have the effect of substantially lessening competition in Hong Kong (initially in the telecommunications sector only). A disqualification order of up to five years can be made against a director if a company of which he is a director has contravened a competition rule as defined in the Competition Ordinance and the Competition Tribunal considers that his conduct renders him unfit to be concerned in the management of a company.	Director liability cannot be restricted. A company can obtain D&O insurance for its directors.

Indonesia	The board of director's primary general duty as set out under Articles 92 and 98 of Law No. 40 of 2007 on limited liability companies (Company Law), is to carry out the day-to-day operations of the company, as well as to represent the company inside and outside the court. The Company Law sets out certain specific duties of the board of directors, including the duty to submit annual work plans to the board of commissioners or general meeting of shareholders and annual reports to the general meeting of shareholders after consideration by the board of commissioners (*Articles 63 to 69, Company Law*). The Company Law requires members of the board of commissioners and board of directors to perform their duties in good faith, prudently and responsibly in the interests of the company, and in accordance with its purpose and objectives. Each member of the board of commissioners and board of directors who is at fault or negligent in performing his or her duties is personally liable for any of the resulting losses to the company.	Law No. 40 of 2007 on limited liability companies (Company Law) requires members of the board of commissioners and board of directors to perform their duties in good faith, prudently and responsibly in the interests of the company, and in accordance with its purpose and objectives. On the part of members of the board of commissioners or board of directors, the following matters are covered under the Indonesian Penal Code: Theft. Article 362 of the Indonesian Penal Code. Fraud. Article 378 of the Indonesian Penal Code. Bribery**.** Articles 418 to 419 of the Indonesian Penal Code. Criminal sanctions for theft, fraud and bribery are as follows: Theft. Imprisonment for between five and 20 years, or a fine. Fraud. Imprisonment for between one and four years, or a fine. Bribery. Imprisonment for between one year and life (in certain circumstances, capital punishment is possible).	Any director (or commissioner) of a company who is found guilty of a breach or violation of Law No. 8 of 1995 on capital markets (Capital Markets Law) is subject to a fine, criminal sanctions or both. These vary from detention of up to one year, imprisonment for between three to ten years and a fine ranging from IDR1 billion to IDR15 billion.	Law No. 37 of 2004 on bankruptcy and suspension of debt payment obligation does not specifically provide the scope of a director's duties and liability relating to the bankruptcy or suspension of debt payment obligations proceedings. However, Law No. 40 of 2007 on limited liability companies (Company Law) provides that where a bankruptcy occurs due to the fault or negligence of the board of directors, and the company's assets are not sufficient to pay all of the company's obligations, each member of the board of directors is jointly and severally liable for all obligations that remain unpaid by the bankruptcy estate. This personal liability applies to board members who were at fault or negligent and who served on the board of directors in the five-year period before the declaration of bankruptcy.	Under Law No. 32 of 2009 on environmental protection and management, administrative sanctions (such as a written warning, government coercion, the suspension of an environmental permit or the revocation of an environmental permit) can be imposed on directors in cases of serious violation of the environmental laws. The imposition of administrative sanctions does not discharge directors from restoration obligations or penal responsibilities and sanctions under the criminal law. Law No. 36 of 2009 on health imposes corporate liability. The law obliges the employer (the company, not the directors) to ensure the health of employees through preventive efforts, improvement, treatment and recovery. The employer must bear the entire cost of the employees' healthcare. The employer must bear the cost of any health problems to employees that are caused as a result of their work. The employer must also participate in the government's social security programme for the benefit of its employees.	A director or commissioner is prohibited from holding a position as the director or commissioner of another company if that company (*Law No. 5 of 1999 on the ban on monopolistic practices and unfair business competition*): Operates in the same relevant market. Has significant relevance in the field of business. Collectively has dominant markets for certain products or services that may trigger the ban on monopolistic practices or unfair business competition. The violation of this provision is subject to a fine ranging from IDR5 billion to IDR25 billion.	The Company law is silent on whether a company can indemnify its directors against liabilities. Directors can take out D&O insurance and the company can pay for the insurance premiums.
Japan	Directors must perform their duties (Companies Act): 1. With the care of a prudent manager. 2. In compliance with all laws and regulations, the articles and resolutions of shareholders' meetings. 3. In a loyal manner. Directors who neglect their duties are liable to the company for resulting	A director can be criminally liable for aggravated breach of trust if he both: (1) Acts in breach of his duties for the purpose of promoting his own interests or the interests of a third party, or inflicting damage on the company. (2) Causes actual financial damages to the company.	Any director of a company that submits a securities report containing misstatements of any important matter or engages in illegal insider trading may be subject to both civil and criminal liabilities.	There is no specific liability owed by a director under the insolvency laws. However, a rehabilitation debtor, a bankruptcy administrator or an administrator can petition the court to assess a claim for damages, based on a director's liability under his general duties.	Directors who violate environmental and health and safety laws can be subject to both civil and criminal liabilities.	Directors who violate anti-trust laws (for example, cartel activities and bid rigging) can be subject to both civil and criminal liabilities.	A director can be exempted from liability with the unanimous consent of all shareholders. Directors can obtain D&O insurance, company can pay the insurance premium, however, generally the directors pay part of the insurance premium.

	damages. Where directors are grossly negligent or knowingly fail in performing their duties, such directors are also liable to third parties or shareholders for resulting damages.						
Singapore	Directors have the following general duties: 1. To act honestly and in good faith in the best interests of the company. 2. To exercise powers for a proper purpose. 3. Not to make improper use of information. 4. To avoid conflicts between their own personal interest and the interests of the company of which they are directors. 5. Of care, skill and diligence.	A director can be criminally liable under the general laws and statutes dealing with theft and fraud. Theft and fraud are also breaches of a director's general duties.	A director can be liable for various offences under securities laws, including omissions and misleading or deceptive statements in disclosure documents (for example, a prospectus or takeover document). Insider trading while in the possession of price-sensitive information is also a securities offence. Such offences can attract both civil and criminal liabilities.	The duties of directors shift during or pending an insolvency situation, as directors have a duty to take the interests of the company's creditors into account when making decisions on behalf of the company. In particular, a director can be personally liable if the company incurs a debt while insolvent or if it becomes insolvent by incurring the debt if there was no reasonable expectation of the company being able to repay that debt. This can attract both civil and criminal liabilities.	It is possible for directors to be found personally liable for a company's breach of environmental laws. General penalties under the Environmental Protection and Management Act (Chapter 94A) include a fine of up to SG$20,000 for a first offence, and up to SG$50,000 for a second offence. Continuing offences are subject to a maximum fine of SG$2,000 for each day for which the offence continues. If the offence involves a hazardous substance, a director can be liable to a fine up to SG$50,000 or imprisonment for up to two years.	Directors can be found personally liable for not ensuring that the company complies with anti-trust laws. Penalties for offences under the Competition Act (Chapter 50B) include a fine of up to SG$10,000 or imprisonment for up to 12 months.	Not possible to restrict or limit a directors' liability. A company can maintain D&O insurance to cover its directors.

Source: Thomson Reuters Practical Law

Table 5.2
Cultural Value Scores for Asia-Pacific Countries

Country	Power Distance (11-104)	Uncertainty Avoidance (8-112)	Masculinity-Femininity (5-110)	Individualism-Collectivism (6-91)	Long Term Orientation (0-100)	Indulgence-Restraint (0-100)
Australia	38	51	60	90	21	71
China	80	30	66	20	87	24
Hong Kong	68	29	57	25	61	17
Indonesia	78	48	46	14	62	38
India	77	40	56	48	51	26
Japan	54	92	95	46	88	42
Korea	60	85	39	18	100	29
Malaysia	104	36	50	26	41	57
New Zealand	22	49	58	79	33	75
Philippines	94	44	64	32	27	42
Singapore	74	8	48	20	72	46
Thailand	64	64	34	20	32	45
Taiwan	58	69	45	17	93	49

Source: Hofstede et al. (2010)

Table 5.3
Sample Selection

Firms listed on Stock Exchanges in Asia-Pacific from 2009 to 2013 and available on the Thompson Reuters DataStream	7,610
Delete:	
Firms in the finance sector (SIC Code between 6000-6999)	1,240
Firms without audit fee data	1,591
Firms without necessary financial data to compute control variables	208
Firms without necessary corporate governance data	1,356
Final Sample in Audit Fee Analysis	**3,215**

Table 5.4
Variable Definitions

Panel A: Main Dependent Variable		
Variable Name	**Variable Measurement**	**Data Source**
AUDFEE	Natural log of audit fee in thousands of U.S. dollars (ESG ASSET4 #ECSLDP064)	Thomson Reuters ASSET4 ESG
Panel B: Independent Variables		
Variable Name	**Variable Measurement**	**Data Source**
DLINDEX	The strictness of a country's director liability regime, measured by the natural log of the director liability index from World Bank Doing Business Indicators (2009-2013). This index ranges from 0 to 10, where 0 indicates the weakest director liability regime and 10 denotes the strictest regime.	The World Bank, Doing Business Project
UA	A natural log of a country's level of uncertainty avoidance score developed as part of a comprehensive measure of national culture by Hofstede et al. (2010).	Hofstede et al. (2010)
PD	A natural log of a country's level of power distance score developed as part of a comprehensive measure of national culture by Hofstede et al. (2010).	Hofstede et al. (2010)
IND	A natural log of a country's level of individualism score developed as part of a comprehensive measure of national culture by Hofstede et al. (2010).	Hofstede et al. (2010)
MAS	A natural log of a country's level of masculinity score developed as part of a comprehensive measure of national culture by Hofstede et al. (2010).	Hofstede et al. (2010)
ENFORCE	The natural log of the quality of the audit environment and enforcement of accounting regulations, ranges from 0 to 56 as reported by Brown et al. (2014)	Brown et al. (2014)
Panel C: Firm-Specific Control Variables		
Variable Name	**Variable Measurement**	**Data Source**
BDIND	The percentage of non-executive directors on the board (ESG ASSET4 #CGB5006V)	Thomson Reuters ASSET4 ESG
BDMTG	Number of board meetings held during the year (ESG ASSET4 #CGBFO10V)	Thomson Reuters ASSET4 ESG
BDEXP	The average number of other corporate affiliations of the board members (ESG ASSET4 #CGBS011V)	Thomson Reuters ASSET4 ESG
ACEXP	1 if the audit committee consists of at least three members and 1 financial expert within the meaning of Sarbanes-Oxley Act, and 0 otherwise (ESG ASSET4 #CGB003V)	Thomson Reuters ASSET4 ESG
ACIND	The percentage of independent audit committee members (ESG ASSET4 #CGBF001V)	Thomson Reuters ASSET4 ESG
LNTA	Natural log of total assets in thousands of U.S. dollars (Worldscope #WC02999)	Worldscope
INVREC	Receivables (Worldscope #WC02051) divided by total assets (Worldscope #WC02999); total inventory (Worldscope #WC02101) divided by total assets (Worldscope #WC02999)	Worldscope
LOSS	1 if the firms report a net loss, and 0 otherwise (Worldscope #WC01751)	Worldscope
LEV	Total liabilities (Worldscope # WC03351) divided by total assets (Worldscope #WC02999)	Worldscope
ISSUE	1 if firm obtained new financing, and 0 otherwise (Worldscope # WC03255 and WC03995)	Worldscope

NGS	Square root of 1 plus the number of geographical segments (Worldscope #WC19600-WC19695)	Worldscope
NBS	Square root of 1 plus the number of business segments (Worldscope #WC19600-WC19695)	Worldscope
BIG4	1 if the firm's external auditor is a Big 4, and 0 otherwise (Worldscope #WC07800)	Worldscope
CROSS	1 if the firm is cross-listed in foreign capital markets, and 0 otherwise (Worldscope #WC05427)	Worldscope
Panel D: Country-Level Control Variables		
Variable Name	**Variable Measurement**	**Data Source**
DISCL	A country's disclosure level for transactions measured by the World Bank Doing Business Indicators extent of disclosure index	The World Bank, Doing Business Project
B4DO	The Big 4 dominance in the country, measured by the difference between the market share of the smallest Big 4 auditor and that of the largest non-Big 4 auditor in year t	Worldscope
GDP	Gross domestic product (GDP) per capita in thousands of U.S. dollars	The World Bank
FDI	Foreign direct investment scaled by total GDP	The World Bank

Table 5.5
Descriptive Statistics
Panel A: Overall Sample Descriptive Statistics

Variable	Mean	Standard Dev.	Median	25th Percentile	75th Percentile
AUDFEE	6.838	1.431	6.806	5.841	7.731
DLINDEX	4.848	2.759	6.000	2.000	8.000
UA	52.921	25.091	51.000	30.000	85.000
PD	57.773	18.085	54.000	38.000	68.000
IND	50.068	29.241	46.000	25.000	90.000
MAS	64.843	16.845	61.000	57.000	66.000
ENFORCE	42.114	10.994	43.000	34.000	52.000
BDIND	0.615	0.256	0.667	0.455	0.833
BDMTG	10.459	5.681	10.000	6.000	14.000
BDEXP	1.488	1.111	1.260	0.750	2.000
ACEXP	0.682	0.466	1.000	0.000	1.000
ACIND	0.556	0.497	1.000	0.000	1.000
LNTA	15.127	1.716	15.322	14.070	16.325
INVREC	0.231	0.165	0.205	0.088	0.346
LOSS	0.157	0.364	0.000	0.000	0.000
LEV	0.467	0.207	0.471	0.331	0.616
ISSUE	0.767	0.423	1.000	1.000	1.000
NGS	1.099	0.633	1.099	0.693	1.609
NBS	1.305	0.537	1.386	1.099	1.609
BIG4	0.916	0.277	1.000	1.000	1.000
CROSS	0.453	0.498	0.000	0.000	1.000
DISCL	8.228	1.233	8.000	7.000	9.000
B4DO	4.828	12.952	6.000	0.200	12.000
GDP	39.535	20.167	39.323	30.698	53.122
FDI	0.083	0.118	0.033	0.008	0.046

Table 5.5 Continued
Panel B: Descriptive Statistic by Country

Country	n	AUDFEE	DLINDEX	UA	PD	IND	MAS	ENFORCE	BDIND	BDMTG	BDEXP	ACEXP	ACIND	LNTA	INVREC	LOSS	LEV	ISSUE	NGS	NBS	BIG4	CROSS	DISCL	B4DO	GDP	FDI
Australia	1010	6.155	2.000	51.000	38.000	90.000	61.000	52.000	0.783	12.151	1.185	0.821	0.712	13.654	0.178	0.314	0.386	0.868	0.957	1.076	0.900	0.854	8.000	11.677	60.583	0.036
China	242	7.236	1.000	30.000	80.000	20.000	66.000	37.000	0.661	9.562	1.488	0.860	0.421	16.304	0.274	0.054	0.547	0.719	1.020	1.370	0.806	0.136	10.000	6.508	5.580	0.039
Hong Kong	562	6.926	8.000	29.000	68.000	25.000	57.000	53.000	0.547	6.169	1.772	0.956	0.701	15.451	0.239	0.055	0.473	0.851	0.975	1.292	0.952	0.080	9.000	6.518	35.130	0.318
Indonesia	48	7.649	5.000	48.000	78.000	14.000	46.000	14.000	0.991	9.938	1.095	0.125	0.729	14.819	0.223	0.000	0.381	0.625	0.799	1.352	0.958	0.125	9.833	10.313	3.261	0.020
India	99	5.795	4.000	40.000	77.000	48.000	56.000	21.000	0.712	6.040	3.167	0.879	0.707	15.140	0.269	0.030	0.522	0.636	1.045	1.250	0.535	0.121	6.000	-45.606	1.400	0.017
Japan	677	8.182	6.000	92.000	54.000	46.000	95.000	34.000	0.261	14.216	1.269	0.123	0.080	16.276	0.297	0.158	0.519	0.558	1.321	1.612	0.981	0.619	7.000	0.106	43.049	0.001
Korea	140	6.285	4.329	85.000	60.000	18.000	39.000	28.000	0.621	10.450	1.492	0.557	0.921	16.448	0.271	0.114	0.550	0.793	1.404	1.292	0.957	0.021	7.000	-3.879	23.296	0.009
Malaysia	137	6.187	9.000	36.000	104.000	26.000	50.000	40.000	0.733	7.511	1.511	0.949	0.555	15.220	0.165	0.007	0.475	0.752	1.217	1.310	0.869	0.314	10.000	-2.197	9.817	0.038
New Zealand	42	6.403	9.000	49.000	22.000	79.000	58.000	43.000	0.915	11.857	1.946	0.929	0.667	14.734	0.119	0.024	0.498	0.810	1.022	1.359	1.000	0.167	10.000	2.571	36.548	0.007
Philippines	17	3.769	3.000	44.000	94.000	32.000	64.000	27.000	0.698	8.529	2.703	0.412	0.000	14.907	0.100	0.059	0.559	0.824	0.513	1.339	1.000	0.000	2.000	100.000	2.312	0.009
Singapore	157	6.838	9.000	8.000	74.000	20.000	48.000	32.000	0.794	6.185	2.183	0.904	0.675	15.476	0.229	0.032	0.491	0.879	1.438	1.445	0.975	0.172	10.000	7.650	50.752	0.192
Thailand	33	6.060	7.000	64.000	64.000	20.000	34.000	23.000	0.748	11.879	0.851	0.636	0.939	15.353	0.225	0.061	0.564	0.788	0.646	1.287	0.818	0.000	10.000	12.758	4.956	0.022
Taiwan	51	6.102	4.294	69.000	58.000	17.000	45.000	18.000	0.731	7.373	1.824	0.510	0.863	15.491	0.252	0.157	0.482	0.784	1.447	1.184	1.000	0.000	7.588	13.608	21.025	0.004
Mean (total)	(3215)	6.838	4.848	52.921	57.773	50.068	64.843	42.114	0.615	10.459	1.488	0.682	0.556	15.127	0.231	0.157	0.467	0.767	1.099	1.305	0.916	0.453	8.228	4.828	39.535	0.083
Mean-Strong DLINDEX	1631	7.337	7.327	55.730	64.412	34.510	70.625	40.783	0.482	9.923	1.567	0.590	0.436	15.772	0.253	0.092	0.497	0.722	1.189	1.444	0.958	0.332	8.368	2.777	37.092	0.133
Mean-Weak DLINDEX	1584	6.325	2.295	50.029	50.936	66.086	58.889	43.484	0.751	11.011	1.407	0.777	0.680	14.464	0.208	0.224	0.436	0.813	1.007	1.162	0.872	0.579	8.085	6.940	42.051	0.031
t-value for the mean difference		32.44	135.09	21.67	14.66	-24.23	50.55	5.44	-53.00	-1.96	-4.10	-15.41	-24.37	30.91	7.54	-9.59	7.22	-9.75	8.46	23.28	9.65	-3.07	7.55	-9.74	9.76	26.31
See Table 5.4 for variable definitions																										

Table 5.6
Correlations Matrix

	AUDFEE	DLINDEX	UA	PD	IND	MAS	ENFORCE	BDIND	BDMTG	BDEXP	ACEXP	ACIND	LNTA	INVREC	LOSS	LEV	ISSUE	NGS	NBS	BIG4	CROSS	DISCL	B4DO	GDP	FDI
AUDFEE	1.000																								
DLINDEX	**0.206**	1.000																							
UA	**0.176**	**-0.118**	1.000																						
PD	**0.125**	**0.409**	**-0.410**	1.000																					
IND	**-0.152**	**-0.448**	**0.396**	**-0.865**	1.000																				
MAS	**0.423**	-0.005	**0.523**	**-0.194**	**0.341**	1.000																			
ENFORCE	**-0.147**	**-0.210**	**-0.176**	**-0.194**	**0.484**	**0.046**	1.000																		
BDIND	**-0.352**	**-0.354**	**-0.390**	**-0.194**	**0.138**	**-0.607**	**0.133**	1.000																	
BDMTG	**0.125**	**-0.184**	**0.424**	**-0.194**	**0.333**	**0.348**	-0.009	**-0.157**	1.000																
BDEXP	**0.148**	**0.141**	**-0.207**	**-0.194**	**-0.164**	**-0.119**	**-0.121**	**0.119**	**-0.186**	1.000															
ACEXP	**-0.192**	**-0.139**	**-0.496**	**-0.194**	-0.021	**-0.469**	**0.357**	**0.454**	**-0.256**	**0.140**	1.000														
ACIND	**-0.205**	**-0.092**	**-0.243**	**-0.194**	-0.010	**-0.492**	**0.129**	**0.335**	**-0.132**	**0.070**	**0.333**	1.000													
LNTA	**0.701**	**0.295**	**0.064**	**-0.194**	**-0.465**	**0.184**	**-0.339**	**-0.341**	0.019	**0.268**	**-0.141**	**-0.166**	1.000												
INVREC	**0.222**	**0.090**	**0.081**	**-0.194**	**-0.150**	**0.147**	**-0.154**	**-0.216**	0.032	**-0.088**	**-0.103**	**-0.081**	**0.155**	1.000											
LOSS	**-0.116**	**-0.190**	**0.134**	**-0.194**	**0.282**	**0.065**	**0.146**	**0.052**	**0.178**	**-0.066**	-0.030	-0.010	**-0.261**	**-0.136**	1.000										
LEV	**0.317**	**0.113**	0.019	**-0.194**	**-0.208**	**0.056**	**-0.173**	**-0.121**	**0.059**	**0.087**	-0.030	**-0.076**	**0.440**	**0.337**	**-0.100**	1.000									
ISSUE	**-0.101**	**-0.069**	**-0.167**	**-0.194**	**0.047**	**-0.207**	**0.176**	**0.192**	-0.029	0.017	**0.174**	**0.147**	**-0.083**	**-0.066**	0.013	0.007	1.000								
NGS	**0.331**	**0.134**	**0.053**	**-0.194**	**-0.094**	**0.084**	**-0.147**	**-0.115**	**0.049**	**0.074**	**-0.088**	**-0.060**	**0.242**	**0.204**	**-0.063**	**0.111**	**-0.061**	1.000							
NBS	**0.471**	**0.198**	**0.077**	**-0.194**	**-0.165**	**0.214**	**-0.182**	**-0.222**	0.030	**0.105**	**-0.125**	**-0.141**	**0.485**	**0.184**	**-0.181**	**0.273**	**-0.074**	**0.274**	1.000						
BIG4	**0.227**	**0.135**	**0.051**	**-0.194**	-0.026	**0.071**	**0.046**	**-0.043**	0.020	0.030	**-0.050**	**-0.038**	**0.124**	**0.083**	-0.027	**0.053**	-0.008	**0.078**	**0.088**	1.000					
CROSS	**0.036**	**-0.314**	**0.309**	**-0.194**	**0.623**	**0.309**	**0.273**	-0.009	**0.257**	**-0.121**	**-0.096**	**-0.064**	**-0.218**	**-0.080**	**0.201**	**-0.105**	0.003	0.013	**-0.042**	**0.048**	1.000				
DISCL	-0.002	0.022	**-0.596**	**-0.194**	**-0.326**	**-0.387**	**0.259**	**0.296**	**-0.227**	-0.029	**0.365**	**0.204**	-0.031	**-0.055**	**-0.090**	**-0.035**	**0.115**	**-0.042**	**-0.059**	-0.004	**-0.183**	1.000			
B4DO	**-0.120**	**-0.246**	**-0.117**	**-0.194**	**0.152**	-0.017	**0.408**	**0.178**	**0.052**	**-0.140**	**0.076**	**0.035**	**-0.211**	**-0.128**	**0.105**	**-0.115**	**0.128**	**-0.089**	**-0.094**	**0.164**	**0.155**	**-0.037**	1.000		
GDP	**-0.060**	**-0.157**	**0.127**	**-0.194**	**0.737**	**0.232**	**0.579**	**0.061**	**0.229**	**-0.190**	-0.019	0.032	**-0.389**	**-0.109**	**0.253**	**-0.209**	**0.097**	-0.017	**-0.120**	**0.110**	**0.512**	**-0.114**	**0.350**	1.000	
FDI	-0.021	**0.457**	**-0.631**	**-0.194**	**-0.416**	**-0.307**	**0.403**	0.007	**-0.402**	**0.150**	**0.357**	**0.185**	**0.043**	-0.003	**-0.143**	-0.002	**0.146**	**-0.079**	-0.029	**0.054**	**-0.353**	**0.408**	**0.106**	**-0.040**	1.000

See Table 5.4 for variable definitions.
Bold values denote significance at the 0.05 level.

Table 5.7
Basic Model Fitting and Validation of the Audit Fee Model

Variable	Expected Sign	Coefficient	t-value	p-value
LNTA	+	0.609	31.830	0.000***
INVREC	+	0.842	4.890	0.000***
LOSS	+	0.210	4.220	0.000***
LEV	+	-0.243	-1.930	0.054*
ISSUE	+	-0.087	-2.440	0.015**
NGS	+	0.163	4.170	0.000***
NBS	+	0.283	5.890	0.000***
BIG4	+	0.324	3.260	0.001***
CROSS	+	0.324	6.000	0.000***
DISCL	+	0.999	4.530	0.000***
B4DO	+	-0.007	-2.730	0.006***
GDP	+	0.020	10.630	0.000***
FDI	+	0.091	0.350	0.725
Intercept	?	-6.087	-11.170	0.000***
Industry fixed-effects		Included		
Year fixed-effects		Included		
Observations		4,571		
Adjusted R-square		0.627		
F-statistic		116.50***		

*, **, *** Denote significance at the 0.10, 0.05, and 0.01 levels respectively.
See Table 5.4 for variable definitions.

Table 5.8
Regression Estimates of the Association between Director Liability Regime, National Culture, Quality of the Audit Environment and the Enforcement of Accounting Regulations and Audit Fees

Variable	Expected Sign	Coefficient	t-value	p-value
DLINDEX	?	-0.162	-2.690	0.007***
UA	+	0.513	3.970	0.000***
PD	+	0.612	2.360	0.018**
IND	-	0.661	3.140	0.002***
MAS	-	1.690	9.180	0.000***
ENFORCE	+	-1.426	-3.420	0.001***
BDIND	?	0.167	1.040	0.300
BDMTG	?	-0.006	-0.950	0.343
BDEXP	?	0.052	2.000	0.046**
ACEXP	?	0.070	1.110	0.268
ACIND	?	0.077	1.480	0.140
LNTA	+	0.546	25.010	0.000***
INVREC	+	0.503	2.700	0.007***
LOSS	+	0.229	4.400	0.000***
LEV	+	-0.047	-0.360	0.721
ISSUE	+	0.006	0.160	0.870
NGS	+	0.263	5.990	0.000***
NBS	+	0.189	3.680	0.000***
BIG4	+	0.384	3.820	0.000***
CROSS	+	0.111	1.770	0.077*
DISCL	+	2.663	6.490	0.000***
B4DO	+	0.008	1.900	0.058*
GDP	+	0.014	4.570	0.000***
FDI	+	3.361	4.110	0.000***
Intercept	?	-17.386	-9.860	0.000***
Industry dummies		Included		
Year dummies		Included		
Observations		3,215		
Adjusted R-square		0.706		
F-statistic		99.420***		

*, **, *** Denote significance at the 0.10, 0.05, and 0.01 levels respectively.
See Table 5.4 for variable definitions.

CHAPTER 6:
CONCLUSIONS AND IMPLICATIONS

6.1 INTRODUCTION

The aim of this thesis is to examine the benefits and costs of new and revised auditing standards and legislations and investigate the impact of factors that may influence auditor judgements when applying new and revised auditing standards. The principal objectives are: (1) to critically analyse the current audit report reforms and investigate the implications of the changes for the suppliers and users of the financial reports; (2) to examine the factors that affect the materiality judgements of auditors and identify interventions that could mitigate their effects; (3) to examine the factors that influence auditors' judgements to present KAMs in the auditor's reports; and (4) to investigate the extent and causes of differences in audit fees between companies across countries.

Four research projects were undertaken to address the objectives of the thesis. Paper 1 addresses the first objective by critically examining the perceptions of stakeholders, such as users, national accountancy bodies and accounting firms, on the new audit report requirements. In particular, this study examines the level of support for each of the major reforms and compares this across different stakeholders. It further analyses the overall implications of the reforms in terms of the informational value that would eventuate, audit quality and audit costs. Paper 2 addresses the second objective by investigating the impact of a personality variable, the preference for quantitative information on auditors' utilisation of quantitative versus qualitative information and the ensuing materiality judgement made on the basis of the information utilised. It further examines how biases resulting from auditors' preferences for quantitative information could be mitigated by simple interventions and decision aids. The third Paper addresses the third objective by examining how auditors' judgement on the presentation of KAMs is influenced by the nature of the KAM, client pressure and client's financial condition. Paper 4 addressed the fourth objective by examining the impact of cross-country differences in director liability regimes, national culture and the quality of the audit environment and enforcement of accounting regulations on audit fees.

This chapter is organised as follows. Section 6.2 presents the summary and implications of each of the four papers. Section 6.3 summarises the overall conclusions and implications derived from the entire thesis. Section 6.4 highlights the limitations of this thesis together with suggestions for future research.

6.2 SUMMARIES AND IMPLICATIONS OF THE INDIVIDUAL STUDIES

Paper 1: The Changing Face of the Auditor's Report: Implications for Suppliers and Users of Financial Statements

The purpose of this study is to critically examine the perceptions of prominent stakeholders on the key audit report reforms and analyse the implications of the reforms for the informational value of the audit report, audit quality and audit costs. Using a content analysis of the comment letters written by stakeholders in response to the 2013 IAASB ED on audit report reforms, the study identifies the overall support for key reform initiatives from different stakeholder groups and from different regions of the world. A total of 138 comment letters from 42 countries and 10 different stakeholder groups are analysed. A critical analysis was undertaken to further examine the impact of the key reform initiatives on the value of the audit report, audit quality and audit costs.

Based on the analysis of the comment letters, there is a high level of support for the audit report reforms. However, the level of support varies for the key reform initiatives. There are also significant differences between different stakeholder groups with respect to support of the reforms. In particular, preparers of financial statements are generally opposed to the reforms while the users generally support the reforms. The findings also show that accounting firms and professional membership bodies support the initiatives as well. These differences suggest that the stakeholder's support for the reforms, to some extent, are economically motivated. Generally, preparers would bear the costs associated with such reforms while users would stand to benefit from additional information in the auditor's report. The accounting firms will also have an opportunity to increase audit fees in response to additional reporting requirements; therefore, they also tend to benefit economically. Furthermore, the results suggest that there are differences in the level of support across countries for some key reforms. In particular, the level of support for the more contentious reforms related to the disclosure of the name of the audit engagement partner received little support from respondents in North American countries.

The study further finds that the audit report reforms will improve the informational value of the audit report for users. The need to provide information that is useful to users is one of the major motivations of the IAASB to undertake the reforms. As such, these initial findings have implications for the auditing standard-setters across different countries. It suggests that adoption of the reforms will provide benefits to the intended users of the auditor's report.

There are also indications that the new requirements for the audit report will lead to increased costs. This initial finding has implications for accounting firms and financial statement preparers. Initially, accounting firms would bear additional costs associated with the introduction of new auditing standards or additional requirements in the auditing standards, but the additional costs would eventually be passed on to clients in the form of higher audit fees. However, not all accounting firms may be able to easily pass on additional costs to their clients, in particular, small and medium accounting practices may find it difficult to do so as their clients are smaller and may not readily have the ability to absorb such costs. This issue is reflected in the comment letters and the level of support for the key reforms from big and small accounting firms.

This study has important implications for the national and international auditing standard-setters. First, it provides evidence that the key reform initiatives have informational value; therefore, it provides standard-setters with insights that their reforms serve the intended purpose. It also provides national auditing standard-setters with much needed analysis of benefits and costs that should assist them in making a decision on the adoption of the new requirements into their auditing standards. Second, the finding that smaller audit practices may find it difficult to pass on additional costs to their clients implies that it is important for auditing standard-setters to take into consideration the effect of their reforms on smaller clients as well as smaller accounting firms. The findings also have implications for the accounting firms and auditors as it provides insights into the effects of the reforms on audit costs and legal liability of auditors.

Paper 2: The Effects of Preference for Quantitative Information and Utilisation of Quantitative versus Qualitative Information on Auditors' Materiality Judgements

The purpose of this study is to investigate the impact of a personality variable on the judgement of auditors. In particular, it examined whether an accountants' preference for quantitative information influences their utilisation of quantitative versus qualitative information when making materiality judgements. The study further examined if the utilisation of more quantitative information than qualitative information leads to biased materiality judgements. The study also examined whether a simple intervention in the form of a warning, a decision aid, auditors' motivation to systematically process information and their level of involvement leads to unbiased materiality judgements.

An experiment conducted using professional accountants as participants reveals that preference for quantitative information has a significant impact on accountants' utilisation of quantitative versus qualitative information and judgements. Professional accountants who had a preference for more quantitative information utilised that information more when making judgements. It further showed that professional accountants who utilised more quantitative than qualitative information to support their materiality judgements make biased judgements. Furthermore, the results show that professional accountants who received a simple intervention in the form of a warning performed better in the materiality judgement task compared to professional accountants who did not receive the simple intervention.

The study presents important policy and practical implications for audit quality. The findings suggest that changes and amendments to auditing standards may not be sufficient in improving audit quality due to the impact of personality factors on auditor judgements and decisions. As such, national and international auditing standard-setters need to take into consideration the impact of auditors' personality related factors and how it influences auditors' judgements and decisions so that they are able to develop and implement policies that facilitate higher quality judgements and decisions. It was also demonstrated that a simple intervention in the form of a warning was successful in mitigating the bias introduced by the auditors' personality variable; the preference for quantitative information. Such a simple intervention is similar to regulatory alerts and staff bulletins, which suggests that regulatory agencies and standard-setters need to regularly update and inform accounting firms and individual auditors of any new requirements, as well as, crucial existing requirements in the auditing standards. Auditing standard-setters may consider providing additional instruction and guidance in auditing standards itself to enable auditors to effectively incorporate both quantitative and qualitative information in their judgements and decisions. Additionally, professional development training and educational materials need to incorporate knowledge on how to assimilate different types of information into decision making. This is particularly important as both the volume and types of information available nowadays is growing exponentially, and it is important that auditors are adequately trained to properly utilise such information. From an accounting firm's perspective, the findings suggest that there is a need to systematically measure the personality traits of new recruits and base decisions, such as audit team allocations, on a systematic consideration of such traits.

Paper 3: The Impact of Client Pressure and Client's Financial Condition on Auditors' Judgements to Report KAMs in the Auditor's Report

The purpose of this study is to examine factors that may influence the judgement of auditors related to the presentation of KAMs in the audit report. Specifically, it seeks to examine if auditors' judgement is influenced by whether the KAM being considered for presentation has a negative or positive tendency. The study also investigates whether client pressure in the form of client preference not to present negative KAMs and client's financial condition influences auditors' judgement on the presentation of negative KAMs.

The results indicate that negative KAMs are presented more than positive KAMs in the audit report. It also reveals that negative KAMs are presented before positive KAMs. The findings also show that client pressure influences auditor's judgements. Auditors who face high client pressure present fewer negative KAMs than those auditors who face no client pressure. Another important finding of this study is that the financial condition of the client also has an influence on auditors' judgements. Specifically, auditors present more negative KAMs for clients who are in poor financial condition than for clients in a healthy financial condition. Overall, the results suggest that the presentation of KAM information can be influenced by client characteristics, pressure from clients and the positive or negative nature of the information under consideration for presentation.

The study presents important policy and practical implications. First, national and international auditing standard-setters need to consider the impact of such factors when designing new auditing standards, particularly auditing standards that relate to reporting by auditors. Additional guidance may be provided in the auditing standards to enable auditors to make better judgements. In particular, guidance on selection and reporting of positive versus negative information may be useful as psychology theories suggest that individuals tend to get influenced by negative information more than positive information. Furthermore, the results suggest that regulators and legislators need to develop strategies to mitigate client pressure. The existence of fully independent audit committees as intermediaries between the management and the auditor tends to serve such a purpose. However, even in a country, such as Australia, where fully independent audit committees are a common feature, management is still able to exert pressure and impose its preferences on the auditor. Therefore, it may be plausible to consider other strategies to mitigate the impact of client pressure on auditors. Similarly, accounting firms need to implement strategies to counter the effects of client pressure on their auditors. In particular, accounting firms may need to eliminate performance benchmarks and other requirements that tend to make auditors more susceptible to client pressure.

Paper 4: The Impact of Director Liability Regime, National Culture and the Quality of the Audit Environment and Enforcement of Accounting Regulations on Audit Fees

This study aims to examine the impact of three prominent country-level variables on audit fees. Specifically, it examines the impact of director liability regimes, national culture and the quality of the audit environment and enforcement of accounting regulations on audit fees. It examines the impact of director liability regimes by employing a measure of director liability index that captures the extent to which directors are legally held liable for their actions and omissions. This study provides direct evidence on the assumption in prior studies that independent directors demand higher assurance from the auditor partly to protect themselves from legal liability. This study also theorises an association between the accounting cultural value of secrecy and audit fees. This association is examined through the four national culture dimensions of Hofstede (1980), namely, uncertainty avoidance, power distance, individualism and masculinity. Furthermore, this study provides empirical evidence on the association between the quality of the audit environment and enforcement of accounting regulations and audit fees. It adopts a direct measure of the quality of the audit environment and enforcement of accounting standards from Brown et al. (2014) and examines how audit fees for firms located in countries with high quality audit environments and stronger enforcement of accounting regulations differs from audit fees of firms located in countries with low quality audit environments and weaker enforcement of accounting regulations

These associations are tested using a regression of audit fees on the three independent variables along with firm-level and country-level control variables. The findings suggest a negative association between director liability regimes and audit fees. Specifically, the results indicate that firms located in a country with stronger director liability regimes pay lower audit fees compared to firms located in countries with weak director liability regimes. This study also shows partial support for the association between the accounting cultural value of secrecy and audit fees. The findings on the impact that the quality of the audit environment and enforcement of accounting regulations has on audit fees indicates that firms located in countries with a higher quality of enforcement pay lower audit fees.

The findings of this study offer implications for public policy and audit practice. First, lower audit fees in countries with stronger director liability regimes reflect stronger internal governance and monitoring as auditors reflect this in their pricing of audit services. As such, countries with weak director liability regimes may benefit from enhancing their director liability laws to hold directors of corporations more accountable and legally liable for their actions, and as a response to improve overall corporate governance. Second, countries with low quality audit environments and weak enforcement of accounting regulations may benefit from enhancing their regulations and legislation related to financial reporting. In particular, independent audit oversight, independent surveillance of financial reporting, independent inspection of audit files and independent accounting and auditing standard-setting will lead to enhanced financial reporting quality.

6.3 OVERALL CONCLUSIONS AND IMPLICATIONS

Motivated by significant and far-reaching reforms in the audit market over the last 15 years, this thesis conducts a comprehensive investigation of some of the most prominent reforms and changes that were implemented to improve the quality of auditing. It provides empirical evidence that a number of factors (related to the personality of the auditor, client characteristics and client pressure) influence the judgements of auditors related to prominent audit market reforms. It also provides empirical evidence on the impact of some of the reforms on audit costs through audit fees, as such, it also provides indirect evidence on the efficacy of the reform initiatives.

The IAASB's intention of carrying out the Clarity Project and the more recent audit report reforms was to enhance the quality of the audits performed and the reporting of the findings from the audit. The IAASB places great emphasis on audit quality and the importance of auditor judgements toward audit quality. It also places a great deal of importance on providing users with more relevant and useful information about the audit performed on financial statements. In addition, legislators have also implemented new legislation and revised existing legislation related to governance of companies and the audit market in general. These reforms were designed to enhance the quality of the institutional environment for financial reporting.

A number of policy and practical implications arising from this thesis will be of interest to the IAASB, national auditing standard-setters, such as AUASB, regulators, legislators, accounting firms and accounting educators. First, major reform initiatives, such as the audit report reform, offer significant benefits; however, they also increase costs and legal liability for auditors, which in some cases may fall disproportionately on large and small accounting firms. Additionally, the impact of reforms on increasing legal liability for auditors may have differential impacts based on the jurisdiction where the reforms are implemented as litigation risks, and legal liability varies across countries. These differences may have an impact on the adoption of the changes in the auditing standards across countries. The disproportionate impact of the reforms on costs for large and small accounting firms and clients may lead to differences in the adoption of the changes within a country. In particular, smaller accounting firms who cannot easily pass off additional costs associated with the changes may adopt strategies to mitigate increased costs. Such strategies may include reducing audit effort in other areas to compensate for increased effort as a result of new or changed auditing requirements. Such strategies will have negative implications on the quality of the audit performed and the quality of the financial statements. This implies that the IAASB needs to take into consideration the impact of their reforms on audit costs and the legal liability of auditors for different sized accounting firms and clients, as well as, for different jurisdictions that have adopted ISAs.

Second, the findings of this thesis provide important implications for improving audit quality. In particular, the findings suggest that the IAASB and the national standard-setters should give greater attention to the factors that influence auditor judgements. The findings indicate that it is important to consider how individual auditors' personality variables may affect their utilisation of information in the context of accounting and auditing judgements under the ISAs. Standard-setters need to consider the impact of such factors when designing auditing standards and how new and revised auditing standards could be designed so that it facilitates higher quality auditor judgements. This may include strategies such as providing greater guidance and instructions in the auditing standards directly. The finding that simple interventions in the form of warnings are effective in improving the quality of judgements suggests that standard-setters and regulators should provide continuous staff alerts and regulatory bulletins to reiterate crucial audit requirements. Judgements may also be improved through design and implementation of better continuous professional development training and accounting education in general. The IAASB and national standard-setters themselves could develop and disseminate training materials to practising auditors. Accounting educators could also incorporate teaching strategies and implement learning materials that aid students in developing their abilities to make sound judgements based on the utilisation of different types of information. Since auditors are required to make judgements throughout the audit process, accounting education could also prepare accounting students by incorporating courses that have a focus on judgement and decision making with consideration of various psychological theories on causes of biases in judgements and decision making.

Third, the findings regarding the impact of client pressure and client characteristics on auditor judgements provide implications for accounting firms and regulators. Specifically, the findings suggest that there is a need for accounting firms and regulatory agencies to make auditors aware of the need to make objective judgements and decisions. Accounting firms may need to implement strategies to ensure that auditors are not influenced by the preferences of their clients for a particular reporting outcome. Regulators and legislators may need to consider the implementation of strategies that reduce the pressure that management is able to exert on auditors.

Fourth, this thesis and its findings have important implications for legislators. Specifically, the findings related to the impact of director liability regimes and the quality of the audit environment and enforcement of accounting regulations. These findings suggest that legislators from jurisdictions with weak director liability regimes or low quality audit environments and weak enforcement of accounting regulations may improve the institutional environment of financial reporting by enhancing the laws and regulations. Auditors have insights into companies and their operations, as such, they are able to consider the internal governance and related internal control structures in their pricing of audit services. Firms with poor internal governance and poor internal control structures pose greater risks for the auditor; hence, a higher audit fee is charged for such clients. However, lower audit fees may reflect that there are strong internal governance and control structures, including the quality of the company's financial reporting. The finding that audit fees are lower for firms from countries with stronger director liability regimes suggests that in such countries, companies have better internal governance systems and control structures. This implies that a stronger director liability regime achieves its intended purpose of enticing directors to perform their oversight roles more effectively, for example, by ensuring firms internal governance systems and internal control structures function effectively and efficiently.

Overall, the findings of this thesis provide some evidence on the efficacy of the major audit market reforms, in particular, it identifies factors that may impede higher quality judgements under the requirements of some of the new auditing standards. It also provides some evidence of the effect of some of the major reforms on audit costs reflected in audit fees, which provides indirect evidence to the efficacy of those reforms. The findings encourage these reforms; however, they suggest that international and national auditing standard-setters take into consideration some of the factors identified in this thesis that can potentially reduce the quality of auditors' judgements and the quality of the audits.

6.4 LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

This thesis has some limitations, and the findings of the thesis should be interpreted in light of these limitations. A number of the limitations are related to the research methods used in the thesis. Other limitations relate to the case scenarios, variables and the research setting. These limitations and the strategies used to alleviate the limitations are discussed along with avenues for future research.

First, this thesis employs content analysis as a research method to analyse the perceptions of key stakeholders with respect to audit report reforms and the implications of those reforms on the informational value of the audit report, audit quality and audit costs (Chapter 2). Contents of comment letters written by stakeholders in response to the audit report reforms were analysed and coded to determine the level of support for each key reform initiative. As with all research of this type, a number of limitations exist. First, content analysis is purely descriptive, that is, it describes what is there but may not reveal the underlying motives for the patterns observed. Second, the analysis is limited by the availability of material, in this thesis by the availability of comment letters from different stakeholder groups. Not all stakeholders may have submitted their views and inputs through the comment letters. Furthermore, issues that affect the stakeholders more may have received more coverage in the comment letters. Some of these limitations are mitigated as the study also critically analyses each of the key reform initiatives to understand the implications of the reforms and perceptions of the stakeholders. Analysis of the comment letters also involved coding of the support and opposition to each of the key reforms. Coding by a single researcher could introduce bias and errors into the coded data. To mitigate this limitation, a sample of the comment letters were coded by an independent person. Inter-coder reliability tests provide assurance that the coding of the data was reliable. Furthermore, any differences between the coders were discussed and resolved before coding the rest of the letters.

Second, this thesis employs the experimental research method to examine the issues in Chapter 3 and Chapter 4. Experiments offer a high degree of internal validity, and a well-designed and executed experiment provides robust causal conclusions (Shadish et al., 2002).

However, the high degree of control that allows us to examine causal relationships also poses a limitation in that it reduces the generalisability of the results (Hageman, 2008). Furthermore, an experimental setting may not provide participants with the incentives that they face in the real audit environment, such as those that lead to a more vigilant processing of information. An experimental setting also requires the use of contrived cases that may not always represent real-world scenarios. This thesis employs a number of strategies to ensure that the research outcomes were valid and external validity is enhanced. These strategies are: (1) the hypotheses were derived based on robust theories from psychology and judgement and decision-making literature in auditing, (2) the use of cases that represent real-world auditing scenarios, (3) designing and extensively pilot testing the experimental tasks, (4) selection of relevant participants for each of the studies, and (5) the use of appropriate statistical techniques to analyse data.

Third, the use of the archival research method in Chapter 5 poses its own limitations. Generally, the archival research method is very useful for the examination of trends in large-scale data. It is able to achieve high external validity. Furthermore, archival research is appropriate for examining both macro-level and micro-level patterns. However, the greater external validity comes at the price of reduced internal validity from the use of secondary data. In particular, it is difficult to establish causal relationships with archival research since other factors may potentially influence the dependent variable, which may not have been controlled (Shadish et al., 2002). Furthermore, regression analysis makes strict assumptions about normality, linearity, homoscedasticity and multicollinearity and a violation of these assumptions could make the findings misleading. This thesis employs a number of strategies to ensure that the research outcomes were valid, such as (1) the inclusion of a range of control variables in the audit fee model to ensure that the model is well specified; (2) the variables are transformed (for example, by taking natural log values of variables) when the model violates assumptions such as normality, homoscedasticity and linearity in line with prior studies, such as Simunic (1980); and (3) careful analysis of correlations between independent variables and VIFs to ensure multicollinearity does not affect the findings.

Fourth, in this thesis, the experiment on the preference for quantitative information and auditors' judgement was examined in the context of materiality judgements (Chapter 3), and the impact of the nature of information, client pressure and the client's financial condition was examined in the context of the presentation of KAMs (Chapter 4). These two cases cannot represent all possible cases in accounting and auditing. Furthermore, because the cases relate to specific audit judgements, the generalisability of the findings to other accounting and auditing judgements may have to be treated with caution. As such, future research could examine the impact of factors examined in this thesis in other cases requiring auditor judgements, such as the evaluation of audit evidence, which entails the evaluation of quantitative and qualitative information as well as negative and positive information.

Fifth, in this thesis, the experiments (Chapter 3 and Chapter 4) are conducted with accountants and auditors from a single jurisdiction (Australia). Furthermore, the data used to test the hypotheses in Chapter 5 is restricted to firms from countries in the Asia-Pacific region. This limits the generalisability of the findings to other countries and regions in the world. The quality of auditing and issues that are examined in this thesis are also of relevance to other countries and regions, in particular, the ISAs are used in over 120 countries. Therefore, future research could replicate the studies in other jurisdictions and regions to provide further insights on the impact of issues examined in this thesis.

BIBLIOGRAPHY

Abbott, L. J., and Parker, S. 2000. Auditor selection and audit committee characteristics. *Auditing: A Journal of Practice & Theory,* 19(2): 47-66.

Abbott, L. J., Parker, S., Peters, G. F., and Raghunandan, K. 2003. The association between audit committee characteristics and audit fees. *Auditing: A Journal of Practice & Theory,* 22(2): 17-32.

Agarwal, R., Tanniru, M. R., and Dacruz, M. 1992. Knowledge-based support for combining qualitative and quantitative judgments in resource allocation decisions. *Journal of Management Information Systems,* 9(1): 165-184.

Aier, J. K., Chen, L., and Pevzner, M. 2014. Debtholders' demand for conservatism: Evidence from changes in directors' fiduciary duties. *Journal of Accounting Research,* 52(5): 993-1027.

Ali, A., and Kallapur, S. 2001. Securities price consequences of the Private Securities Litigation Reform Act of 1995 and related events. *The Accounting Review,* 76(3): 431-460.

Allan, G. 2006. The HIH collapse: A costly catalyst for reform. *Deakin Law Review,* 11(2): 137-159.

Allens. 2015. *Shareholder class actions in Australia.* Retrieved from https://www.allens.com.au/pubs/class/papclassfeb17-02.htm

American Institute of Certified Public Accountants (AICPA). 1955. *A case study on the extent of audit samples.* New York, NY: AICPA.

Anderson, H. 2008. Directors' liability for unpaid employee entitlements-suggestions for reform based on their liabilities for unremitted taxes. *Sydney Law Review,* 30(3): 470-505.

Anderson, H. 2009. Directors' liability for corporate faults and defaults-an international comparison. *Pacific Rim Law and Policy Journal,*18(1): 1-52.

Anderson, N. H. 1965. Averaging versus adding as a stimulus combination role in impression formation. *Journal of Personality and Social Psychology,* (February): 1-9.

Anderson, U., and Koonce, L. 1995. Explanation as a method for evaluating client-suggested causes in analytical procedures. *Auditing: A Journal of Practice & Theory,* 14(2): 124-132.

Anderson, U., and Wright, W. F. 1988. Expertise and the explanation effect. *Organizational Behavior and Human Decision Processes,* 42(2): 250-269.

Anderson, U., Kadous, K., and Koonce, L. 2004. The role of incentives to manage earnings and quantification in auditors' evaluations of management-provided information. *Auditing: A Journal of Practice & Theory,* 23(1): 11-27.

Ang, N. P., and Trotman, K. T. 2015. The Utilization of Quantitative and Qualitative Information in Groups' Capital Investment Decisions. *Behavioral Research in Accounting,* 27(1): 1-24.

Apsler, R., and Sears, D. O. 1968. Warning, personal involvement, and attitude change. *Journal of Personality and Social Psychology,* 9(2): 162-166.

Arkes, H. R. 1991. Costs and benefits of judgment errors: Implications for debiasing. *Psychological Bulletin,* 110(3): 486-498.

Arnold, D. F., Bernardi, R. A., and Neidermeyer, P. E. 2001. The association between European materiality estimates and client integrity, national culture, and litigation. *The International Journal of Accounting,* 36(4): 459-483.

Asare, S. K., and Wright, A. M. 2012. Investors', auditors' and lenders' understanding of the message conveyed by the standard audit report on the financial statements'. *Accounting Horizons,* 26(2): 193-217.

Ashbaugh-Skaife, H., Collins, D. W., Kinney, W. R., and LaFond, R. 2008. The effect of SOX internal control deficiencies and their remediation on accrual quality. *The Accounting Review*, 83(1): 217-250.

Audousset-Coulier, S. 2015. Audit fees in a joint audit setting. *European Accounting Review*, 24(2): 347-377.

Australian Auditing and Assurance Standards Board (AUASB). 2013. *Submission on the IAASB's exposure draft: Reporting on audited financial statements.* Retrieved from https://www.ifac.org/publications-resources/reporting-audited-financial-statements-proposed-new-and-revised-international

Australian Auditing and Assurance Standards Board (AUASB). 2016. *Auditor reporting frequently asked questions.* Retrieved from http://www.auasb.gov.au/Publications/Auditor-Reporting-FAQs.aspx#

Australian Institute of Company Directors (AICD). 2013. *Exposure draft-reporting on audited financial statements: Proposed new and revised international standards on auditing.* Retrieved from https://www.ifac.org/publications-resources/reporting-audited-financial-statements-proposed-new-and-revised-international

Australian Securities and Investments Commission (ASIC). 2014a. *Audit inspections and surveillance programs.* Retrieved from http://asic.gov.au/regulatory-resources/financial-reporting-and-audit/auditors/audit-inspection-and-surveillance-programs/

Australian Securities and Investments Commission (ASIC). 2014b. *ASICs financial reporting surveillance program.* Retrieved from http://asic.gov.au/regulatory-resources/financial-reporting-and-audit/directors-and-financial-reporting/asics-financial-reporting-surveillance-program/

Babcock, L., Loewenstein, G., and Issacharoff, S. 1997. Creating convergence: Debiasing biased litigants. *Law & Social Inquiry*, 22(4): 913-925.

Backof, A., Bowlin, K., and Goodson, B. 2014. *The impact of proposed changes to the content of the audit report on jurors' assessments of auditor negligence.* Working Paper. Retrieved from https://business.illinois.edu/accountancy/wp-content/uploads/sites/12/2014/09/Doctoral-Consortium-Session-III-Goodson-Backof-Bowlin.pdf

Barth, M. E., Landsman, W. R., Lang, M., and Williams, C. 2012. Are IFRS-based and US GAAP-based accounting amounts comparable? *Journal of Accounting and Economics*, 54(1): 68-93.

Basioudis, I. G., and Francis, J. 2007. Big 4 audit fee premiums for national and office-level industry leadership in the United Kingdom. *Auditing: A Journal of Practice & Theory*, 26(2): 143-166.

Basioudis, I. G., Papakonstantinou, E., and Geiger, M. A. 2008. Audit fees, non-audit fees and auditor going-concern reporting decisions in the United Kingdom. *Abacus*, 44(3): 284-309.

Baumeister, R. F., Bratslavsky, E., Finkenauer, C., and Vohs, K. D. 2001. Bad is stronger than good. *Review of General Psychology*, 5(4): 323-370.

BDO International Limited. 2013. *IAASB exposure draft-reporting on audited financial statements: Proposed new and revised international standards on auditing.* Retrieved from https://www.ifac.org/publications-resources/reporting-audited-financial-statements-proposed-new-and-revised-international

Beasley, M. S. 1996. An empirical analysis of the relation between the board of director composition and financial statement fraud. *The Accounting Review*, 71(October): 443-465.

Bebbington, K., MacLeod, C., Ellison, T. M., and Fay, N. 2017. The sky is falling: evidence of a negativity bias in the social transmission of information. *Evolution and Human Behavior*, 38(1): 92-101.

Bedard, J., Gonthier-Besacier, N., and Schatt, A. 2014. *Costs and benefits of reporting key audit matters in the audit report: The French experience.* Working Paper. Retrieved from https://documents.bsb-education.com/pdf/cig2014/ACTESDUCOLLOQUE/BEDARD_GONTHIER_BESACIER_SCHATT.pdf

Bedard, J. C., and Johnstone, K. M. 2004. Earnings manipulation risk, corporate governance risk, and auditors planning and pricing decisions. *The Accounting Review*, 79(2): 227-304.

Bell, J. 1984. The effect of presentation form on the use of information in annual reports. *Management Science*, 30(2):169-185.

Bernardi, R. A., and Pincus, K. V. 1996. The relationship between materiality thresholds and judgments of fraud risk. *Managerial Finance*, 22(9): 1-15.

Bernstein, L. A. 1967. The concept of materiality. *The Accounting Review*, 42(1): 86-95.

Black, B., Cheffins, B., and Klausner, M. 2006. Outside director liability. *Stanford Law Review*, 58(4): 1055-1160.

Blay, A. D., Notbohm, M., Schelleman, C., and Valencia, A. 2014. Audit quality effects of an individual audit engagement partner signature mandate. *International Journal of Auditing*, 18(3): 172-192.

Block, R. A., and Harper, D. R. 1991. Overconfidence in estimation: Testing the anchoring-and-adjustment hypothesis. *Organizational Behavior and Human Decision Processes*, 49(2): 188-207.

Blue Ribbon Committee (BRC). 1999. *Audit committee characteristics and restatements: A study of the efficacy of certain blue ribbon committee recommendations.* New York, NY: New York Stock Exchange and National Association of Securities Dealers.

Boatsman, J. R., and Robertson, J. C. 1974. Policy-capturing on selected materiality judgments. *The Accounting Review* 49(2): 342-352.

Bonner, S. E. 2008. *Judgment and decision making in accounting.* Upper Saddle River, New Jersey: Pearson Prentice Hall.

Bonner, S. E., Libby, R., and Nelson, M.W. 1996. Using decision aids to improve auditors' conditional probability judgments. *The Accounting Review*, 71 (2): 221-240.

Bonner, S. E., Palmrose, Z. V., and Young, S. M. 1998. Fraud type and auditor litigation: An analysis of SEC accounting and auditing enforcement releases. *The Accounting Review*, 73(4): 503-532.

Booth, P., and Cocks, N. 1990. Critical research issues in accounting standard setting. *Journal of Business Finance & Accounting*, 17(4): 511-28.

Brase, G. L. 2002. Which statistical formats facilitate what decisions? The perception and influence of different statistical information formats. *Journal of Behavioral Decision Making*, 15(5): 381-401.

Brasel, K., Doxey, M. M., Grenier, J. H., and Reffett, A. 2016. Risk disclosure preceding negative outcomes: The effects of reporting critical audit matters on judgments of auditor liability. *The Accounting Review*, 91(5): 1345-1362.

Brody, R. G., Lowe, D. J., and Pany, K. 2003. Could $51 million be immaterial when Enron reports income of $105 Million? *Accounting Horizons*, 17(2): 153-160.

Brown, D., and Eining, M. 1997. Information technology and decision aids. In Arnold, V., and Sutton, S. G. (eds), *Behavioral Accounting Research: Foundations and Frontiers*, Sarasota, FL: American Accounting Association.

Brown, P., Preiato, J., and Tarca, A. 2014. Measuring country differences in enforcement of accounting standards: An audit and enforcement proxy. *Journal of Business Finance & Accounting*, 41(1-2): 1-52.

Burnkrant, R. E., and Sawyer, A. G. 1983. Effects of involvement and message content on information-processing intensity. *Information Processing Research in Advertising*, 12(2): 46-64.
Burton, F. G., Coller, M., and Tuttle, B. 2006. Market responses to qualitative information from a group polarization perspective. *Accounting, Organizations and Society*, 31(2): 107-127.
Butler, S. A. 1985. Application of a decision aid in the judgmental evaluation of substantive test of details samples. *Journal of Accounting Research*, 23(2): 513-526.
Byard, D., Li, Y., and Yu, Y. 2011. The effect of mandatory IFRS adoption on financial analysts' information environment. *Journal of Accounting Research*, 49(1): 69-96.
Cade, N., and Hodge, F. 2014. *The effect of expanding the audit report on managers communication openness.* Working Paper. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2433641
Cao, Z., and Narayanamoorthy, G. S. 2011. The effect of litigation risk on management earnings forecasts. *Contemporary Accounting Research*, 28(1): 125-173.
Carcello, J. V., Hermanson, D. R., Neal, T. L., and Riley, R. A. 2002a. Board characteristics and audit fees. *Contemporary Accounting Research*, 19(3): 365-385.
Carcello, J. V., and Li, C. 2013. Costs and benefits of requiring an engagement partner signature: Recent experience in the United Kingdom. *The Accounting Review*, 88(5): 1511-1546.
Carcello, J. V., and Palmrose, Z. V. 1994. Auditor litigation and modified reporting on bankrupt clients. *Journal of Accounting Research*, 32: 1-30.
Carcello, J. V., Hermanson, D. R., and Neal, T. L. 2002b. Disclosures in audit committee charters and reports. *Accounting Horizons*, 16(4): 291-304.
Carcello, J. V., Vanstraelen, A., and Willenborg, M. 2009. Rules rather than discretion in audit standards: Going-concern opinions in Belgium. *The Accounting Review*, 84(5): 1395-1428.
Carey, P. J., Monroe, G. S., and Shailer, G. 2014. Review of post-CLERP 9 Australian auditor independence research. *Australian Accounting Review*, 24(4): 370-380.
Carpenter, B. W., and Dirsmith, M. W. 1992. Early debt extinguishment transactions and auditor materiality judgments: A bounded rationality perspective. *Accounting, Organizations and Society*, 17(8): 709-739.
Carpenter, B. W., Dirsmith, M. W., and Gupta, P. P. 1994. Materiality judgments and audit firm culture: Social-behavioral and political perspectives. *Accounting, Organizations and Society*, 19(4): 355-380.
Carpenter, T. D., and Reimers, J. L. 2013. Professional skepticism: The effects of a partner's influence and the level of fraud indicators on auditors' fraud judgments and actions. *Behavioral Research in Accounting*, 25(2): 45-69.
Carson, E. 2009. Industry specialization by global audit firm networks. *The Accounting Review*, 84(2): 355-382.
Carson, E., and Fargher, N. 2007. Note on audit fee premiums to client size and industry specialization. *Accounting and Finance*, 47(3): 423-446.
Carson, E., Fargher, N. L., Geiger, M. A., Lennox, C. S., Raghunandan, K., and Willekens, M. 2013. Audit reporting for going-concern uncertainty: A research synthesis. *Auditing: A Journal of Practice & Theory*, 32(Supplement): 353-384.
Carson, E., Redmayne, N. B., and Liao, L. 2014. Audit market structure and competition in Australia. *Australian Accounting Review*, 24(4): 298-312.
Celsi, R. L., and Olson, J. C. 1988. The role of involvement in attention and comprehension processes. *Journal of Consumer Research*, 15(2): 210-224.

Chaiken, S. 1980. Heuristic versus systematic information processing and the use of source versus message cues in persuasion. *Journal of Personality and Social Psychology*, 39(5): 752-766.

Chalmers, J. M., Dann, L. Y., and Harford, J. 2002. Managerial opportunism? Evidence from directors' and officers' insurance purchases. *The Journal of Finance*, 57(2): 609-636.

Chan, A. M. Y., Liu, G., and Sun, J. 2013. Independent audit committee members' board tenure and audit fees. *Accounting and Finance*, 53(4): 1129-1147.

Chan, K. C., Farrell, B., and Lee, P. 2008. Earnings management of firms reporting material internal control weaknesses under Section 404 of Sarbanes-Oxley Act. *Auditing: A Journal of Practice & Theory*, 27(2): 161-179.

Chand, P., Cummings, L., and Patel, C. 2012. The effect of accounting education and national culture on accounting judgments: A comparative study of Anglo-Celtic and Chinese culture. *European Accounting Review*, 21(1): 153-182.

Chang, C. J., Yen, S. H., and Duh, R. R. 2002. An empirical examination of competing theories to explain the framing effect in accounting-related decisions. *Behavioral Research in Accounting*, 14(1): 35-64.

Chartered Financial Analyst (CFA) Institute. 2010. *Independent auditor's report survey results.* Retrieved from http://www.cfainstitute.org/Survey/independent_auditors_ report_survey_results.pdf.

Chartered Financial Analyst (CFA) Institute. 2013. *Auditor's Reporting Model.* Retrieved from https://www.ifac.org/publications-resources/reporting-audited-financial-statements-proposed-new-and-revised-international

Che Ahmad, A., Houghton, K. A., and Zalina Mohamad Yusof, N. 2006. The Malaysian market for audit services: Ethnicity, multinational companies and auditor choice. *Managerial Auditing Journal*, 21(7): 702-723.

Cheffins, B. R., and Black, B. S. 2006. Outside director liability across countries. *Texas Law Review*, 84(6): 1385-1480.

Chen, C. X., Trotman, K. T., and Zhou, F. 2015. Nominal versus interacting electronic fraud brainstorming in hierarchical audit teams. *The Accounting Review*, 90(1): 175-198.

Chen, H. J., Huang, S. Y., and Barnes, F. B. 2007. A cross-cultural study of auditors' risk assessment in emerging capital markets. *The Journal of Applied Management and Entrepreneurship*, 12(2): 61-74.

Chen, S., Duckworth, K., and Chaiken, S. 1999. Motivated heuristic and systematic processing. *Psychological Inquiry*, 10(1): 44-49.

Cheng, C. S. A., Ho, J. L. Y., and Tian, F. 2006. *An empirical analysis of value-relevance of disclosure of material weaknesses under Section 404.* Working Paper. Retrieved from https://www.researchgate.net/publication/256067883_An_Empirical_Analysis_of_ Value-relevance_of_Disclosure_of_Material_Weaknesses_Under_Section_404

Cheng, F. F., and Wu, C. S. 2010. Debiasing the framing effect: The effect of warning and involvement. *Decision Support Systems*, 49(3): 328-334.

Chewning, E. G., Wheeler, S. W., and Chan, K. C. 1998. Evidence on auditor and investor materiality thresholds resulting from equity-for-debt swaps. *Auditing: A Journal of Practice & Theory*, 17(1): 39-53.

Chewning, G., Pany, K., and Wheeler, S. 1989. Auditor reporting decisions involving accounting principle changes: Some evidence on materiality thresholds. *Journal of Accounting Research*, 27(1): 78-96.

Choi, J. H., Kim, J. B., Liu, X., and Simunic, D. 2008. Audit pricing, legal liability regimes, and Big-4 premiums: Theory and cross-country evidence. *Contemporary Accounting Research*, 25(1): 55-99.

Choi, J. H., Kim, J. B., Liu, X., and Simunic, D. 2009. Cross-listing audit fee premiums: Theory and evidence. *The Accounting Review*, 84(5): 1429-1463.

Chong, K. M., and Pflugrath, G. 2008. Do different audit report formats affect shareholders' and auditors' perceptions? *International Journal of Auditing*, 12(3): 221-241.

Christensen, B. E., Glover, S. M., and Wolfe, C. J. 2014. Do critical audit matter paragraphs in the audit report change nonprofessional investors' decision to invest? *Auditing: A Journal of Practice & Theory,* 33(4): 71-93.

Christensen, H. B., Hail, L., and Leuz, C. 2013. Mandatory IFRS reporting and changes in enforcement. *Journal of Accounting and Economics*, 56(2): 147-177.

Chung, H., and Wynn, P. J. 2014. Corporate governance, directors' and officers' insurance premiums and audit fees. *Managerial Auditing Journal*, 29(2): 173-195.

Chung, H. H., and Wynn, J. P. 2008. Managerial legal liability coverage and earnings conservatism. *Journal of Accounting and Economics,* 46(1): 135-153.

Chung, H. H., Hillegeist, S. A., and Wynn, J. P. 2015. Directors' and officers' legal liability insurance and audit pricing. *Journal of Accounting and Public Policy*, 34(6): 551-577.

Chung, S., and Narasimhan, R. 2002. An international study of cross-sectional variations in audit fees. *International Journal of Auditing*, 6(1): 79-91.

Church, B., Davis, S., and McCracken, S. 2008. The auditor's reporting model: A literature overview and research synthesis. *Accounting Horizons*, 22(1): 69-90.

Citron, D. B., and Taffler, R. J. 1992. The audit report under going concern uncertainties: An empirical analysis. *Accounting and Business Research*, 22(88): 337-345.

Clarkson, P. M., Emby, C., and Watt, V. W. S. 2002. Debiasing the outcome effect: The role of instructions in an audit litigation setting. *Auditing: A Journal of Practice & Theory*, 21(2): 7-20.

Coates, J. C., and Srinivasan, S. 2014. SOX after ten years: A multidisciplinary review. *Accounting Horizons*, 28(3): 627-671.

Cohen Commission. 1978. *The commission on auditors' responsibilities: Report, conclusions, and recommendations.* New York, NY: American Institute of Certified Public Accountants.

Cohen, J., and Hanno, D. 2000. Auditors' consideration of corporate governance and management control philosophy in preplanning and planning judgments. *Auditing: A Journal of Practice & Theory*, 19 (2): 133-146.

Cokely, E. T., and Kelley, C. M. 2009. Cognitive abilities and superior decision making under risk: A protocol analysis and process model evaluation. *Judgment and Decision Making*, 4(1): 20-33.

Collier, P., and Gregory, A. 1996. Audit committee effectiveness and the audit fee. *European Accounting Review*, 5(2): 177-198.

Coram, P. J., Mock, T. J., Turner, J. L., and Gray, G. L. 2011. The communicative value of the auditor's report. *Australian Accounting Review,* 21(3): 235-252.

Corporate Law Economic Reform Program. 2004. *Audit Reform & Corporate Disclosure Act 2004 (CLERP 9)*. Canberra: Australian Government Publishing Service.

CPA Australia. 2013. *Reporting on audited financial statements*. Retrieved from https://www.ifac.org/system/files/publications/exposure-drafts/comments/IAASB submission_Auditorreporting2013.pdf

Craswell, A. T., and Francis, J. R. 1999. Pricing initial audit engagements: A test of competing theories. *The Accounting Review*, 74(2): 201-216.

Daske, H., Hail, L., Leuz, C., and Verdi, R. 2008. Mandatory IFRS reporting around the world: Early evidence on the economic consequences. *Journal of Accounting Research*, 46(5): 1085-1142.

Davis, L. R., and Simon, D. T. 1992. The impact of SEC disciplinary actions on audit fees. *Auditing: A Journal of Practice & Theory,* 11(1): 58-68.

Davis, M., and Hay, D. 2012. An analysis of submissions on proposed regulations for audit and assurance in New Zealand. *Australian Accounting Review*, 22 (3): 303-316.
De Dreu, C. K., Koole, S. L., and Oldersma, F. L. 1999. On the seizing and freezing of negotiator inferences: Need for cognitive closure moderates the use of heuristics in negotiation. *Personality and Social Psychology Bulletin*, 25(3): 348-362.
De Dreu, C. K., Nijstad, B. A., and van Knippenberg, D. 2008. Motivated information processing in group judgment and decision making. *Personality and Social Psychology Review*, 12(1): 22-49.
De George, E. T., Ferguson, C. B., and Spear, N. A. 2013. How much does IFRS cost? IFRS adoption and audit fees. *The Accounting Review*, 88(2): 429-462.
De Wit, F. R. C., Jehn, K. A., and Scheepers, D. 2013. Task conflict, information processing, and decision-making: The damaging effect of relationship conflict. *Organizational Behavior and Human Decision Processes*, 122(2): 177-189.
Dechow, P. M., Sloan, R. G., and Sweeney, A. P. 1996. Causes and consequences of earnings manipulation: An analysis of firms subject to enforcement actions by the SEC. *Contemporary Accounting Research*, 13(1): 1-36.
Deegan, C., and Gordon, B. 1996. A study of the environmental disclosure practices of Australian corporations. *Accounting and Business Research*, 26(3): 187-199.
Deloitte Touche Tohmatsu Limited. 2013. *Comment letter to International Auditing and Assurance Standards Board*. Retrieved from https://www.ifac.org/publications-resources/reporting-audited-financial-statements-proposed-new-and-revised-international
Denes-Raj, V., and Epstein, S. 1994. Conflict between intuitive and rational processing: When people behave against their better judgment. *Journal of Personality and Social Psychology*, 66(5): 819-829.
Desir, R., Casterella, J. R., and Kokina, J. 2014. A reexamination of audit fees for initial audit engagements in the post-SOX period. *Auditing: A Journal of Practice & Theory*, 33(2): 59-78.
DeZoort, F. T., and Lord, A. T. 1997. A review and synthesis of pressure effects research in accounting. *Journal of Accounting Literature*, 16: 28-85.
DeZoort, T., Harrison, P., and Taylor, M. 2006. Accountability and auditors' materiality judgments: The effects of differential pressure strength on conservatism, variability, and effort. *Accounting, Organizations and Society*, 31(4): 373-390.
Dhaliwal, D. S., Naiker, V., and Navissi, F. 2010. The association between accruals quality and the characteristics of accounting experts and mix of expertise on audit committees. *Contemporary Accounting Research*, 27(3): 787-827.
Dieckmann, N. 2008. *Numeracy: A review of the literature.* Working Paper. Retrieved from https://scholarsbank.uoregon.edu/xmlui/bitstream/handle/1794/22045/611.pdf?sequence=1
Dijksterhuis, A., and Aarts, H. 2003. On wildebeests and humans: The preferential detection of negative stimuli. *Psychological Science*, 14(1): 14-18.
Dilla, W. N., and Stone, D. N. 1997. Representations as decision aids: The asymmetric effects of words and numbers on auditors' inherent risk judgments. *Decision Sciences* 28(3): 709-743.
Ditto, P. H., Scepansky, J. A., Munro, G. D., Apanovitch, A. M., and Lockhart, L. K., 1998. Motivated sensitivity to preference-inconsistent information. *Journal of Personality and Social Psychology*, 75(1): 53-69.
Djankov, S., La Porta, R., Lopez-de-Silanes, F., and Shleifer, A. 2008. The law and economics of self-dealing. *Journal of Financial Economics*, 88(3): 430-465.
Donovan, R. J., and Jalleh, G. 1999. Positively versus negatively framed product attributes: The influence of involvement. *Psychology and Marketing*, 16(7): 613-630.

Doogar, R., Rowe, S. P., and Sivadasan, P. 2015. Asleep at the wheel (Again)? Bank audits during the lead-up to the financial crisis. *Contemporary Accounting Research,* 32(1): 358-391.

Doupnik, T. S., and Riccio, E. L. 2006. The influence of conservatism and secrecy on the interpretation of verbal probability expressions in the Anglo and Latin cultural areas. *The International Journal of Accounting*, 41(3): 237-261.

Doupnik, T. S., and Richter, M. 2004. The impact of culture on the interpretation of "in context" verbal probability expressions. *Journal of International Accounting Research*, 3(1): 1-20.

Doupnik, T. S., and Tsakumis, G. T. 2004. A critical review of tests of Gray's theory of cultural relevance and suggestions for future research. *Journal of Accounting Literature*, 23: 1-48.

Doyle, J., Ge, W., and McVay, S. 2007. Accruals quality and internal control over financial reporting. *The Accounting Review,* 82(5): 1141-1170.

Dyer, J. L. 1975. Toward the development of objective materiality norms. *The Arthur Andersen Chronicle,* 35(4): 38-49.

Earley, C. E., Hoffman, V. B., and Joe, J. R. 2008. Reducing management's influence on auditors' judgments: An experimental investigation of SOX 404 assessments. *The Accounting Review,* 83(6): 1461-1485.

Edgley, C. 2014. A genealogy of accounting materiality. *Critical Perspectives on Accounting,* 25(3): 255-271.

Eichenseher, J. W., and Shields, D. 1985. Corporate director liability and monitoring preferences. *Journal of Accounting and Public Policy,* 4(1): 13-31.

Eilifsen, A. and Messier, W. 2015. Materiality guidance of the major public accounting firms. *Auditing: A Journal of Practice & Theory,* 34(2): 3-26.

Eining, M. M., Jones, D. R., and Loebbecke, J. K. 1997. Reliance on decision aids: An examination of auditors' assessment of management fraud. *Auditing: A Journal of Practice & Theory*, 16(2): 1-19.

Elliott, W. B. 2006. Are investors influenced by pro forma emphasis and reconciliations in earnings announcement. *The Accounting Review*, 81(1): 113-133.

Ernst and Young Global Limited (E & Y). 2014. *Point of view: Auditor reporting.* Retrieved from http://www.ey.com/Publication/vwLUAssets/EY-Point-of-view-auditor-reporting-February-2014/$FILE/EY-Point-of-view-auditor-reporting-February-2014.pdf

Estes, R., and Reames, D. 1988. Effects of personal characteristics on materiality decisions: A multivariate analysis. *Accounting and Business Research*, 18(72): 291-296.

Ettredge, M., and Greenberg, R. 1990. Determinants of fee cutting on initial audit engagements. *Journal of Accounting Research*, 28(1): 198-210.

Ettredge, M. L., Xu, Y., and Yi, H. S. 2014. Fair value measurements and audit fees: Evidence from the banking industry. *Auditing: A Journal of Practice & Theory*, 33(3): 33-58.

European Federation of Accountants and Auditors (EFAA). 2013. *Comment on IAASB exposure draft-reporting on audited financial statements proposed new and revised International Standards on Auditing.* Retrieved from https://www.ifac.org/publications-resources/reporting-audited-financial-statements-proposed-new-and-revised-international

European Parliament and the Council of the European Union. 2014. *Directive 2014/56/EU of the European Parliament and of the Council.* Retrieved from http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32014L0056

Fargher, N., Taylor, M. H., and Simon, D. T. 2001. The demand for auditor reputation across international markets for audit services. *The International Journal of Accounting*, 36(4): 407-421.

Farmer, T. A., Rittenberg, L. E., and Trompeter, G. M. 1987. An investigation of the impact of economic and organizational factors on auditor independence. *Auditing: A Journal of Practice & Theory*, 7(1): 1-14.

Feldman, S. 1966. Motivational aspects of attitudinal elements and their place in cognitive interaction. In Feldman, S. (Ed.), *Cognitive Consistency*. New York: Academic Press.

Feldmann, D. A., and Read, W. J. 2010. Auditor conservatism after Enron. *Auditing: A Journal of Practice & Theory*, 29(1): 267-278.

Felix, W. L., Gramling, A. A., and Maletta, M. J. 2005. The influence of nonaudit service revenues and client pressure on external auditors' decisions to rely on internal audit. *Contemporary Accounting Research*, 22(1): 31-53.

Ferguson, A., Pundrich, G., and Raftery, A. 2014. Auditor industry specialization, service bundling, and partner effects in a mining-dominated city. *Auditing: A Journal of Practice & Theory*, 33(3): 153-180.

Firth, M. 1979. Consensus views and judgment models in materiality decisions. *Accounting, Organizations and Society*, 4(4): 283-295.

Firth, M. 1985. An analysis of audit fees and their determinants in New Zealand. *Auditing: A Journal of Practice and Theory*, 4(2): 23-37.

Fisher, M. H. 1990. The effects of reporting auditor materiality levels publicly, privately, or not at all in an experimental markets setting. *Auditing: A Journal of Practice & Theory*, 9(Supplement): 184-223.

Fiske, S. T. 1980. Attention and weight in person perception: The impact of negative and extreme behavior. *Journal of Personality and Social Psychology*, 38(6): 889-906.

Florou, A., and Pope, P. F. 2012. Mandatory IFRS adoption and institutional investment decisions. *The Accounting Review*, 87(6): 1993-2025.

Francis, J. 1984. The effect of audit firm size on audit prices. *Journal of Accounting and Economics*, 6(2): 133-151.

Francis, J. R. 1987. Lobbying against proposed accounting standards: The case of employers' pension accounting. *Journal of Accounting and Public Policy*, 6(1): 35-57.

Francis, J. R. 2004. What do we know about audit quality? *British Accounting Review*, 36(4): 345-368.

Francis, J. R. 2011. A framework for understanding and researching audit quality. *Auditing: A Journal of Practice & Theory*, 30(2): 125-152.

Francis, J. R., and Simon, D. T. 1987. A test of audit pricing in the small-client segment of the US audit market. *The Accounting Review*, 62(1): 145-157.

Frederickson, J. R., and Miller, J. S. 2004. The effects of pro forma earnings disclosure on analysts' and non-professional investors' equity valuation judgments. *The Accounting Review*, 79(3): 667-686.

Friedberg, A. H., Strawser, J. R., and Cassidy, J. H. 1989. Factors affecting materiality judgements: A comparison of big eight accounting firms materiality views with the results of empirical research. *Advances in Accounting*, 7: 187-201.

Frishkoff, P. 1970. An empirical investigation of the concept of materiality in accounting. *Journal of Accounting Research*, 8: 116-129.

Fung, S. Y. K., Gul, F. A., and Krishnan, J. 2012. City-level auditor industry specialization, economies of scale, and audit pricing. *The Accounting Review*, 87(4): 1281-1307.

Gay, G., Schelluch, P., and Baines, A. 1998. Perceptions of messages conveyed by review and audit reports. *Accounting, Auditing & Accountability Journal*, 11(4): 472-494.

Geiger, M. A., and Raghunandan, K., 2001. Bankruptcies, audit reports, and the reform act. *Auditing: A Journal of Practice & Theory*, 20(1): 187-195.

George, J. M., 2000. Emotions and leadership: The role of emotional intelligence. *Human Relations*, 53(8): 1027-1055.

Georgiou, G. 2005. Investigating corporate management lobbying in the U.K. accounting standard setting process: A multi-issue/multi-period approach. *Abacus*, 41(3): 323-347.

Gerner-Beuerle, C., Paech, P., and Schuster, E. P. 2013. *Study on directors' duties and liability.* London, U.K.: London School of Economics Enterprise Limited.

Ghandar, A. 2014. *Auditor reporting is poised for sweeping changes worldwide with the introduction of new standards from the IAASB.* Retrieved from http://intheblack.com/articles/2014/10/09/in-auditing-long-is-the-new-short

Ghosh, A., and Pawlewicz, R. 2009. The impact of regulation on auditor fees: Evidence from the Sarbanes-Oxley Act. *Auditing: A Journal of Practice & Theory*, 28(2): 171-197.

Gimbar, C., Hansen, B., and Ozlanski, M. E., 2016. The effects of critical audit matter paragraphs and accounting standard precision on auditor liability. *The Accounting Review*, 91(6): 1629-1646.

Gold, A., Gronewold, U., and Pott, C. 2012. The ISA 700 auditor's report and the audit expectation gap: Do explanations matter? *International Journal of Auditing*, 16(3): 286-307.

Goncharov, I., Riedl, E. J., and Sellhorn, T. 2014. Fair value and audit fees. *Review of Accounting Studies*, 19(1): 210-241.

Goodwin-Stewart, J., and Kent, P. 2006. Relation between external audit fees, audit committee characteristics and internal audit. *Accounting and Finance,* 46(3): 387-404.

Gray, G. L., Turner, J. L., Coram, P. J., and Mock, T. J. 2011. Perceptions and misperceptions regarding the unqualified auditor's report by financial statement preparers, users and auditors, *Accounting Horizons*, 25(4): 659-684.

Gray, S. J. 1988. Towards a theory of cultural influence on the development of accounting systems internationally. *Abacus*, 24(1): 1-15.

Griffin, P. A., Lont, D. H., and Sun, Y. 2008. Corporate governance and audit fees: Evidence of countervailing relations. *Journal of Contemporary Accounting & Economics*, 4(1): 18-49.

Grote, C. L., Robiner, W. N., and Haut, A. 2001. Disclosure of negative information in letters of recommendation: Writers' intentions and readers' experiences. *Professional Psychology: Research and Practice*, 32(6): 655-661.

Gul, F. A., and Tsui, J. 1993. A comparative study of auditors' attitudes to uncertainty qualifications: An empirical test of the strong versus weak uncertainty avoidance hypothesis. *International Journal of Accounting*, 28(4): 356-364.

Gul, F. A., and Tsui, J. S. L. 1992. An empirical analysis of Hong Kong bankers' perceptions of auditor ability to resist management pressure in an audit conflict situation. *Journal of International Accounting, Auditing and Taxation*, 1(2): 177-190.

Gul, F. A. 1991. Size of audit fees and perceptions of auditors' ability to resist management pressure in audit conflict situations. *Abacus*, 27(2): 162-172.

Gul, F. A., Wu, D., and Yang, Z. 2013. Do individual auditors affect audit quality? Evidence from archival data. *The Accounting Review*, 88(6): 1993-2023.

Guthrie, J., and Parker, L. D. 1990. Corporate social disclosure practice: a comparative international analysis. *Advances in Public Interest Accounting*, 3: 159-175.

Hackenbrack, K., and Knechel, W. R. 1997. Resource allocation decisions in audit engagements. *Contemporary Accounting Research*, 14(3): 481-499.

Hackenbrack, K., and Nelson, M. W. 1996. Auditors' incentives and their application of financial accounting standards. *The Accounting Review*, 71(1): 43-59.

Hageman, A. M. 2008. A review of the strengths and weaknesses of archival, behavioral, and qualitative research methods: Recognizing the potential benefits of triangulation. In Arnold, V., Clinton, B. D., Lillis, A., Roberts, R., Wolfe, C., Wright, S. (ed.), *Advances in Accounting Behavioral Research,* Volume 11: Emerald Group Publishing Limited.

Hasher, L., Attig, M. S., and Alba, J. W. 1981. I knew it all along: Or, did I? *Journal of Verbal Learning and Verbal Behavior*, 20(1): 86-96.

Hatfield, R. C., Jackson, S. B., and Vandervelde, S. D. 2011. The effects of prior auditor involvement and client pressure on proposed audit adjustments. *Behavioral Research in Accounting*, 23(2): 117-130.

Hay, D. 2013. Further evidence from meta-analysis of audit fee research. *International Journal of Auditing*, 17(2): 162-176.

Hay, D. C., Knechel, W. R., and Wong, N. 2006. Audit fees: A meta-analysis of the effect of supply and demand attributes. *Contemporary Accounting Research*, 23(1): 141-191.

Hecimovic, A., Martinov-Bennie, N., and Roebuck, P. 2009. The force of law: Australian auditing standards and their impact on the auditing profession. *Australian Accounting Review*, 19 (1): 1-10.

Heiman, V. B. 1990. Auditors' assessments of the likelihood of error explanations in analytical review. *The Accounting Review*, 65(4): 875-890.

Hirt, E. R., and Markman, K. D. 1995. Multiple explanation: A consider-an-alternative strategy for debiasing judgments. *Journal of Personality and Social Psychology*, 69(6): 1069-1086.

Ho, J. L., and Chang, C. J. 1994. Does national culture or professional knowledge affect auditors' probabilistic conjunction judgments? A study of the United States versus Taiwan. *The International Journal of Accounting*, 29(3): 189-205.

Hoch, S. J. 1985. Counterfactual reasoning and accuracy in predicting personal events. *Journal of Experimental Psychology: Learning, Memory, and Cognition,* 11(4): 719-731.

Hodge, F., and Pronk, M. 2006. The impact of expertise and investment familiarity on investors' use of online financial report information. *Journal of Accounting, Auditing & Finance*, 21(3): 267-292.

Hodgetts, R. M., and Luthans, F. 1993. US multinationals' compensation strategies for local management: Cross-cultural implications. *Compensation & Benefits Review*, 25(2): 42-48.

Hofstede, G. 1980. *Culture's consequences: International differences in work-related values.* Beverly Hills, CA: Sage Publications.

Hofstede, G. 2001. *Culture's consequences: Comparing values, behaviors, institutions, and organizations across cultures.* Thousand Oaks, CA: Sage Publications.

Hofstede, G., and Bond, M. H. 1988. The confucius connection: From cultural roots to economic growth. *Organizational Dynamics*, 16(4): 5-21.

Hofstede, G., Hofstede, G. J., and Minkov, M. 2010. *Cultures and organizations: Software of the mind.* New York, NY: McGraw-Hill USA.

Hofstedt, T. R., and Hughes, G. D. 1977. An experimental study of the judgment element in disclosure decisions. *The Accounting Review,* 52(2): 379-395.

Hogan, C. E., and Wilkins, M. S. 2008. Evidence on the audit risk model: Do auditors increase audit fees in the presence of internal control deficiencies? *Contemporary Accounting Research*, 25(1): 219-242.

Hoitash, U., Hoitash, R., and Bedard, J. C. 2009. Corporate governance and internal control over financial reporting: A comparison of regulatory regimes. *The Accounting Review*, 84(3): 839-867.

Holstrum, G. L., and Messier, W. F. 1982. A review and integration of empirical research on materiality. *Auditing: A Journal of Practice & Theory*, 2(1): 45-63.

Hooghiemstra, R., Hermes, N., and Emanuels, J. 2015. National culture and internal control disclosures: A cross-country analysis. *Corporate Governance: An International Review*, 23(4): 357-377.

Hope, O. K. 2003. Disclosure practices, enforcement of accounting standards, and analysts' forecast accuracy: An international study. *Journal of Accounting Research*, 41(2): 235-272.

Hope, O. K., Kang, T., Thomas, W., and Yoo, Y. K. 2008. Culture and auditor choice: A test of the secrecy hypothesis. *Journal of Accounting and Public Policy*, 27(5): 357-373.

Hopwood, W., McKeown, J., and Mutchler, J. 1989. A test of the incremental explanatory power of opinions qualified for consistency and uncertainty. *The Accounting Review*: 64(1): 28-48.

Houghton, K. A., Jubb, C., Kend, M., and Ng, J. 2010. *The future of audit: Keeping capital markets efficient.* Canberra, ACT: The Australian National University Press.

Houghton, K. A., Kend, M., and Jubb, C. 2013. The CLERP 9 audit reforms: benefits and costs through the eyes of regulators, standard setters and audit service suppliers. *Abacus*, 49(2): 139-160.

Houghton, K. A., Jubb, C., and Kend, M. 2011. Materiality in the context of audit: The real expectations gap. *Managerial Auditing Journal*, 26(6): 482-500.

Houqe, N., Dunstan, K., Karim, W., and Van Zijl, T. 2012. The effect of investor protection and IFRS adoption on earnings quality around the world. *The International Journal of Accounting*, 47(3): 333-355.

Huang, H. W., Liu, L. L., Raghunandan, K., and Rama, D. V. 2007. Auditor industry specialization, client bargaining power, and audit fees: Further evidence. *Auditing: A Journal of Practice & Theory*, 26(1): 147-158.

Huang, H. W., Raghunandan, K., and Rama, D. 2009. Audit fees for initial audit engagements before and after SOX. *Auditing: A Journal of Practice & Theory*, 28(1): 171-190.

Hudaib, M., and Cooke, T. E. 2005. The impact of managing director changes and financial distress on audit qualification and auditor switching. *Journal of Business Finance & Accounting*, 32(9-10): 1703-1739.

Icerman, R. C., and Hillison, W. A. 1991. Disposition of audit-detected errors: Some evidence on evaluative materiality. *Auditing: A Journal of Practice & Theory*, 10(1): 22-34.

Igartua, J. J., Cheng, L., and Lopes, O. 2003. To think or not to think: Two pathways towards persuasion by short films on AIDS prevention. *Journal of Health Communication*, 8(6): 513-528.

Innes, J., Brown, T., and Hatherly, D. 1997. The expanded audit report: A research study within the development of SAS 600. *Accounting, Auditing & Accountability Journal*, 10(5): 702-717.

Institute of Chartered Accountants in Australia (ICAA). 2013. *ED reporting on auditing financial statements: Proposed new and revised International Standards on Auditing*. Retrieved from https://www.ifac.org/publications-resources/reporting-audited-financial-statements-proposed-new-and-revised-international

Institute of Chartered Accountants of England and Wales (ICAEW). 2013. *Reporting on audited financial statements: Proposed new and revised ISAs*. Retrieved from https://www.ifac.org/publications-resources/reporting-audited-financial-statements-proposed-new-and-revised-international.

International Accounting Standards Board (IASB). 2013. *Presentation of financial statements*. International Accounting Standard (IAS) 1. London, U.K.: IFRS Foundation.

International Auditing and Assurance Standards Board (IAASB). 2004. *Improving the clarity of IAASB standards*. New York, NY: International Auditing and Assurance Standards Board.

International Auditing and Assurance Standards Board (IAASB). 2009. *Implementation of the clarified International Standards on Auditing.* Retrieved from http://www.ifac.org/system/files/downloads/IAASB-Implementation-Monitoring-Clarified-ISAs.pdf

International Auditing and Assurance Standards Board (IAASB). 2010. *Implementation of the clarified International Standards on Auditing*. New York, NY: International Auditing and Assurance Standards Board.

International Auditing and Assurance Standards Board (IAASB). 2012. *IFAC member body compliance program: Basis of ISA adoption by jurisdiction.* Retrieved from https://www.ifac.org/system/files/uploads/MBD/Basis-of-ISA-Adoption-by-Jurisdiction-August-2012.pdf

International Auditing and Assurance Standards Board (IAASB). 2013. *Reporting on audited financial statements: Proposed new and revised International Standards on Auditing.* Retrieved from https://www.ifac.org/publications-resources/reporting-audited-financial-statements-proposed-new-and-revised-international

International Auditing and Assurance Standards Board (IAASB). 2015a. *Reporting on audited financial statements-new and revised auditor reporting standards and related conforming amendments.* Retrieved from http://www.iaasb.org/new-auditors-report

International Auditing and Assurance Standards Board (IAASB). 2015b. *At a glance: ISA 720 (Revised), the auditors' responsibilities relating to other information.* Retrieved from http://www.ifac.org/publications-resources/glance-isa-720-revised-auditor-s-responsibilities-relating-other-information

International Auditing and Assurance Standards Board (IAASB). 2014. *ISA 450 Evaluation of misstatements identified during the audit.* New York, NY: International Federation of Accountants.

International Federation of Accountants Small and Medium Practices Committee (IFAC SMP). 2013. *Small and medium practices (SMP) committee response to the exposure draft reporting on audited financial statements: Proposed new and revised International Standards on Auditing.* Retrieved from https://www.ifac.org/publications-resources/reporting-audited-financial-statements-proposed-new-and-revised-international

Ito, T. A., Larsen, J. T., Smith, N. K., and Cacioppo, J. T. 1998. Negative information weighs more heavily on the brain: The negativity bias in evaluative categorizations. *Journal of Personality and Social Psychology*, 75(4): 887-900.

Ittner, C. D., Larcker, D. F., and Meyer, M. W. 2003. Subjectivity and the weighting of performance measures: Evidence from a balanced scorecard. *The Accounting Review*, 78(3): 725-758.

Ittonen, K., and Tronnes, P. C. 2015. Benefits and costs of appointing joint audit engagement partners. *Auditing: A Journal of Practice & Theory*, 34(3): 23-46.

Jaffe-Katz, A., Budescu, D., and Wallsten., T. 1989. Timed magnitude comparisons of numerical and nonnumerical expressions of uncertainty. *Memory & Cognition*, 17 (3): 249-264.

Jaggi, B., and Low, P. Y. 2011. Joint effect of investor protection and securities regulations on audit fees. *The International Journal of Accounting*, 46(3): 241-270.

Jennings, M., Kneer, D. C., and Reckers, P. M. J. 1987. A reexamination of the concept of materiality: View of auditors, users, and officers of the court. *Auditing: A Journal of Practice & Theory*, 6(2): 104-115.

Jiambalvo, J., and Waller, W. 1984. Decomposition and assessments of audit risk. *Auditing: A Journal of Practice & Theory*, 3(2): 80-88.

Jiang, W., and Son, M. 2015. Do audit fees reflect risk premiums for control risk? *Journal of Accounting, Auditing & Finance*, 30(3): 318-340.

Joe, J. R., Vandervelde, S. D., and Wu, Y. J. 2014. *Use of third party specialists' reports when auditing fair value measurements: Do auditors stay in their comfort zone?* Working Paper. Retrieved from http://www.audsymp.dept.ku.edu/wp-content/uploads/2014/05/Saturday-Paper-3-by-Joe-Vandervelde-Wu.pdf

Johnson, M. F., Kasznik, R., and Nelson, K. K. 2001. The impact of securities litigation reform on the disclosure of Forward-Looking information by high technology firms. *Journal of Accounting Research*, 39(2): 297-327.

Jubb, C. A., and Houghton, K. A. 2007. The Australian Auditing and Assurance Standards Board after the implementation of CLERP 9. *Australian Accounting Review,* 17(2): 18-27.

Kachelmeier, S. J., and Messier, W. F. 1990. An investigation of the influence of a nonstatistical decision aid on auditor sample size decisions. *The Accounting Review*, 65(1): 209-226.

Kachelmeier, S. J., Schmidt, J. J., and Valentine, K. 2014. *The disclaimer effect of disclosing critical audit matters in the auditor's report.* Working Paper. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2481284

Kadous, K., Koonce, L., and Towry, K. L. 2005. Quantification and persuasion in managerial judgement. *Contemporary Accounting Research,* 22(3): 643-686.

Kahneman, D., and Tversky, A. 1984. Choices, values, and frames. *American Psychologist*, 39(4): 341-350.

Kanouse, D. E., and Reid, L. H. 1972. Negativity in evaluations. In Jones, E. E., Kanouse, D. E., Kelley, H. H., Nisbett, R. E., Valins, S., and Weiner, B. (Eds.), *Attribution: Perceiving the Causes of Behavior*. Hillsdale, NJ: Lawrence Erlbaum Associates.

Kaplan, M. R., and Harrison, J. R. 1993. Defusing the director liability crisis: The strategic management of legal threats. *Organization Science*, 4(3): 412-432.

Kaufmann, D., Kraay, A., and Mastruzzi, M. 2010. *The worldwide governance indicators project.* Retrieved from www.govindicators.org.

Kennedy, J. 1995. Debiasing the curse of knowledge in audit judgment. *The Accounting Review*, 70(2): 249-273.

Khan, S., and Wald, J. K. 2015. Director liability protection, earnings management, and audit pricing. *Journal of Empirical Legal Studies*, 12(4): 781-814.

Kilgore, A., Harrison, G., and Radich, R. 2014. Audit quality: What's important to users of audit services. *Managerial Auditing Journal*, 29(9): 776-799.

Kilgore, A., Radich, R., and Harrison, G. 2011. The relative importance of audit quality attributes. *Australian Accounting Review,* 21(3): 253-265.

Kim, J., Liu, X., and Zheng, L. 2012. The impact of mandatory IFRS adoption on audit fees: Theory and evidence. *The Accounting Review*, 87(6): 2061-2094.

Kim, Y., and Li, S. 2011. *The externality effect of accounting standards convergence: evidence from cross-border information transfers around EU mandatory IFRS adoption.* Working Paper. Retrieved from https://www.researchgate.net/publication/228236754_The_Externality_Effect_of_Accounting_Standards_Convergence_Evidence_from_Cross-Border_Information_Transfers_Around_EU_Mandatory_IFRS_Adoption

King, R. R., Davis, S. M., and Mintchik, N. 2012. Mandatory disclosure of the engagement partner's identity: Potential benefits and unintended consequences. *Accounting Horizons*, 26(3): 533-561.

Knapp, M. C. 1985. Audit conflict: An empirical study of the perceived ability of auditors to resist management pressure. *The Accounting Review*, 60(2): 202-211.

Knechel, R. W., Krishnan, G. V., Pevzner, M., Shefchik, L. B., and Velury, U. K. 2013. Audit quality: Insights from the academic literature. *Auditing: A Journal of Practice & Theory*, 32(Supplement): 385-421.

Knechel, R. W., Vanstraelen, A., and Zerni, M. 2015. Does the identity of engagement partners matter? An analysis of audit partner reporting decisions. *Contemporary Accounting Research*, 32(4): 1443-1478.

Knight, E. 2011. *Centro directors escape without penalty*. Retrieved from http://www.smh.com.au/business/centro-directors-escape-without-penalty--lets-hope-they-learn-to-read-accounts-20110831-1jm2s.html

Knutsen, E. S. 2010. The cost of costs: The unfortunate deterrence of everyday civil litigation in Canada. *Queen's Law Journal*, 36: 113-160.

Koch, C., and Salterio, S. E. 2017. The effects of auditor affinity for client and perceived client pressure on auditor proposed adjustments. *The Accounting Review*, In-press.

Koehler, D. J. 1991. Explanation, imagination, and confidence in judgment. *Psychological Bulletin*, 110(3): 499-519.

Köhler, A. G., Ratzinger-Sakel, N. V., and Theis, J. C. 2016. *The effects of key audit matters on the auditor's report's communicative value: Experimental evidence from investment professionals and non-professional investors*. Working Paper. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2838162

Koonce, L. 1992. Explanation and counterexplanation during audit analytical review. *The Accounting Review*, 67(1): 59-76.

Kothari, S. P., Shu, S., and Wysocki, P. D. 2009. Do managers withhold bad news? *Journal of Accounting Research*, 47(1): 241-276.

KPMG 2017. *Auditors report snapshot*. Retrieved from https://home.kpmg.com/au/en/home/insights/2017/03/key-audit-matters-auditor-report-28-march-2017.html

Krishnan, G., and Visvanathan, G. 2009. Do auditor price audit committees expertise? The case of accounting versus non-accounting financial experts. *Journal of Accounting, Auditing & Finance*, 24(1): 115-144.

Krishnan, J. 2005. Audit committee financial expertise and internal control: An empirical analysis. *The Accounting Review*, 80(2): 649-675.

Krogstad, J. L., Ettenson, R. T., and Shanteau, J. 1984. Context and experience in auditors' materiality judgments. *Auditing: A Journal of Practice & Theory*, 4(1): 54-73.

Kunda, Z. 1990. The case for motivated reasoning. *Psychological Bulletin*, 108(3): 480-498.

La Porta, R. L., Lopez-de-Silanes, F., and Shleifer, A. 2006. What works in securities laws? *The Journal of Finance*, 61(1): 1-32.

La Porta, R. L., Lopez-de-Silanes, F., Shleifer, A., and Vishny, R. W. 1998. Law and finance. *Journal of Political Economy*, 106(6): 1113-1155.

Landsman, W. R., Maydew, E. L., and Thornock, J. R. 2012. The information content of annual earnings announcements and mandatory adoption of IFRS. *Journal of Accounting and Economics*, 53(1): 34-54.

Larrick, R. P. 2004. Debiasing. In Koehler, D. J., and Harvey, N. (eds.), *Blackwell Handbook of Judgment and Decision Making*. Malden, MA: Blackwell.

Laux, V. 2010. Effects of litigation risk on board oversight and CEO incentive pay. *Management Science*, 56(6): 938-948.

Lee, H. Y., and Mande, V. 2005. The relationship of audit committee characteristics with endogenously determined audit and non-audit fees. *Quarterly Journal of Business & Economics*, 44(3): 93-112.

Legoria, J., Melendrez, K. D., and Reynolds, J. K. 2013. Qualitative audit materiality and earnings management. *Review of Accounting Studies*, 18(2): 414-442.
Leuz, C., Nanda, D., and Wysocki, P. D. 2003. Earnings management and investor protection: An international comparison. *Journal of Financial Economics*, 69(3): 505-527.
Levitt, A. 1998. The numbers game. *The CPA Journal*, 68(12): 14-19
Li, J., and Harrison, J. R. 2008b. Corporate governance and national culture: a multi-country study. *Corporate Governance: The International Journal of Business in Society*, 8(5): 607-621.
Li, J., and Harrison, R. 2008a. National culture and the composition and leadership structure of boards of directors. *Corporate Governance: An International Review*, 16(5): 375-385.
Li, S. 2010. Does mandatory adoption of International Financial Reporting Standards in the European Union reduce the cost of equity capital? *The Accounting Review*, 85(2): 607-636.
Libby, R., and Libby, P. A. 1989. Expert measurement and mechanical combination in control reliance decisions. *The Accounting Review*, 64(4): 729-747.
Libby, R., and Kinney, W. R. 2000. Does mandated audit communication reduce opportunistic corrections to manage earnings to forecasts? *The Accounting Review*, 75(4): 383-404.
Liberali, J. M., Reyna, V. F., Furlan, S., Stein, L. M., and Pardo, S. T. 2012. Individual differences in numeracy and cognitive reflection, with implications for biases and fallacies in probability judgment. *Journal of Behavioral Decision Making*, 25(4): 361-381.
Lindahl, F. W. 1987. Accounting standards and Olson's theory of collective action. *Journal of Accounting and Public Policy*, 6(1): 59-72.
Lipkus, I. M., Samsa, G., and Rimer, B. K. 2001. General performance on a numeracy scale among highly educated samples. *Medical Decision Making*, 2(1): 37-44.
Loos, A. 2010. *Directors' liability: A worldwide review*. The Netherlands: Kluwer Law International.
Lord, A. T., and DeZoort, F. T. 2001. The impact of commitment and moral reasoning on auditors' responses to social influence pressure. *Accounting, Organizations and Society*, 26 (3): 215-235.
Lord, C. G., Lepper, M. R., and Preston, E. 1984. Considering the opposite: a corrective strategy for social judgment. *Journal of Personality and Social Psychology*, 47(6): 1231-1243.
Louwers, T. J. 1998. The relation between going-concern opinions and the auditor's loss function. *Journal of Accounting Research*, 36(1): 143-156.
Lowe, D., and Reckers, P. 2000. The use of foresight decision aids in auditors' judgments. *Behavioral Research in Accounting*, 12: 97-118.
Lundgren, S. R., and Prislin, R. 1998. Motivated cognitive processing and attitude change. *Personality and Social Psychology Bulletin*, 24(7): 715-726.
Manson, S., and Zaman, M. 2001. Auditor communication in an evolving environment: Going beyond SAS 600 auditors' reports on financial statements. *The British Accounting Review*, 33(2): 113-136.
Martinov, N., and Roebuck, P. 1998. The assessment and integration of materiality and inherent risk: An analysis of major firms' audit practices. *International Journal of Auditing*, 2(2): 103-126.
Mautz, R. K. 1959. Evidence, judgment, and the auditors opinion. *Journal of Accountancy*, 107(4): 40-44.

Mayper, A. G. 1982. Consensus of auditors' materiality judgments of internal accounting control weaknesses. *Journal of Accounting Research*, 20(2): 773-783.

Mayper, A. G., Doucet, M. S., and Warren, C. S. 1989. Auditors' materiality judgments of internal accounting control weaknesses. *Auditing: A Journal of Practice & Theory,* 9 (1): 72-86.

McAlary, B. 2010. A moment of clarity. *Charter*, 81(1): 70.

McCabe, C., and Dillon, B. 2010. Clarity standards come into force. *Charter,* 81(2): 62-63.

McEnroe, J. E., and Martens, S. C. 1998. Individual investors' perceptions regarding the meaning of US and UK audit report terminology: 'present fairly in conformity with GAAP' and 'give a true and fair view'. *Journal of Business Finance & Accounting,* 25(3/4): 289-307.

Messier, W. 1995. Research in and development of audit decision aids. In Ashton, R., and Ashton, A., *Judgment and Decision Making Research in Accounting and Auditing*. Cambridge: Cambridge University Press.

Messier, W. F. 1983. The effect of experience and firm type on materiality/disclosure judgments. *Journal of Accounting Research*, 21(2): 611-618.

Messier, W. F., Martinov-Bennie, N., and Eilifsen, A. 2005. A review and integration of empirical research on materiality: Two decades later. *Auditing: A Journal of Practice & Theory*, 24(2): 153-187.

Meyers-Levy, J., and Malaviya, P. 1999. Consumers' processing of persuasive advertisements: An integrative framework of persuasion theories. *The Journal of Marketing*, 63(Supplementary): 45-60.

Milkman, K. L., Chugh, D., and Bazerman, M. H. 2009. How can decision making be improved? *Perspectives on Psychological Science*, 4(4): 379-383.

Mock, T. J., Bedard, J., Coram, P. J., Davis, S. M., Espahbodi, R., and Warne, R. C. 2013. The audit reporting model: Current research synthesis and implications. *Auditing: A Journal of Practice & Theory,* 32(1): 323-351.

Monks, R. A. G., and Minow, N. 2008. *Corporate governance.* West Sussex, England: John Wiley.

Montgomery, D. 2014. *The new auditors report: Revealing key audit matters.* Retrieved from http://nasba.org/media-resources/presentations-and-speeches/#annual2014

Moriarity, S., and Barron, F. H. 1976. Modeling the materiality judgements of audit partners. *Journal of Accounting Research,* 14(2): 320-341.

Moriarity, S., and Barron, F. H. 1979. A judgment-based definition of materiality. *Journal of Accounting Research,* 17: 114-135.

Nagar, V., Nanda, D., and Wysocki, P. 2003. Discretionary disclosure and stock-based incentives. *Journal of Accounting and Economics*, 34(1): 283-309.

Nagy, A. L. 2010. Section 404 compliance and financial reporting quality. *Accounting Horizons*, 24(3): 441-454.

Naiker, V., and Sharma, D. S. 2009. Former audit partners on the audit committee and internal control deficiencies. *The Accounting Review*, 84(2): 559-587.

National Association of Corporate Directors (NACD). 1996. *Report of the NACD Blue Ribbon Commission on director professionalism.* Washington, DC: NACD.

Nelson, M., and Tan, H. 2005. Judgment and decision making research in auditing: A task, person, and interpersonal interaction perspective. *Auditing: A Journal of Practice & Theory,* 24(Supplement): 41-71.

Nelson, M. W., and Rupar, K. K. 2015. Numerical formats within risk disclosures and the moderating effect of investors' concerns about management discretion. *The Accounting Review,* 90(3): 1149-1168.

Nelson, M. W., Smith, S. D., and Palmrose, Z. V. 2005. The effect of quantitative materiality approach on auditors' adjustment decisions. *The Accounting Review,* 80(3): 897-920.

Neumann, F. 1968. The auditing standard of consistency. *Journal of Accounting Research*, 6: 1-17.
New Zealand Auditing and Assurance Standards Board (NZAuASB). 2013. *IAASB exposure draft, reporting on audited financial statements: Proposed new and revised International Standards on Auditing.* Retrieved from https://www.ifac.org/publications-resources/reporting-audited-financial-statements-proposed-new-and-revised-international
Newton, L. K. 1977. The risk factor in materiality decisions. *The Accounting Review,* 52(1): 97-108.
Ng, T. B. P., and Tan, H. T. 2007. Effects of qualitative factor salience, expressed client concern, and qualitative materiality thresholds on auditors' audit adjustment decisions. *Contemporary Accounting Research*, 24(4): 1171-1192.
Ng, T. B. P. 2007. Auditors' decisions on audit differences that affect significant earnings thresholds. *Auditing: A Journal of Practice & Theory,* 26(1): 71-89.
Ng, T. B. P., and Tan, H. T. 2003. Effects of authoritative guidance availability and audit committee effectiveness on auditors' judgments in an auditor-client negotiation context. *The Accounting Review,* 78(3): 801-818.
Nichols, D. R., and Price, K. H. 1976. The auditor-firm conflict: An analysis using concepts of exchange theory. *The Accounting Review*, 51(2): 335-346.
Nishizaki, R., Takano, Y., and Takeda, F. 2014. Information content of internal control weaknesses: The evidence from Japan. *The International Journal of Accounting*, 49(1): 1-26.
Niven, D. 2009. Audit inspections for smaller firms. *Charter*, 80(3): 66.
Nolder, C., and Riley, T. J. 2014. Effects of differences in national culture on auditors' judgments and decisions: A literature review of cross-cultural auditing studies from a judgment and decision making perspective. *Auditing: A Journal of Practice & Theory*, 33(2): 141-164.
Norton, R. W. 1975. Measurement of ambiguity tolerance. *Journal of Personality Assessment*, 39(6): 607-619.
Nunnally, J. C. 1967. *Psychometric theory.* New York, NY: McGraw-Hill.
O'Sullivan, N. 1999. Board characteristics and audit pricing post-Cadbury: A research note. *European Accounting Review*, 8(2): 253-263.
Olson, M. J., and Budescu, D. V. 1997. Patterns of preference for numerical and verbal probabilities. *Journal of Behavioral Decision Making*, 10(2): 117-131.
Owen, N. 2003. *Report of the HIH Royal Commission*. Canberra: Commonwealth of Australia.
Palmrose, Z. V. 1986. Audit fees and auditor size: Further evidence. *Journal of Accounting Research*, 24(1): 97-110.
Palmrose, Z. V. 1987. Litigation and independent auditors-the role of business failures and management fraud. *Auditing: A Journal of Practice & Theory*, 6(2): 90-103.
Palmrose, Z. V. 1997a. Audit litigation research: Do the merits matter? An assessment and directions for future research. *Journal of Accounting and Public Policy*, 16(4): 355-378.
Palmrose, Z. V. 1997b. Who got sued? *Journal of Accountancy*, 183(3): 67-69.
Patel, C., and Psaros, J. 2000. Perceptions of external auditors' independence: Some cross-cultural evidence. *The British Accounting Review*, 32(3): 311-338.
Patel, C., Harrison, G. L., and McKinnon, J. L. 2002. Cultural influences on judgments of professional accountants in auditor-client conflict resolution. *Journal of International Financial Management & Accounting*, 13(1): 1-31.
Peeters, G., and Czapinski, J. 1990. Positive-negative asymmetry in evaluations: The distinction between affective and informational negativity effects. In Stroebe, W., and

Hewstone, M. (Eds.), *European Review of Social Psychology*. New York, NY: John Wiley.
Perkins, M. L. 2001. The use of quantitative and qualitative information in institutional decision making. *New Directions for Institutional Research* 2001(112): 85-95.
Peters, E. 2012. Beyond comprehension: The role of numeracy in judgments and decisions. *Current Directions in Psychological Science*, 21(1): 31-35.
Peters, E., Västfjäll, D., Slovic, P., Mertz, C. K., Mazzocco, K., and Dickert, S. 2006. Numeracy and decision making. *Psychological Science,* 17(5): 407-413.
Petty, R. E., and Cacioppo, J. T. 1979. Issue involvement can increase or decrease persuasion by enhancing message-relevant cognitive responses. *Journal of Personality and Social Psychology,* 37(10): 1915-1926.
Petty, R. E., Cacioppo, J. T., and Schumann, D. 1983. Central and peripheral routes to advertising effectiveness: The moderating role of involvement. *Journal of Consumer Research*, 10(2): 135-146.
Piotroski, J. D., Wong, T. J., and Zhang, T. 2015. Political incentives to suppress negative information: Evidence from Chinese listed firms. *Journal of Accounting Research*, 53(2): 405-459.
Pitcher Partners. 2013. *Exposure draft-Reporting on audited financial statements: Proposed new and revised International Standards on Auditing.* Retrieved from https://www.ifac.org/publications-resources/reporting-audited-financial-statements-proposed-new-and-revised-international
Plous, S. 1993. *The psychology of judgment and decision making.* New York, NY: McGraw-Hill Book Company.
Porter, T. 1995. *Trust in numbers*. Princeton, New Jersey: Princeton University Press.
Preiato, J., Brown, P., and Tarca, A. 2015. A comparison of between-country measures of legal setting and enforcement of accounting standards. *Journal of Business Finance & Accounting*, 42(1-2): 1-50.
PricewaterhouseCoopers International Limited (PwC). 2013. *IAASB exposure draft: Reporting on audited financial statements.* Retrieved from https://www.ifac.org/publications-resources/reporting-audited-financial-statements-proposed-new-and-revised-international
PricewaterhouseCoopers International Limited (PwC). 2014. *PCAOB rulemaking docket matter No. 029, improving the transparency of audits: Proposed amendments to PCAOB auditing standards to provide disclosure in the auditor's report of certain participants in the audit.* Retrieved from http://pcaobus.org/Rules/Rulemaking/Docket029/032c_PwC.pdf
Public Company Accounting Oversight Board (PCAOB). 2013a. *Proposed auditing standard: The auditor's report on an audit of financial statements when the auditor expresses an unqualified opinion.* Retrieved from http://pcaobus.org/Rules/Rulemaking/Docket034/Release_2013-005_ARM.pdf
Public Company Accounting Oversight Board (PCAOB). 2013b. *Improving the transparency of audits.* Retrieved from http://pcaobus.org/Rules/Rulemaking/Docket029/PCAOB%20Release%20No%20%202013-009%20-%20Transparency.pdf
Public Oversight Board (POB). 1994. *Strengthening the professionalism of the independent auditor: Report to the Public Oversight Board of the SEC practice section.* Stamford, CT: POB.
Puro, M. 1984. Audit firm lobbying before the Financial Accounting Standards Board: An empirical study. *Journal of Accounting Research,* 22(2): 624-646.
Radebaugh, L. H., Gray, S. J. 2002. *International accounting and multinational enterprises.* New York, NY: Wiley.

Raghunandan, K., and Rama, D. V. 1995. Audit reports for companies in financial distress: Before and after SAS No. 59. Auditing*: A Journal of Practice & Theory*, 14(1): 50-63.

Raghunandan, K., and Rama, D. V. 2006. SOX Section 404 material weakness disclosures and audit fees. *Auditing: A Journal of Practice & Theory*, 25(1): 99-114.

Ramsay, I. 2001. *Independence of Australian company auditors: Review of current Australian requirements and proposals for reform*. Retrieved from http://law.unimelb.edu.au/__data/assets/pdf_file/0020/1710083/114-full-report1.pdf

Reber, A. S. 1995. *The Penguin dictionary of psychology*. New York, NY: Penguin Press.

Reimers, J. L., and Butler, S. A. 1992. The effect of outcome knowledge on auditors' judgmental evaluations. *Accounting, Organizations and Society*, 17(2): 185-194.

Reyna, V. F., and Brainerd, C. J. 2008. Numeracy, ratio bias, and denominator neglect in judgments of risk and probability. *Learning and Individual Differences*, 18(1): 89-107.

Reyna, V. F., Nelson, W. L., Han, P. K., and Dieckmann, N. F. 2009. How numeracy influences risk comprehension and medical decision making. *Psychological Bulletin*, 135(6): 943-973.

Reynolds, T. H., and Flores, A. A. 1989. *Foreign law: Current sources of codes and legislation in jurisdictions of the world*. Littleton, CO: F.B. Rothman & Company.

Rezaee, Z., Espahbodi, R., Espahbodi, P., and Espahbodi, H. 2012. Firm characteristics and stock price reaction to SOX 404 compliance. *Abacus*, 48(4): 473-501.

Rice, S. C., and Weber, D. P. 2012. How effective is internal control reporting under SOX 404? Determinants of the (non-)disclosure of existing material weaknesses. *Journal of Accounting Research*, 50(3): 811-843.

Robiner, W. N., Saltzman, S. R., Hoberman, H. M., and Schirvar, J. A. 1997. Psychology supervisors' training, experiences, supervisory evaluation and self-rated competence. *The Clinical Supervisor*, 16(1): 117-144.

Sanna, L. J., Schwarz, N., and Small, E. M. 2002. Accessibility experiences and the hindsight bias: I knew it all along versus it could never have happened. *Memory & Cognition*, 30(8): 1288-1296.

Schelluch, P., and Gay, G. 2006. Assurance provided by auditors' reports on prospective financial information: Implications for the expectation gap. *Accounting & Finance*, 46(4): 653-676.

Schneider, A., and Church, B. K. 2008. The effect of auditors' internal control opinions on loan decisions. *Journal of Accounting and Public Policy*, 27(1): 1-18.

Scholten, L., van Knippenberg, D., Nijstad, B. A., and De Dreu, C. K. W. 2007. Motivated information processing and group decision-making: Effects of process accountability on information processing and decision quality. *Journal of Experimental Social Psychology*, 43(4): 539-552.

Schultz, J. J., and Reckers, P. M. J. 1981. The impact of group processing on selected audit disclosure decisions. *Journal of Accounting Research*, 19(2): 482-501.

Seetharaman, A., Gul, F. A., and Lynn, S. G. 2002. Litigation risk and audit fees: Evidence from U.K. firms cross-listed on U.S. markets. *Journal of Accounting and Economics*, 33(1): 91-115.

Shadish, W. R., Cook, T. D., and Campbell, D. T. 2002. *Experimental and quasi-experimental designs for generalized causal inference*. Belmont, CA: Wadsworth Cengage Learning.

Sharma, D. S., Boo, E., and Sharma, V. D. 2008. The impact of non-mandatory corporate governance on auditors' client acceptance, risk and planning judgments. *Accounting and Business Research*, 38(2): 105-120.

Sherif, M., and Hovland, C. I. 1961. *Social judgment: Assimilation and contrast effects in communication and attitude change.* Oxford, England: Yale University Press.

Simon, D., and Francis, J. 1988. The effects of auditor changes on audit fees: Tests of price cutting and price recovery. *The Accounting Review*, 63(2): 255-269.

Simunic, D. A. 1980. The pricing of audit services: Theory and evidence. *Journal of Accounting Research*, 18(1): 27-35.

Simunic, D. A., and Stein, M. T. 1996. Impact of litigation risk on audit pricing: A review of the economics and the evidence. *Auditing: A Journal of Practice & Theory*, 15(Supplement): 119-134.

Sirois, L., Bedard, J., and Bera, P. 2014. *The informational value of key audit matters in the auditor's report: Evidence from an eye tracking study.* Working Paper. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2469905

Skinner, D. C. 2006. Director responsibilities and liability exposure in the era of Sarbanes-Oxley. *The Practical Lawyer*, 52(3): 29-31.

Skowronski, J. J., and Carlston, D. E. 1989. Negativity and extremity biases in impression formation: A review of explanations. *Psychological Bulletin*, 105(1): 131-142.

Smieliauskas, W., Craig, R., and Amernic, J. 2008. A proposal to replace 'true and fair view' with 'acceptable risk of material misstatement. *Abacus*, 44(3): 225-250.

Sprinkle, G. B. 2000. The effect of incentive contracts on learning and performance. *The Accounting Review*, 75(3): 299-326.

Stanovich, K. E., and West, R. F. 2000. Individual differences in reasoning: Implications for the rationality debate? *Behavioral and Brain Sciences*, 23(5): 645-665.

Steinbart, P. J. 1987. The construction of a rule-based expert system as a method for studying materiality judgments. *The Accounting Review*, 62(1): 97-116.

Stenka, R. I., and Taylor, P. 2010. Setting UK standards on the concept of control: An analysis of lobbying behaviour. *Accounting and Business Research*, 40(2): 109-30.

Stice, J. D. 1991. Using financial and market information to identify pre-engagement factors associated with lawsuits against auditors. *The Accounting Review*, 66(3): 516-533.

Stone, D. N., and Schkade, D. A. 1991. Numeric and linguistic information representation in multiattribute choice. *Organizational Behavior and Human Decision Processes*, 49(1): 42-59.

Stone, D. N., and Dilla, W. N. 1994. When numbers are better than words: The joint effects of response representation and experience on inherent risk judgments. *Auditing: A Journal of Practice & Theory*, 13(1): 1-19.

Sutton, T. G. 1984. Lobbying of accounting standard-setting bodies in the U.K. and the U.S.A.: A downsian analysis. *Accounting, Organizations and Society*, 9(1): 81-95.

Tackett, J., Wolf, F., and Claypool, G. 2004. Sarbanes-Oxley and audit failure: A critical examination. *Managerial Auditing Journal*, 19(3): 340-350.

Tandy, P. R., and Wilburn, N. L. 1992. Constituent participation in standard-setting: The FASB's first 100 statements. *Accounting Horizons*, 9(2): 47-58.

Tandy, P. R., and Wilburn, N. L. 1996. The academic community's participation in standard setting: Submission of comment letters on SFAS No's. 1-117. *Accounting Horizons*, 10(3): 92-111.

Taylor, M. H., and Simon, D. T. 1999. Determinants of audit fees: The importance of litigation, disclosure, and regulatory burdens in audit engagements in 20 countries. *The International Journal of Accounting*, 34(3): 375-388.

Taylor, S. E. 1991. Asymmetrical effects of positive and negative events: The mobilization-minimization hypothesis. *Psychological Bulletin*, 110(1): 67-85.

The World Bank. 2010. *Doing business indicators.* Retrieved from http://www.doingbusiness.org/custom-query.

The World Bank. 2013. *Comments on reporting on audited financial statements: Proposed new and revised International Standards on Auditing.* Retrieved from https://www.ifac.org/publications-resources/reporting-audited-financial-statements-proposed-new-and-revised-international

Toivonen, J., Kleemola, A., Vanharanta, H., and Visa, A. 2006. Improving logistical decision making-applications for analysing qualitative and quantitative information. *Journal of Purchasing and Supply Management*, 12(3): 123-134.

Trotman, K. 2006. *Professional judgment: Are auditors being held to a higher standard than other professionals?* Sydney, NSW: The Institute of Chartered Accountants in Australia.

Trotman, K. T., Wright, A. M., and Wright, S. 2009. An examination of the effects of auditor rank on pre-negotiation judgments. *Auditing: A Journal of Practice & Theory*, 28(1): 191-203.

Tsui, J., Jaggi, B., and Gul, F. 2001. CEO domination, discretionary accruals and audit fees. *Journal of Accounting, Auditing and Finance*, 16(2): 189-207.

Turner, E. 2013. *Dramatic changes to the auditor's report will affect companies large and small.* Retrieved from https://www.cpacanada.ca/en/connecting-and-news/blogs/audit-blog/2013/August/dramatic-changes-to-the-auditors-report-will-affect-companies-large-and-small-but-is-it-worth-it

Tutticci, I., Dunstan, K., and Holmes, S. 1994. Respondent lobbying in the Australian accounting standard-setting process: ED 49 (A Case Study). *Accounting, Auditing and Accountability Journal*, 7(2): 86-104.

Tversky, A., and Kahneman, D. 1974. Judgment under uncertainty: Heuristics and biases. *Science*, 185(4157): 1124-1131.

Tversky, A., and Kahneman, D. 1981. The framing of decisions and the psychology of choice. *Science*, 211(4481): 453-458.

Tversky, A., and Kahneman, D. 1991. Loss aversion in riskless choice: A reference-dependent model. *The Quarterly Journal of Economics*, 106(4): 1039-1061.

United Kingdom Financial Reporting Council (U.K. FRC). 2013. *Reporting on audited financial statements.* Retrieved from https://www.ifac.org/publications-resources/reporting-audited-financial-statements-proposed-new-and-revised-international

Vanstraelen, A., Schelleman, C., Meuwissen, R., and Hofmann, I. 2012. The audit reporting debate: Seemingly intractable problems and feasible solutions. *European Accounting Review*, 21(2): 193-215.

Viswanathan, M. 1993. Measurement of individual differences in preference for numerical information. *Journal of Applied Psychology*, 78(5): 741-752.

Viswanathan, M., and Childers, T. L. 1997. '5' calories or 'low' calories? What do we know about using numbers or words to describe products and where do we go from here? *Advances in Consumer Research*, 24(1): 412-418.

Vollmer, H. 2007. How to do more with numbers: Elementary stakes, framing, keying, and the three-dimensional character of numerical signs. *Accounting, Organizations and Society*, 32(6): 577-600.

Ward, B. H. 1976. An investigation of the materiality construct in auditing. *Journal of Accounting Research*, 14(1): 138-152.

Watts, R. L., and Zimmerman, J. L. 1978. Towards a positive accounting theory of the determination of accounting standards. *The Accounting Review*, 53(1): 112-134.

Wingate, M. L. 1997. An examination of cultural influence on audit environments. *Research in Accounting Regulation*, 11(Supplement): 129-148.

Wood, M., McLisky, C., and Sharrock, C. 2011. Personal risks facing board members in Asia Pacific. Retrieved from https://www.financierworldwide.com/personal-risks-facing-board-members-in-asia-pacific/#.WbisP61L1sM

Wooldridge, J. M., 2009. *Introductory econometrics: A modern approach.* Mason, OH: South-Western Cengage Learning.

Woolsey, S. M. 1954a. Development of criteria to guide the accountant in judging materiality. *Journal of Accountancy,* 97(2): 167-173.

Woolsey, S. M. 1954b. Judging materiality in determining requirements for full disclosure. *Journal of Accountancy,* 98(6): 745-750.

Wu, X. 2012. Corporate governance and audit fees: Evidence from companies listed on the Shanghai Stock Exchange. *China Journal of Accounting Research,* 5(4): 321-342.

Yalch, R. F., and Elmore-Yalch, R. 1984. The effect of numbers on the route to persuasion. *Journal of Consumer Research,* 11(1): 522-527.

Yao, D. F. T., Percy, M., and Hu, F. 2015. Fair value accounting for non-current assets and audit fees: Evidence from Australian companies. *Journal of Contemporary Accounting & Economics*, 11(1): 31-45.

Yatim, P., Kent, P., and Clarkson, P. 2006. Governance structures, ethnicity, and audit fees of Malaysian listed firms. *Managerial Auditing Journal*, 21(7): 757-782.

Yen, S. H., Chang, Y. S., and Chen, H. L. 2013. Does the Signature of a CPA matter? Evidence from Taiwan. *Research in Accounting Regulation,* 25(2): 230-235.

Yoon, H. J., and Tinkham, S. F. 2013. Humorous threat persuasion in advertising: The effects of humor, threat intensity, and issue involvement. *Journal of Advertising,* 42(1): 30-41.

Zaichkowsky, J. L. 1985. Measuring the involvement construct. *Journal of Consumer Research*, 341-352.

Zaichkowsky, J. L. 1994. The personal involvement inventory: Reduction, revision, and application to advertising. *Journal of Advertising,* 23(4): 59-70.

Zaman, M., Hudaib, M., and Haniffa, R. 2011. Corporate governance quality, audit fees and non-audit services fees. *Journal of Business Finance and Accounting,* 38(1): 165-197.

Zhang, Y., Zhou, J., and Zhou, N. 2007. Audit committee quality, auditor independence, and internal control weaknesses. *Journal of Accounting and Public Policy,* 26(3): 300-327.

Zimbelman, M. F. 1997. The effects of SAS No. 82 on auditors' attention to fraud risk factors and audit planning decisions. *Journal of Accounting Research*, 35 (Special Edition): 75-97.

APPENDIX 1

Ethics Approval Letters

MACQUARIE
University

PRANIL PRASAD <pranil.prasad@students.mq.edu.au>

Approved - 5201401145

1 message

Mrs Yanru Ouyang <fbe-ethics@mq.edu.au> Mon, Dec 1, 2014 at 3:35 PM
To: Mr Parmod Chand <parmod.chand@mq.edu.au>
Cc: Ms Meiting Lu <meiting.lu@mq.edu.au>, Mr Pranil Prasad <pranil.prasad@students.mq.edu.au>

Dear Mr Chand,

RE: 'Auditor Preference for quantitative Information and its Influence on Materiality Judgment ' (Ref: 5201401145)

The above application was reviewed by the Faculty of Business & Economics Human Research Ethics Sub Committee. Approval of the above application is granted, effective "1/12/2014". This email constitutes ethical approval only.

This research meets the requirements of the National Statement on Ethical Conduct in Human Research (2007). The National Statement is available at the following web site:

http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/e72.pdf.

The following personnel are authorised to conduct this research:

Mr Parmod Chand
Mr Pranil Prasad
Ms Meiting Lu

NB. STUDENTS: IT IS YOUR RESPONSIBILITY TO KEEP A COPY OF THIS APPROVAL EMAIL TO SUBMIT WITH YOUR THESIS.

Please note the following standard requirements of approval:

1. The approval of this project is conditional upon your continuing compliance with the National Statement on Ethical Conduct in Human Research (2007).

2. Approval will be for a period of five (5) years subject to the provision of annual reports.

Progress Report 1 Due: 1st Dec 2015
Progress Report 2 Due: 1st Dec 2016
Progress Report 3 Due: 1st Dec 2017
Progress Report 4 Due: 1st Dec 2018
Final Report Due: 1st Dec 2019

NB. If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. If the project has been discontinued or not commenced for any reason, you are also required to submit a Final Report for the project.

Progress reports and Final Reports are available at the following website:
http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

3. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report and submit a new application for the project. (The five year limit on renewal of approvals allows the Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).

4. All amendments to the project must be reviewed and approved by the Committee before implementation. Please complete and submit a Request for Amendment Form available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

5. Please notify the Committee immediately in the event of any adverse effects on participants or of any unforeseen events that affect the continued ethical acceptability of the project.

6. At all times you are responsible for the ethical conduct of your research in accordance with the guidelines established by the University. This information is available at the following websites:

http://www.mq.edu.au/policy/
http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/policy

If you will be applying for or have applied for internal or external funding for the above project it is your responsibility to provide the Macquarie University's Research Grants Management Assistant with a copy of this email as soon as possible. Internal and External funding agencies will not be informed that you have approval for your project and funds will not be released until the Research Grants Management Assistant has received a copy of this email.

If you need to provide a hard copy letter of approval to an external organisation as evidence that you have approval, please do not hesitate to contact the FBE Ethics Committee Secretariat, via fbe-ethics@mq.edu.au or 9850 4826.

Please retain a copy of this email as this is your official notification of ethics approval.

Yours sincerely,

Parmod Chand
Chair, Faculty of Business and Economics Ethics Sub-Committee
Faculty of Business and Economics
Level 7, E4A Building
Macquarie University
NSW 2109 Australia
T: +61 2 9850 4826
F: +61 2 9850 6140
www.businessandeconomics.mq.edu.au/

MACQUARIE University

PRANIL PRASAD <pranil.prasad@students.mq.edu.au>

Ethics application approved 5201600911

1 message

FBE Ethics <fbe-ethics@mq.edu.au> Fri, Dec 23, 2016 at 11:13 AM
To: Parmod Chand <parmod.chand@mq.edu.au>
Cc: Nikola Balnave <nikki.balnave@mq.edu.au>, Meiting Lu <meiting.lu@mq.edu.au>, Mr Pranil Prasad <pranil.prasad@students.mq.edu.au>

Dear Associate Professor Chand,

RE: 'An Examination of Auditor's Judgement on Reporting of Key Audit Matters in the Auditors' Report' (Ref: 5201600911)

The above application was reviewed by the Faculty of Business & Economics Human Research Ethics Sub Committee. Approval of the above application is granted, effective "1/12/2016". This email constitutes ethical approval only.

This research meets the requirements of the National Statement on Ethical Conduct in Human Research (2007). The National Statement is available at the following web site:

http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/e72.pdf.

The following personnel are authorised to conduct this research:

Associate Professor Parmod Chand
Doctor Meiting Lu
Mister Pranil Prasad

NB. STUDENTS: IT IS YOUR RESPONSIBILITY TO KEEP A COPY OF THIS APPROVAL EMAIL TO SUBMIT WITH YOUR THESIS.

Please note the following standard requirements of approval:

1. The approval of this project is conditional upon your continuing compliance with the National Statement on Ethical Conduct in Human Research (2007).

2. Approval will be for a period of five (5) years subject to the provision of annual reports.

Progress Report 1 Due: 1st December 2017
Progress Report 2 Due: 1st December 2018
Progress Report 3 Due: 1st December 2019
Progress Report 4 Due: 1st December 2020
Final Report Due: 1st December 2021

NB. If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. If the project has been discontinued or not commenced for any reason, you are also required to submit a Final Report for the project.

Progress reports and Final Reports are available at the following website:
http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

3. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report and submit a new application for the project. (The five year limit on renewal of approvals allows the Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).

4. All amendments to the project must be reviewed and approved by the Committee before implementation. Please complete and submit a Request for Amendment Form available at the following website:

http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms

5. Please notify the Committee immediately in the event of any adverse effects on participants or of any unforeseen events that affect the continued ethical acceptability of the project.

6. At all times you are responsible for the ethical conduct of your research in accordance with the guidelines established by the University. This information is available at the following websites:

http://www.mq.edu.au/policy/
http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/policy

If you will be applying for or have applied for internal or external funding for the above project it is your responsibility to provide the Macquarie University's Research Grants Management Assistant with a copy of this email as soon as possible. Internal and External funding agencies will not be informed that you have approval for your project and funds will not be released until the Research Grants Management Assistant has received a copy of this email.

If you need to provide a hard copy letter of approval to an external organisation as evidence that you have approval, please do not hesitate to contact the FBE Ethics Committee Secretariat, via fbe-ethics@mq.edu.au or 9850 4826.

Please retain a copy of this email as this is your official notification of ethics approval.

Yours sincerely,

Dr. Nikola Balnave

Chair, Faculty of Business and Economics Ethics Sub-Committee

FBE Ethics Secretariat

Faculty of Business and Economics
Level 5, E4A Building
Macquarie University
NSW 2109 Australia
T: +61 2 9850 4826
F: +61 2 9850 6140
www.businessandeconomics.mq.edu.au/

Appendix 2

Research Instrument – Paper 2

(Version 1 – Control Version)

Department of Accounting and Corporate Governance
Faculty of Business and Economics
Macquarie University NSW 2109
Phone: +61 2 9850 6137
Fax: +61 2 9850 8497
Email: parmod.chand@mq.edu.au

Participant Information Form

JUDGEMENTS OF AUDITORS

You are invited to participate in a study which investigates judgements made by auditors. The purpose of this study is to examine the impact of various factors affecting the judgements of auditors on materiality.

The study is being conducted by Pranil Prasad [Department of Accounting and Corporate Governance, Macquarie University, NSW, Australia, pranil.prasad@students.mq.edu.au, Ph: (614) 2435 7440]. It is being conducted to meet the requirements of Doctor of Philosophy in Accounting and Corporate Governance under the supervision of Associate Professor Parmod Chand [parmod.chand@mq.edu.au, Ph: (612) 9850 6137] and Dr Meiting Lu [meiting.lu@mq.edu.au, Ph: (612) 9850 1928] of the Department of Accounting and Corporate Governance, Macquarie University.

If you decide to participate, you will be asked to complete a questionnaire. The questionnaire has three parts. Part one collects demographic data about the respondents. Part two consists of a small case study, and you are asked to provide your judgement on a scenario concerning the materiality of an audit adjustment. Part three consists of a series of questions on your preferences for using different types of information. It will take approximately 20-25 minutes to complete the questionnaire.

As you participate in this study as an individual, you are not considered to be a representative of your work organization or institution. The information provided by you represents your personal views only and not the views of your workplace. No sensitive personal information will be collected. Any information or personal details gathered in this study are confidential, except as required by law. No individual will be identified in any publication of the results. Data will be analysed in aggregate form, held and accessed solely by the researchers (Associate Professor Parmod Chand, Dr Meiting Lu and Pranil Prasad) and will not be used for any other purpose. The results of this study will be incorporated into Pranil Prasad's PhD thesis, which will be available at the Macquarie University Library for public access. A summary of the research results can be made available to you on request by email to the researchers.

Participation in this survey is entirely voluntary. If you could complete the attached questionnaire, your time and co-operation will be greatly appreciated. If you do not wish to participate, simply do not return the questionnaire. Please note that completion and return of the questionnaire will be regarded as consent to use the information for research purposes.[1]

Please answer all questions. Your response is very important for the research which will contribute to understanding the factors affecting the professional judgement of auditors.

---

[1] The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics (telephone [02] 9850 7854, email: ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Section 1

YOUR PERSONAL PROFILE

Please respond to the following questions so that a profile for respondents can be developed.

1.	**Are you:** Male ☐ Female ☐
2.	**How old are you?** ☐ Under 20 years ☐ 20-24 ☐ 25-29 ☐ 30-34 ☐ 35-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over
3.	**In total, how many years of formal education (primary, secondary and tertiary) did you complete?** ☐ Less than 15 years ☐ 15 years ☐ 16 years ☐ 17 years ☐ 18 years or over
4.	**In which country did you complete your:** **Primary education** __________ **Secondary education** ____________ **Tertiary education** _________
5.	**What is your ethnicity?** ☐ Anglo-Celtic ☐ Chinese ☐ Indian __________________ Other (please specify)
6.	**Are you a member of:** ☐ ICAA ☐ CPA Australia ☐ IPA ____________ Other (please specify)
7.	**How many years of professional experience do you have as a qualified accountant?** _______ Years
8.	**In which of the following areas do you specialize or work?** ☐ Audit ☐ Accounting ☐ Tax ☐ Consulting _________________ Other (please specify)
9.	**What is your current position in your firm?** __________________
10.	**In which of the following industry(s) do you specialize or work?** ☐ Consumer Discretionary ☐ Consumer Staples ☐ Information Technology ☐ Energy ☐ Healthcare ☐ Telecommunication services ☐ Financials ☐ Industrials ☐ Metals and mining ☐ Utilities ☐ Materials ☐ Other (please specify) __________
11.	**In which type of firm/organization do you work?** ☐ Big 4 Accounting Firm ☐ Non-Big 4 Accounting Firm ____________ Other (please specify)
12.	**How large (in terms of qualified professional accountants) is the firm/organization in which you work?** ☐ 1-5 ☐ 6-20 ☐ 21-100 ☐ Over 100
13.	**How familiar are you with Australian Auditing Standards (ASAs)?** ☐ Very familiar ☐ Familiar ☐ Somewhat familiar ☐ Not familiar
14.	**How frequently do you refer to ASAs in your professional practice?** ☐ Often ☐ Sometimes ☐ Seldom ☐ Never

- 2 -

Section 2

CASE STUDY

Below is a scenario that requires your judgement on the materiality of an audit adjustment. The required judgement is based on Australian Auditing Standards (ASAs). You may refer to the relevant ASA in making your judgement.

The Audit Engagement

Assume that you are the manager in-charge of the audit engagement of your client, Dax Ltd, for the financial year ended 30 June 2015. You are at the final stage of the audit and have completed the review of the work papers prepared by the audit team. You are required to make some judgements and decisions on the proposed audit adjustments for the client. To assist you in performing the task, some background description of the client and extracts of its financial statements are provided below.

Client Background

Dax Ltd is a medium sized publicly-traded company that manufactures air conditioning and refrigeration equipment for industrial, commercial and domestic applications. The company sells its products through its own chain of retail stores and through independent retailers around Australia. The air conditioning and refrigeration industry is characterised by intense competition, which results in limited potential for growth and thin margins. The principal competitive factors are product performance, technology, customer service, and price. Dax Ltd was one of the leading air conditioning and refrigeration equipment supplier in the market not so long ago, however, the availability of cheaper imports and mergers and acquisitions amongst competitors has led to a loss of market share for Dax Ltd.

The financial results of Dax Ltd have been unstable in recent years with significant variations in sales and income numbers. The general economic condition in the country is also sluggish. However, Dax Ltd has been able to meet its analysts' earnings forecast for each of the last 5 years. The company is closely followed by analysts and the earnings per share forecast for the current financial year is $1.00. The management team at Dax Ltd are paid base salaries and are rewarded with bonuses and incentives based on the financial results. The top level managers are paid bonuses if return on assets is above the 10 per cent threshold.

In efforts to boost financial performance and sales, Dax Ltd has introduced a number of strategies. The management has decided to focus their attention to the domestic air conditioning and refrigeration appliances market. One of the strategies involves offering customers lucrative credit terms. Currently, customers buying products through the retail chains have to make a deposit of 10 percent and start payments 30 days after purchases on a monthly basis. The issue is that many of the competitors offer better credit terms and thus win away customers. As a result, management decided to offer zero deposit and a payment holiday of up to six months. They have also decided to decentralize the credit approval process to each of the individual stores so that applications can be processed faster and customer turn-around times shorter. These changes have boosted sales performance at most of the retail outlets around Australia. However, this has also significantly increased the level of accounts receivables in the balance sheet and increased pressure on the cash flow position of the company.

The management of Dax Ltd were concerned with the cash position towards the end of the financial year. In efforts to secure the cash position, Dax Ltd applied to their bankers for an extra line of credit. This application has been approved with conditions that the company will provide the bank its audited financial reports within 3 months of the financial year end and maintain the debt to equity ratio below and profitability ratio above a certain threshold. In particular their requirement is for Dax Ltd to maintain the debt to equity ratio of 2.5:1 and return on asset of at least 10 per cent.

Your firm has been auditing Dax Ltd for a number of years and has maintained a good working relationship with its management. Provided below are extracts from the draft financial statements of Dax Ltd for the current period.

Financial Statement (Extracts) – Dax Ltd

Consolidated Income Statement

	30/06/2015 (Before Audit Adjustments)
Revenues	$200,000,000
Cost of sales	120,000,000
Gross profit	80,000,000
Depreciation and amortization	24,850,000
Selling and Administrative expenses	22,685,000
Interest expenses	3,500,000
Other expenses	13,965,000
Net profit before tax	15,000,000
Provision for income tax	5,000,000
Net profit after tax	10,000,000
Earnings per share	**1.00**
Number of ordinary shares	10,000,000

Consolidated Cash Flow Statement

	30/06/2015 (Before Audit Adjustments)
Cash flows from operating activities	(40,500,000)
Cash flows from investing activities	(20,500,000)
Cash flows from financing activities	30,450,000
Increase in cash and equivalents	(30,550,000)
Cash and equivalents, beginning of year	40,000,000
Cash and equivalents, end of year	**9,450,000**

Consolidated Balance Sheet

	30/06/2015 (Before Audit Adjustments)
Cash and equivalents	9,450,000
Receivables (net)	35,000,000
Inventories (net)	40,000,000
Other current assets	13,550,000
Total current assets	98,000,000
Non-current assets	52,000,000
Total assets	**150,000,000**
Accounts payable and accrued liabilities	10,000,000
Short-term borrowings and current maturities of long-term debt	20,000,000
Total current liabilities	30,000,000
Long-term debt (excluding current maturities)	70,000,000
Other long-term liabilities	7,000,000
Total liabilities	107,000,000
Total shareholders' equity	43,000,000
Total liabilities and shareholders' equity	**150,000,000**

Current Situation

Assume that there is only one proposed audit adjustment to be considered. This proposed audit adjustment relates to an under provision of the allowance for doubtful debts. Dax Ltd has set the allowance for doubtful debts at $350,000. This level of allowance for doubtful debts was determined using historical data on bad debts and a review of the company's accounts receivables aging report.

You have reviewed the collectability of Dax Ltd's accounts receivables as part of the audit. After a review of the company's controls on credit sales and cash collections, prior experience on debt collection, financial status of its customers and the general economic conditions you have come to the conclusion that Dax Ltd has under provided for doubtful debts. Your audit found that the program to offer customers no deposits and payment holiday of up to six months has increased the risk of non-collection of customer accounts. Your review also revealed that certain outlets had sold goods to customers with poor previous credit history to improve their sales performance. You estimate that Dax Ltd's allowance estimate should be $1,000,000.

Dax Ltd's management has indicated that the proposed audit adjustment is not material to the financial statements as a whole and that they do not wish to record the audit adjustment. Assume that you have reviewed the supporting work paper documentation and are satisfied with the work done related to this proposed audit adjustment. Additional work has been carried out where necessary and no further misstatements are detected.

Please answer the following questions relating to the proposed audit adjustment by marking an "X" on the scale corresponding to your judgement:

1. To what extent do you consider the proposed audit adjustment to be material to Dax Ltd's financial statements?

Judgement	Not material at all						Extremely material
	1	2	3	4	5	6	7

2. What is your most likely decision regarding the disposition of the proposed audit adjustment (i.e., whether to waive (not record) or book (record) the proposed adjustment)? Please tick one.

[ ] **Waive the proposed audit adjustment (Not Record)** [ ] **Book the proposed audit adjustment (Record)**

3. How confident are you in your decision (in Q.2) above?

Judgement	Not confident at all						Extremely confident
	1	2	3	4	5	6	7

4. Please indicate whether the following pieces of information were useful/not useful to your decision making process.

Please **do not go back to change any of your judgements** in parts 1-3 above in light of these information.

Please place a tick in the appropriate box where 1 denotes that the information was not useful at all and 10 denotes that the information was very useful.

Information	**Not Useful at all**									**V ery Useful**
1. The audit adjustment is less than 5 percent of net profit before tax.	1	2	3	4	5	6	7	8	9	10
2. The booking (recording) of the audit adjustment will affect compliance with debt covenants or other contractual requirements.	1	2	3	4	5	6	7	8	9	10
3. The audit adjustment is less than 1 per cent of total assets.	1	2	3	4	5	6	7	8	9	10
4. The audit adjustment, if not booked (not recorded) will mask a change in earnings or other trends, especially in the context of general economic and industry conditions.	1	2	3	4	5	6	7	8	9	10
5. The audit adjustment is less than 3 per cent of net assets.	1	2	3	4	5	6	7	8	9	10
6. The audit adjustment has the effect of increasing management compensation, for example by ensuring that the requirements for the award of bonuses or other incentives are satisfied.	1	2	3	4	5	6	7	8	9	10
7. The audit adjustment is less than 3 per cent of EBITDA (earnings before interest, tax, depreciation and amortisation).	1	2	3	4	5	6	7	8	9	10
8. The booking (recording) of the audit adjustment will affect ratios used to evaluate the entity's financial position, results of operations and cash flows.	1	2	3	4	5	6	7	8	9	10
9. The audit adjustment is less than 1 per cent of total revenue.	1	2	3	4	5	6	7	8	9	10
10. The audit adjustment is significant having regard to the auditor's understanding of known previous communications to users, for example in relation to forecast earnings.	1	2	3	4	5	6	7	8	9	10

5. **If your decision (in Q.2) is to book (i.e., not to waive) the audit adjustment, would you qualify the audit opinion if Dax Ltd's management insists on not recording the proposed audit adjustment?**

[ ] **Yes** [ ] **No**

6. **How confident are you in your decision (in Q.5) above?**

Judgement	Not confident at all						Extremely confident
	1	2	3	4	5	6	7

Please indicate how motivated you were to perform well on this case on the following scale:

Not at All			Moderately Motivated			Extremely Motivated
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Please indicate how much effort you have expended on this case on the following scale:

Very Little Effort			Moderate Effort			A Great Deal of Effort
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Please indicate the level of complexity of this case on the following scale:

Not Complex			Moderately Complex			Extremely Complex
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Please indicate your level of familiarity in dealing with similar cases like this on the following scale:

Not Familiar			Moderately Familiar			Very Familiar
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Section 3

I tried to take into consideration all possible perspectives:

Rarely 1	2	3	4	Very Much 5
☐	☐	☐	☐	☐

I tried to make judgements and decisions as thorough as possible:

Absolutely disagree 1	2	3	4	Absolutely agree 5
☐	☐	☐	☐	☐

I thought deeply before making a decision:

Seldom 1	2	3	4	All the time 5
☐	☐	☐	☐	☐

Please mark an "X" along the scale, indicating your preference for each of the pairs of statements.

To me, materiality judgement is:

Important _____ : _____ : _____ : _____ : _____ : _____ : _____ Unimportant

Boring _____ : _____ : _____ : _____ : _____ : _____ : _____ Interesting

Relevant _____ : _____ : _____ : _____ : _____ : _____ : _____ Irrelevant

Exciting _____ : _____ : _____ : _____ : _____ : _____ : _____ Unexciting

Means nothing _____ : _____ : _____ : _____ : _____ : _____ : _____ Means a lot to me

Appealing _____ : _____ : _____ : _____ : _____ : _____ : _____ Unappealing

Fascinating _____ : _____ : _____ : _____ : _____ : _____ : _____ Mundane

Worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ Valuable

Involving _____ : _____ : _____ : _____ : _____ : _____ : _____ Uninvolving

Not needed _____ : _____ : _____ : _____ : _____ : _____ : _____ Needed

TYPE OF INFORMATION

Please indicate how strongly you agree or disagree with each of the statements (Please circle one answer in each line across)	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
I enjoy work that requires the use of numbers	1	2	3	4	5	6	7
I think quantitative information is difficult to understand	1	2	3	4	5	6	7
I find it satisfying to solve day-to-day problems involving numbers	1	2	3	4	5	6	7
Numerical information is very useful in everyday life	1	2	3	4	5	6	7
I prefer not to pay attention to information involving numbers	1	2	3	4	5	6	7
I think more information should be available in numerical form	1	2	3	4	5	6	7
I don't like to think about issues involving numbers	1	2	3	4	5	6	7
Numbers are not necessary for most situations	1	2	3	4	5	6	7
Thinking is enjoyable when it does not involve quantitative information	1	2	3	4	5	6	7
I like to make calculations using numerical information	1	2	3	4	5	6	7
Quantitative information is vital for accurate decisions	1	2	3	4	5	6	7
I enjoy thinking about issues that do not involve numerical information	1	2	3	4	5	6	7
It helps me to think if I put down information as numbers	1	2	3	4	5	6	7

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
Understanding numbers is as important in daily life as reading or writing	1	2	3	4	5	6	7
I easily lose interest in graphs, percentages, and other quantitative information	1	2	3	4	5	6	7
I don’t find numerical information to be relevant for most situations	1	2	3	4	5	6	7
I think it is important to learn and use numerical information to make well-informed decisions	1	2	3	4	5	6	7
Numbers are redundant for most situations	1	2	3	4	5	6	7
It is a waste of time to learn information containing a lot of numbers	1	2	3	4	5	6	7
I like to go over numbers in my mind	1	2	3	4	5	6	7

Please record the approximate time you spent to complete this survey:

Time Spent:

Thank you for taking the time to complete this instrument. Your assistance is very much appreciated. If you have any further comments, please provide them in the space provided.

Please ensure that you have answered every question. Missing questions will mean all of your responses are unusable.

Pranil Prasad
Department of Accounting and Corporate Governance
Faculty of Business and Economics
Macquarie University
NSW 2109
Australia.

Thank you for your participation!

Appendix 2

Research Instrument – Paper 2

(Version 2 – Simple Intervention)

Department of Accounting and Corporate Governance
Faculty of Business and Economics
Macquarie University NSW 2109
Phone: +61 2 9850 6137
Fax: +61 2 9850 8497
Email: parmod.chand@mq.edu.au

Participant Information Form

JUDGEMENTS OF AUDITORS

You are invited to participate in a study which investigates judgements made by auditors. The purpose of this study is to examine the impact of various factors affecting the judgements of auditors on materiality.

The study is being conducted by Pranil Prasad [Department of Accounting and Corporate Governance, Macquarie University, NSW, Australia, pranil.prasad@students.mq.edu.au, Ph: (614) 2435 7440]. It is being conducted to meet the requirements of Doctor of Philosophy in Accounting and Corporate Governance under the supervision of Associate Professor Parmod Chand [parmod.chand@mq.edu.au, Ph: (612) 9850 6137] and Dr Meiting Lu [meiting.lu@mq.edu.au, Ph: (612) 9850 1928] of the Department of Accounting and Corporate Governance, Macquarie University.

If you decide to participate, you will be asked to complete a questionnaire. The questionnaire has three parts. Part one collects demographic data about the respondents. Part two consists of a small case study, and you are asked to provide your judgement on a scenario concerning the materiality of an audit adjustment. Part three consists of a series of questions on your preferences for using different types of information. It will take approximately 20-25 minutes to complete the questionnaire.

As you participate in this study as an individual, you are not considered to be a representative of your work organization or institution. The information provided by you represents your personal views only and not the views of your workplace. No sensitive personal information will be collected. Any information or personal details gathered in this study are confidential, except as required by law. No individual will be identified in any publication of the results. Data will be analysed in aggregate form, held and accessed solely by the researchers (Associate Professor Parmod Chand, Dr Meiting Lu and Pranil Prasad) and will not be used for any other purpose. The results of this study will be incorporated into Pranil Prasad's PhD thesis, which will be available at the Macquarie University Library for public access. A summary of the research results can be made available to you on request by email to the researchers.

Participation in this survey is entirely voluntary. If you could complete the attached questionnaire, your time and co-operation will be greatly appreciated. If you do not wish to participate, simply do not return the questionnaire. Please note that completion and return of the questionnaire will be regarded as consent to use the information for research purposes.[1]

Please answer all questions. Your response is very important for the research which will contribute to understanding the factors affecting the professional judgement of auditors.

[1] The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics (telephone [02] 9850 7854, email: ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Section 1

YOUR PERSONAL PROFILE

Please respond to the following questions so that a profile for respondents can be developed.

1.	**Are you:** Male ☐ Female ☐
2.	**How old are you?** ☐ Under 20 years ☐ 20-24 ☐ 25-29 ☐ 30-34 ☐ 35-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over
3.	**In total, how many years of formal education (primary, secondary and tertiary) did you complete?** ☐ Less than 15 years ☐ 15 years ☐ 16 years ☐ 17 years ☐ 18 years or over
4.	**In which country did you complete your:** **Primary education** __________ **Secondary education** ____________ **Tertiary education** _________
5.	**What is your ethnicity?** ☐ Anglo-Celtic ☐ Chinese ☐ Indian __________________ Other (please specify)
6.	**Are you a member of:** ☐ ICAA ☐ CPA Australia ☐ IPA ____________ Other (please specify)
7.	**How many years of professional experience do you have as a qualified accountant?** _______ Years
8.	**In which of the following areas do you specialize or work?** ☐ Audit ☐ Accounting ☐ Tax ☐ Consulting _________________ Other (please specify)
9.	**What is your current position in your firm?** __________________
10.	**In which of the following industry(s) do you specialize or work?** ☐ Consumer Discretionary ☐ Consumer Staples ☐ Information Technology ☐ Energy ☐ Healthcare ☐ Telecommunication services ☐ Financials ☐ Industrials ☐ Metals and mining ☐ Utilities ☐ Materials ☐ Other (please specify) __________
11.	**In which type of firm/organization do you work?** ☐ Big 4 Accounting Firm ☐ Non-Big 4 Accounting Firm ____________ Other (please specify)
12.	**How large (in terms of qualified professional accountants) is the firm/organization in which you work?** ☐ 1-5 ☐ 6-20 ☐ 21-100 ☐ Over 100
13.	**How familiar are you with Australian Auditing Standards (ASAs)?** ☐ Very familiar ☐ Familiar ☐ Somewhat familiar ☐ Not familiar
14.	**How frequently do you refer to ASAs in your professional practice?** ☐ Often ☐ Sometimes ☐ Seldom ☐ Never

Section 2

CASE STUDY

Below is a scenario that requires your judgement on the materiality of an audit adjustment. The required judgement is based on Australian Auditing Standards (ASAs). You may refer to the relevant ASA in making your judgement.

The Audit Engagement

Assume that you are the manager in-charge of the audit engagement of your client, Dax Ltd, for the financial year ended 30 June 2015. You are at the final stage of the audit and have completed the review of the work papers prepared by the audit team. You are required to make some judgements and decisions on the proposed audit adjustments for the client. To assist you in performing the task, some background description of the client and extracts of its financial statements are provided below.

Client Background

Dax Ltd is a medium sized publicly-traded company that manufactures air conditioning and refrigeration equipment for industrial, commercial and domestic applications. The company sells its products through its own chain of retail stores and through independent retailers around Australia. The air conditioning and refrigeration industry is characterised by intense competition, which results in limited potential for growth and thin margins. The principal competitive factors are product performance, technology, customer service, and price. Dax Ltd was one of the leading air conditioning and refrigeration equipment supplier in the market not so long ago, however, the availability of cheaper imports and mergers and acquisitions amongst competitors has led to a loss of market share for Dax Ltd.

The financial results of Dax Ltd have been unstable in recent years with significant variations in sales and income numbers. The general economic condition in the country is also sluggish. However, Dax Ltd has been able to meet its analysts' earnings forecast for each of the last 5 years. The company is closely followed by analysts and the earnings per share forecast for the current financial year is $1.00. The management team at Dax Ltd are paid base salaries and are rewarded with bonuses and incentives based on the financial results. The top level managers are paid bonuses if return on assets is above the 10 per cent threshold.

In efforts to boost financial performance and sales, Dax Ltd has introduced a number of strategies. The management has decided to focus their attention to the domestic air conditioning and refrigeration appliances market. One of the strategies involves offering customers lucrative credit terms. Currently, customers buying products through the retail chains have to make a deposit of 10 percent and start payments 30 days after purchases on a monthly basis. The issue is that many of the competitors offer better credit terms and thus win away customers. As a result, management decided to offer zero deposit and a payment holiday of up to six months. They have also decided to decentralize the credit approval process to each of the individual stores so that applications can be processed faster and customer turn-around times shorter. These changes have boosted sales performance at most of the retail outlets around Australia. However, this has also significantly increased the level of accounts receivables in the balance sheet and increased pressure on the cash flow position of the company.

The management of Dax Ltd were concerned with the cash position towards the end of the financial year. In efforts to secure the cash position, Dax Ltd applied to their bankers for an extra line of credit. This application has been approved with conditions that the company will provide the bank its audited financial reports within 3 months of the financial year end and maintain the debt to equity ratio below and profitability ratio above a certain threshold. In particular their requirement is for Dax Ltd to maintain the debt to equity ratio of 2.5:1 and return on asset of at least 10 per cent.

Your firm has been auditing Dax Ltd for a number of years and has maintained a good working relationship with its management. Provided below are extracts from the draft financial statements of Dax Ltd for the current period.

Financial Statement (Extracts) – Dax Ltd

Consolidated Income Statement

	30/06/2015 (Before Audit Adjustments)
Revenues	$200,000,000
Cost of sales	120,000,000
Gross profit	80,000,000
Depreciation and amortization	24,850,000
Selling and Administrative expenses	22,685,000
Interest expenses	3,500,000
Other expenses	13,965,000
Net profit before tax	15,000,000
Provision for income tax	5,000,000
Net profit after tax	10,000,000
Earnings per share	**1.00**
Number of ordinary shares	10,000,000

Consolidated Cash Flow Statement

	30/06/2015 (Before Audit Adjustments)
Cash flows from operating activities	(40,500,000)
Cash flows from investing activities	(20,500,000)
Cash flows from financing activities	30,450,000
Increase in cash and equivalents	(30,550,000)
Cash and equivalents, beginning of year	40,000,000
Cash and equivalents, end of year	**9,450,000**

Consolidated Balance Sheet

	30/06/2015 (Before Audit Adjustments)
Cash and equivalents	9,450,000
Receivables (net)	35,000,000
Inventories (net)	40,000,000
Other current assets	13,550,000
Total current assets	98,000,000
Non-current assets	52,000,000
Total assets	**150,000,000**
Accounts payable and accrued liabilities	10,000,000
Short-term borrowings and current maturities of long-term debt	20,000,000
Total current liabilities	30,000,000
Long-term debt (excluding current maturities)	70,000,000
Other long-term liabilities	7,000,000
Total liabilities	107,000,000
Total shareholders' equity	43,000,000
Total liabilities and shareholders' equity	**150,000,000**

Current Situation

Assume that there is only one proposed audit adjustment to be considered. This proposed audit adjustment relates to an under provision of the allowance for doubtful debts. Dax Ltd has set the allowance for doubtful debts at $350,000. This level of allowance for doubtful debts was determined using historical data on bad debts and a review of the company's accounts receivables aging report.

You have reviewed the collectability of Dax Ltd's accounts receivables as part of the audit. After a review of the company's controls on credit sales and cash collections, prior experience on debt collection, financial status of its customers and the general economic conditions you have come to the conclusion that Dax Ltd has under provided for doubtful debts. Your audit found that the program to offer customers no deposits and payment holiday of up to six months has increased the risk of non-collection of customer accounts. Your review also revealed that certain outlets had sold goods to customers with poor previous credit history to improve their sales performance. You estimate that Dax Ltd's allowance estimate should be $1,000,000.

Dax Ltd's management has indicated that the proposed audit adjustment is not material to the financial statements as a whole and that they do not wish to record the audit adjustment. Assume that you have reviewed the supporting work paper documentation and are satisfied with the work done related to this proposed audit adjustment. Additional work has been carried out where necessary and no further misstatements are detected.

Please answer the following questions relating to the proposed audit adjustment by marking an "X" on the scale corresponding to your judgement:

The auditing standard, ASA 450 Evaluation of misstatements identified during the audit, requires auditors to consider both quantitative and qualitative factors when determining the materiality of uncorrected misstatements. Auditing standards in Australia are legally enforceable.

1. To what extent do you consider the proposed audit adjustment to be material to Dax Ltd's financial statements?

Judgement	Not material at all						Extremely material
	1	2	3	4	5	6	7

2. What is your most likely decision regarding the disposition of the proposed audit adjustment (i.e., whether to waive (not record) or book (record) the proposed adjustment)? Please tick one.

[ ] **Waive the proposed audit adjustment (Not Record)**

[ ] **Book the proposed audit adjustment (Record)**

3. How confident are you in your decision (in Q.2) above?

Judgement	Not confident at all						Extremely confident
	1	2	3	4	5	6	7

- 6 -

4. Please indicate whether the following pieces of information were useful/not useful to your decision making process.

Please **do not go back to change any of your judgements** in parts 1-3 above in light of these information.

Please place a tick in the appropriate box where 1 denotes that the information was not useful at all and 10 denotes that the information was very useful.

Information	Not Useful at all									V ery Useful
1. The audit adjustment is less than 5 percent of net profit before tax.	1	2	3	4	5	6	7	8	9	10
2. The booking (recording) of the audit adjustment will affect compliance with debt covenants or other contractual requirements.	1	2	3	4	5	6	7	8	9	10
3. The audit adjustment is less than 1 per cent of total assets.	1	2	3	4	5	6	7	8	9	10
4. The audit adjustment, if not booked (not recorded) will mask a change in earnings or other trends, especially in the context of general economic and industry conditions.	1	2	3	4	5	6	7	8	9	10
5. The audit adjustment is less than 3 per cent of net assets.	1	2	3	4	5	6	7	8	9	10
6. The audit adjustment has the effect of increasing management compensation, for example by ensuring that the requirements for the award of bonuses or other incentives are satisfied.	1	2	3	4	5	6	7	8	9	10
7. The audit adjustment is less than 3 per cent of EBITDA (earnings before interest, tax, depreciation and amortisation).	1	2	3	4	5	6	7	8	9	10
8. The booking (recording) of the audit adjustment will affect ratios used to evaluate the entity's financial position, results of operations and cash flows.	1	2	3	4	5	6	7	8	9	10
9. The audit adjustment is less than 1 per cent of total revenue.	1	2	3	4	5	6	7	8	9	10
10. The audit adjustment is significant having regard to the auditor's understanding of known previous communications to users, for example in relation to forecast earnings.	1	2	3	4	5	6	7	8	9	10

- 7 -

5. If your decision (in Q.2) is to book (i.e., not to waive) the audit adjustment, would you qualify the audit opinion if Dax Ltd's management insists on not recording the proposed audit adjustment?

[ ] Yes [ ] No

6. How confident are you in your decision (in Q.5) above?

Judgement	Not confident at all						Extremely confident
	1	2	3	4	5	6	7

Please indicate how motivated you were to perform well on this case on the following scale:

Not at All			Moderately Motivated			Extremely Motivated
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Please indicate how much effort you have expended on this case on the following scale:

Very Little Effort			Moderate Effort			A Great Deal of Effort
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Auditing standards in Australia are:

[ ] Legally enforceable [ ] Not legally enforceable

Please indicate the level of complexity of this case on the following scale:

Not Complex			Moderately Complex			Extremely Complex
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Please indicate your level of familiarity in dealing with similar cases like this on the following scale:

Not Familiar			Moderately Familiar			Very Familiar
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Section 3

I tried to take into consideration all possible perspectives:

Rarely 1	2	3	4	Very Much 5
☐	☐	☐	☐	☐

I tried to make judgements and decisions as thorough as possible:

Absolutely disagree 1	2	3	4	Absolutely agree 5
☐	☐	☐	☐	☐

I thought deeply before making a decision:

Seldom 1	2	3	4	All the time 5
☐	☐	☐	☐	☐

Please mark an "X" along the scale, indicating your preference for each of the pairs of statements.

To me, materiality judgement is:

Important _____ : _____ : _____ : _____ : _____ : _____ : _____ Unimportant

Boring _____ : _____ : _____ : _____ : _____ : _____ : _____ Interesting

Relevant _____ : _____ : _____ : _____ : _____ : _____ : _____ Irrelevant

Exciting _____ : _____ : _____ : _____ : _____ : _____ : _____ Unexciting

Means nothing _____ : _____ : _____ : _____ : _____ : _____ : _____ Means a lot to me

Appealing _____ : _____ : _____ : _____ : _____ : _____ : _____ Unappealing

Fascinating _____ : _____ : _____ : _____ : _____ : _____ : _____ Mundane

Worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ Valuable

Involving _____ : _____ : _____ : _____ : _____ : _____ : _____ Uninvolving

Not needed _____ : _____ : _____ : _____ : _____ : _____ : _____ Needed

TYPE OF INFORMATION

Please indicate how strongly you agree or disagree with each of the statements (Please circle one answer in each line across)	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
I enjoy work that requires the use of numbers	1	2	3	4	5	6	7
I think quantitative information is difficult to understand	1	2	3	4	5	6	7
I find it satisfying to solve day-to-day problems involving numbers	1	2	3	4	5	6	7
Numerical information is very useful in everyday life	1	2	3	4	5	6	7
I prefer not to pay attention to information involving numbers	1	2	3	4	5	6	7
I think more information should be available in numerical form	1	2	3	4	5	6	7
I don’t like to think about issues involving numbers	1	2	3	4	5	6	7
Numbers are not necessary for most situations	1	2	3	4	5	6	7
Thinking is enjoyable when it does not involve quantitative information	1	2	3	4	5	6	7
I like to make calculations using numerical information	1	2	3	4	5	6	7
Quantitative information is vital for accurate decisions	1	2	3	4	5	6	7
I enjoy thinking about issues that do not involve numerical information	1	2	3	4	5	6	7
It helps me to think if I put down information as numbers	1	2	3	4	5	6	7

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
Understanding numbers is as important in daily life as reading or writing	1	2	3	4	5	6	7
I easily lose interest in graphs, percentages, and other quantitative information	1	2	3	4	5	6	7
I don't find numerical information to be relevant for most situations	1	2	3	4	5	6	7
I think it is important to learn and use numerical information to make well-informed decisions	1	2	3	4	5	6	7
Numbers are redundant for most situations	1	2	3	4	5	6	7
It is a waste of time to learn information containing a lot of numbers	1	2	3	4	5	6	7
I like to go over numbers in my mind	1	2	3	4	5	6	7

Please record the approximate time you spent to complete this survey:

Time Spent:

Thank you for taking the time to complete this instrument. Your assistance is very much appreciated. If you have any further comments, please provide them in the space provided.

Please ensure that you have answered every question. Missing questions will mean all of your responses are unusable.

Pranil Prasad
Department of Accounting and Corporate Governance
Faculty of Business and Economics
Macquarie University
NSW 2109
Australia.

Thank you for your participation!

Appendix 2

Research Instrument – Paper 2

(Version 3 – Decision Aid)

Department of Accounting and Corporate Governance
Faculty of Business and Economics
Macquarie University NSW 2109
Phone: +61 2 9850 6137
Fax: +61 2 9850 8497
Email: parmod.chand@mq.edu.au

Participant Information Form

JUDGEMENTS OF AUDITORS

You are invited to participate in a study which investigates judgements made by auditors. The purpose of this study is to examine the impact of various factors affecting the judgements of auditors on materiality.

The study is being conducted by Pranil Prasad [Department of Accounting and Corporate Governance, Macquarie University, NSW, Australia, pranil.prasad@students.mq.edu.au, Ph: (614) 2435 7440]. It is being conducted to meet the requirements of Doctor of Philosophy in Accounting and Corporate Governance under the supervision of Associate Professor Parmod Chand [parmod.chand@mq.edu.au, Ph: (612) 9850 6137] and Dr Meiting Lu [meiting.lu@mq.edu.au, Ph: (612) 9850 1928] of the Department of Accounting and Corporate Governance, Macquarie University.

If you decide to participate, you will be asked to complete a questionnaire. The questionnaire has three parts. Part one collects demographic data about the respondents. Part two consists of a small case study, and you are asked to provide your judgement on a scenario concerning the materiality of an audit adjustment. Part three consists of a series of questions on your preferences for using different types of information. It will take approximately 20-25 minutes to complete the questionnaire.

As you participate in this study as an individual, you are not considered to be a representative of your work organization or institution. The information provided by you represents your personal views only and not the views of your workplace. No sensitive personal information will be collected. Any information or personal details gathered in this study are confidential, except as required by law. No individual will be identified in any publication of the results. Data will be analysed in aggregate form, held and accessed solely by the researchers (Associate Professor Parmod Chand, Dr Meiting Lu and Pranil Prasad) and will not be used for any other purpose. The results of this study will be incorporated into Pranil Prasad's PhD thesis, which will be available at the Macquarie University Library for public access. A summary of the research results can be made available to you on request by email to the researchers.

Participation in this survey is entirely voluntary. If you could complete the attached questionnaire, your time and co-operation will be greatly appreciated. If you do not wish to participate, simply do not return the questionnaire. Please note that completion and return of the questionnaire will be regarded as consent to use the information for research purposes.[1]

Please answer all questions. Your response is very important for the research which will contribute to understanding the factors affecting the professional judgement of auditors.

[1] The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics (telephone [02] 9850 7854, email: ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Section 1

YOUR PERSONAL PROFILE

Please respond to the following questions so that a profile for respondents can be developed.

1.	**Are you:** Male ☐ Female ☐
2.	**How old are you?** ☐ Under 20 years ☐ 20-24 ☐ 25-29 ☐ 30-34 ☐ 35-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over
3.	**In total, how many years of formal education (primary, secondary and tertiary) did you complete?** ☐ Less than 15 years ☐ 15 years ☐ 16 years ☐ 17 years ☐ 18 years or over
4.	**In which country did you complete your:** **Primary education** __________ **Secondary education** ____________ **Tertiary education** _________
5.	**What is your ethnicity?** ☐ Anglo-Celtic ☐ Chinese ☐ Indian __________________ Other (please specify)
6.	**Are you a member of:** ☐ ICAA ☐ CPA Australia ☐ IPA ____________ Other (please specify)
7.	**How many years of professional experience do you have as a qualified accountant?** _______ Years
8.	**In which of the following areas do you specialize or work?** ☐ Audit ☐ Accounting ☐ Tax ☐ Consulting _________________ Other (please specify)
9.	**What is your current position in your firm?** __________________
10.	**In which of the following industry(s) do you specialize or work?** ☐ Consumer Discretionary ☐ Consumer Staples ☐ Information Technology ☐ Energy ☐ Healthcare ☐ Telecommunication services ☐ Financials ☐ Industrials ☐ Metals and mining ☐ Utilities ☐ Materials ☐ Other (please specify) __________
11.	**In which type of firm/organization do you work?** ☐ Big 4 Accounting Firm ☐ Non-Big 4 Accounting Firm ____________ Other (please specify)
12.	**How large (in terms of qualified professional accountants) is the firm/organization in which you work?** ☐ 1-5 ☐ 6-20 ☐ 21-100 ☐ Over 100
13.	**How familiar are you with Australian Auditing Standards (ASAs)?** ☐ Very familiar ☐ Familiar ☐ Somewhat familiar ☐ Not familiar
14.	**How frequently do you refer to ASAs in your professional practice?** ☐ Often ☐ Sometimes ☐ Seldom ☐ Never

Section 2

CASE STUDY

Below is a scenario that requires your judgement on the materiality of an audit adjustment. The required judgement is based on Australian Auditing Standards (ASAs). You may refer to the relevant ASA in making your judgement.

The Audit Engagement

Assume that you are the manager in-charge of the audit engagement of your client, Dax Ltd, for the financial year ended 30 June 2015. You are at the final stage of the audit and have completed the review of the work papers prepared by the audit team. You are required to make some judgements and decisions on the proposed audit adjustments for the client. To assist you in performing the task, some background description of the client and extracts of its financial statements are provided below.

Client Background

Dax Ltd is a medium sized publicly-traded company that manufactures air conditioning and refrigeration equipment for industrial, commercial and domestic applications. The company sells its products through its own chain of retail stores and through independent retailers around Australia. The air conditioning and refrigeration industry is characterised by intense competition, which results in limited potential for growth and thin margins. The principal competitive factors are product performance, technology, customer service, and price. Dax Ltd was one of the leading air conditioning and refrigeration equipment supplier in the market not so long ago, however, the availability of cheaper imports and mergers and acquisitions amongst competitors has led to a loss of market share for Dax Ltd.

The financial results of Dax Ltd have been unstable in recent years with significant variations in sales and income numbers. The general economic condition in the country is also sluggish. However, Dax Ltd has been able to meet its analysts' earnings forecast for each of the last 5 years. The company is closely followed by analysts and the earnings per share forecast for the current financial year is $1.00. The management team at Dax Ltd are paid base salaries and are rewarded with bonuses and incentives based on the financial results. The top level managers are paid bonuses if return on assets is above the 10 per cent threshold.

In efforts to boost financial performance and sales, Dax Ltd has introduced a number of strategies. The management has decided to focus their attention to the domestic air conditioning and refrigeration appliances market. One of the strategies involves offering customers lucrative credit terms. Currently, customers buying products through the retail chains have to make a deposit of 10 percent and start payments 30 days after purchases on a monthly basis. The issue is that many of the competitors offer better credit terms and thus win away customers. As a result, management decided to offer zero deposit and a payment holiday of up to six months. They have also decided to decentralize the credit approval process to each of the individual stores so that applications can be processed faster and customer turn-around times shorter. These changes have boosted sales performance at most of the retail outlets around Australia. However, this has also significantly increased the level of accounts receivables in the balance sheet and increased pressure on the cash flow position of the company.

The management of Dax Ltd were concerned with the cash position towards the end of the financial year. In efforts to secure the cash position, Dax Ltd applied to their bankers for an extra line of credit. This application has been approved with conditions that the company will provide the bank its audited financial reports within 3 months of the financial year end and maintain the debt to equity ratio below and profitability ratio above a certain threshold. In particular their requirement is for Dax Ltd to maintain the debt to equity ratio of 2.5:1 and return on asset of at least 10 per cent.

Your firm has been auditing Dax Ltd for a number of years and has maintained a good working relationship with its management. Provided below are extracts from the draft financial statements of Dax Ltd for the current period.

Financial Statement (Extracts) – Dax Ltd

Consolidated Income Statement

	30/06/2015 (Before Audit Adjustments)
Revenues	$200,000,000
Cost of sales	120,000,000
Gross profit	80,000,000
Depreciation and amortization	24,850,000
Selling and Administrative expenses	22,685,000
Interest expenses	3,500,000
Other expenses	13,965,000
Net profit before tax	15,000,000
Provision for income tax	5,000,000
Net profit after tax	10,000,000
Earnings per share	**1.00**
Number of ordinary shares	10,000,000

Consolidated Cash Flow Statement

	30/06/2015 (Before Audit Adjustments)
Cash flows from operating activities	(40,500,000)
Cash flows from investing activities	(20,500,000)
Cash flows from financing activities	30,450,000
Increase in cash and equivalents	(30,550,000)
Cash and equivalents, beginning of year	40,000,000
Cash and equivalents, end of year	**9,450,000**

Consolidated Balance Sheet

	30/06/2015 (Before Audit Adjustments)
Cash and equivalents	9,450,000
Receivables (net)	35,000,000
Inventories (net)	40,000,000
Other current assets	13,550,000
Total current assets	98,000,000
Non-current assets	52,000,000
Total assets	**150,000,000**
Accounts payable and accrued liabilities	10,000,000
Short-term borrowings and current maturities of long-term debt	20,000,000
Total current liabilities	30,000,000
Long-term debt (excluding current maturities)	70,000,000
Other long-term liabilities	7,000,000
Total liabilities	107,000,000
Total shareholders' equity	43,000,000
Total liabilities and shareholders' equity	**150,000,000**

Current Situation

Assume that there is only one proposed audit adjustment to be considered. This proposed audit adjustment relates to an under provision of the allowance for doubtful debts. Dax Ltd has set the allowance for doubtful debts at $350,000. This level of allowance for doubtful debts was determined using historical data on bad debts and a review of the company's accounts receivables aging report.

You have reviewed the collectability of Dax Ltd's accounts receivables as part of the audit. After a review of the company's controls on credit sales and cash collections, prior experience on debt collection, financial status of its customers and the general economic conditions you have come to the conclusion that Dax Ltd has under provided for doubtful debts. Your audit found that the program to offer customers no deposits and payment holiday of up to six months has increased the risk of non-collection of customer accounts. Your review also revealed that certain outlets had sold goods to customers with poor previous credit history to improve their sales performance. You estimate that Dax Ltd's allowance estimate should be $1,000,000.

Dax Ltd's management has indicated that the proposed audit adjustment is not material to the financial statements as a whole and that they do not wish to record the audit adjustment. Assume that you have reviewed the supporting work paper documentation and are satisfied with the work done related to this proposed audit adjustment. Additional work has been carried out where necessary and no further misstatements are detected.

DECISION AID

The following decision aid provides information on evaluation of materiality of audit adjustments which may be helpful to you in making your judgement.

In evaluating the materiality of uncorrected misstatements, both the size and the nature of the misstatement have to be considered. Step 1 involves the consideration of the size of the misstatement. Step 2 involves the consideration of various circumstances and contextual factors that may have a bearing on the materiality of a misstatement which may be immaterial based on size. The judgement on materiality of an uncorrected misstatement should only be made after completing Step 1 and Step 2.

Step 1: Determination of materiality based on size of the misstatement (materiality calculation worksheet)
This worksheet can be used as a general guidance in assessing materiality for the audit of Dax Ltd. When computing materiality estimates based on total assets and shareholders' equity, use client balance sheet at or near the financial statement date.
Materiality calculation based on operating results and financial position.

Base	Amount	Percentage	Materiality Estimate
1. Net profit before tax	$15,000,000	5%	$750,000
2. Net assets	$43,000,000	3%	$1,290,000
3. EBITDA	$43,350,000	3%	$1,300,500
4. Total assets	$150,000,000	1%	$1,500,000
5. Total revenue	$200,000,000	1%	$2,000,000

Based on the calculations above, the range for materiality in relation to the financial statements as a whole is $750,000 to $2,000,000.

Step 2: Consideration of the nature of the misstatement
The circumstances (qualitative factors) related to some misstatements may cause the auditor to evaluate them as material, individually or when considered together with other misstatements accumulated during the audit, even if they are lower than materiality for the financial statements as a whole. The following checklist contains a list of factors that should be evaluated when making a judgement on the materiality of a misstatement.

No.	Factors	Yes	No
1.	The misstatement affects compliance with regulatory requirements.	☐	☐
2.	The misstatement affects compliance with debt covenants or other contractual requirements.	☐	☐
3.	The misstatement relates to the incorrect selection or application of an accounting policy that has an immaterial effect on the current period's financial report but is likely to have a material effect on future periods' financial reports.	☐	☐
4.	The misstatement masks a change in earnings or other trends, especially in the context of general economic and industry conditions.	☐	☐
5.	The misstatement affects ratios used to evaluate the entity's financial position, results of operations or cash flows.	☐	☐
6.	The misstatement affects segment information presented in the financial report (for example, the significance of the matter to a segment or other portion of the entity's business that has been identified as playing a significant role in the entity's operations or profitability).	☐	☐
7.	The misstatement has the effect of increasing management compensation, for example, by ensuring that the requirements for the award of bonuses or other incentives are satisfied.	☐	☐
8.	The misstatement is significant having regard to the auditor's understanding of known previous communications to users, for example, in relation to forecast earnings.	☐	☐
9.	The misstatement relates to items involving particular parties (for example, whether external parties to the transaction are related to members of the entity's management).	☐	☐
10.	The misstatement is an omission of information not specifically required by the applicable financial reporting framework but which, in the judgement of the auditor, is important to the users' understanding of the financial position, financial performance or cash flows of the entity.	☐	☐
11.	The misstatement affects other information that will be communicated in documents containing the audited financial report (for example, information to be included in a "Management Discussion and Analysis" or an "Operating and Financial Review") that may reasonably be expected to influence the economic decisions of the users of the financial report.	☐	☐

Please answer the following questions relating to the proposed audit adjustment by marking an "X" on the scale corresponding to your judgement:

1. To what extent do you consider the proposed audit adjustment to be material to Dax Ltd's financial statements?

Judgement	Not material at all						Extremely material
	1	2	3	4	5	6	7

2. What is your most likely decision regarding the disposition of the proposed audit adjustment (i.e., whether to waive (not record) or book (record) the proposed adjustment)? Please tick one.

[ ] **Waive the proposed audit adjustment (Not Record)** [ ] **Book the proposed audit adjustment (Record)**

3. How confident are you in your decision (in Q.2) above?

Judgement	Not confident at all						Extremely confident
	1	2	3	4	5	6	7

4. Please indicate whether the following pieces of information were useful/not useful to your decision making process.

Please **do not go back to change any of your judgements** in parts 1-3 above in light of these information.

Please place a tick in the appropriate box where 1 denotes that the information was not useful at all and 10 denotes that the information was very useful.

Information	**Not Useful at all**									**V ery Useful**
1. The audit adjustment is less than 5 percent of net profit before tax.	1	2	3	4	5	6	7	8	9	10
2. The booking (recording) of the audit adjustment will affect compliance with debt covenants or other contractual requirements.	1	2	3	4	5	6	7	8	9	10
3. The audit adjustment is less than 1 per cent of total assets.	1	2	3	4	5	6	7	8	9	10
4. The audit adjustment, if not booked (not recorded) will mask a change in earnings or other trends, especially in the context of general economic and industry conditions.	1	2	3	4	5	6	7	8	9	10
5. The audit adjustment is less than 3 per cent of net assets.	1	2	3	4	5	6	7	8	9	10
6. The audit adjustment has the effect of increasing management compensation, for example by ensuring that the requirements for the award of bonuses or other incentives are satisfied.	1	2	3	4	5	6	7	8	9	10
7. The audit adjustment is less than 3 per cent of EBITDA (earnings before interest, tax, depreciation and amortisation).	1	2	3	4	5	6	7	8	9	10
8. The booking (recording) of the audit adjustment will affect ratios used to evaluate the entity's financial position, results of operations and cash flows.	1	2	3	4	5	6	7	8	9	10
9. The audit adjustment is less than 1 per cent of total revenue.	1	2	3	4	5	6	7	8	9	10
10. The audit adjustment is significant having regard to the auditor's understanding of known previous communications to users, for example in relation to forecast earnings.	1	2	3	4	5	6	7	8	9	10

5. If your decision (in Q.2) is to book (i.e., not to waive) the audit adjustment, would you qualify the audit opinion if Dax Ltd's management insists on not recording the proposed audit adjustment?

[ ] **Yes** [ ] **No**

6. How confident are you in your decision (in Q.5) above?

Judgement	Not confident at all						Extremely confident
	1	2	3	4	5	6	7

Please indicate how motivated you were to perform well on this case on the following scale:

Not at All			Moderately Motivated			Extremely Motivated
1	2	3	4	5	6	7
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

Please indicate how much effort you have expended on this case on the following scale:

Very Little Effort			Moderate Effort			A Great Deal of Effort
1	2	3	4	5	6	7
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

Please indicate the extent to which the decision aid enabled you to make a better judgement on the following scale:

Not at All			To Some Extent			To a Great Extent
1	2	3	4	5	6	7
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

Please indicate the level of complexity of this case on the following scale:

Not Complex			Moderately Complex			Extremely Complex
1	2	3	4	5	6	7
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

Please indicate your level of familiarity in dealing with similar cases like this on the following scale:

Not Familiar			Moderately Familiar			Very Familiar
1	2	3	4	5	6	7
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

Section 3

I tried to take into consideration all possible perspectives:

Rarely				Very Much
1	2	3	4	5
☐	☐	☐	☐	☐

I tried to make judgements and decisions as thorough as possible:

Absolutely disagree				Absolutely agree
1	2	3	4	5
☐	☐	☐	☐	☐

I thought deeply before making a decision:

Seldom				All the time
1	2	3	4	5
☐	☐	☐	☐	☐

Please mark an "X" along the scale, indicating your preference for each of the pairs of statements.

To me, materiality judgement is:

Important _____ : _____ : _____ : _____ : _____ : _____ : _____ Unimportant

Boring _____ : _____ : _____ : _____ : _____ : _____ : _____ Interesting

Relevant _____ : _____ : _____ : _____ : _____ : _____ : _____ Irrelevant

Exciting _____ : _____ : _____ : _____ : _____ : _____ : _____ Unexciting

Means nothing _____ : _____ : _____ : _____ : _____ : _____ : _____ Means a lot to me

Appealing _____ : _____ : _____ : _____ : _____ : _____ : _____ Unappealing

Fascinating _____ : _____ : _____ : _____ : _____ : _____ : _____ Mundane

Worthless _____ : _____ : _____ : _____ : _____ : _____ : _____ Valuable

Involving _____ : _____ : _____ : _____ : _____ : _____ : _____ Uninvolving

Not needed _____ : _____ : _____ : _____ : _____ : _____ : _____ Needed

- 10 -

TYPE OF INFORMATION

Please indicate how strongly you agree or disagree with each of the statements (Please circle one answer in each line across)	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
I enjoy work that requires the use of numbers	1	2	3	4	5	6	7
I think quantitative information is difficult to understand	1	2	3	4	5	6	7
I find it satisfying to solve day-to-day problems involving numbers	1	2	3	4	5	6	7
Numerical information is very useful in everyday life	1	2	3	4	5	6	7
I prefer not to pay attention to information involving numbers	1	2	3	4	5	6	7
I think more information should be available in numerical form	1	2	3	4	5	6	7
I don’t like to think about issues involving numbers	1	2	3	4	5	6	7
Numbers are not necessary for most situations	1	2	3	4	5	6	7
Thinking is enjoyable when it does not involve quantitative information	1	2	3	4	5	6	7
I like to make calculations using numerical information	1	2	3	4	5	6	7
Quantitative information is vital for accurate decisions	1	2	3	4	5	6	7
I enjoy thinking about issues that do not involve numerical information	1	2	3	4	5	6	7
It helps me to think if I put down information as numbers	1	2	3	4	5	6	7

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
Understanding numbers is as important in daily life as reading or writing	1	2	3	4	5	6	7
I easily lose interest in graphs, percentages, and other quantitative information	1	2	3	4	5	6	7
I don't find numerical information to be relevant for most situations	1	2	3	4	5	6	7
I think it is important to learn and use numerical information to make well-informed decisions	1	2	3	4	5	6	7
Numbers are redundant for most situations	1	2	3	4	5	6	7
It is a waste of time to learn information containing a lot of numbers	1	2	3	4	5	6	7
I like to go over numbers in my mind	1	2	3	4	5	6	7

Please record the approximate time you spent to complete this survey:

Time Spent:

Thank you for taking the time to complete this instrument. Your assistance is very much appreciated. If you have any further comments, please provide them in the space provided.

Please ensure that you have answered every question. Missing questions will mean all of your responses are unusable.

Pranil Prasad
Department of Accounting and Corporate Governance
Faculty of Business and Economics
Macquarie University
NSW 2109
Australia.

Thank you for your participation!

Appendix 3

Research Instrument – Paper 3

(Version 1 – High Client Pressure)

Department of Accounting and Corporate Governance
Faculty of Business and Economics
Macquarie University NSW 2109
Phone: +61 2 9850 6137
Fax: +61 2 9850 8497
Email: parmod.chand@mq.edu.au

Participant Information Form

JUDGEMENTS OF AUDITORS

You are invited to participate in a study which investigates judgements made by auditors. The purpose of this study is to examine the impact of various factors affecting the reporting judgements of auditors.

The study is being conducted by Pranil Prasad [Department of Accounting and Corporate Governance, Macquarie University, NSW, Australia, pranil.prasad@students.mq.edu.au, Ph: (614) 2435 7440]. It is being conducted to meet the requirements of Doctor of Philosophy in Accounting and Corporate Governance under the supervision of Associate Professor Parmod Chand [parmod.chand@mq.edu.au, Ph: (612) 9850 6137] and Dr Meiting Lu [meiting.lu@mq.edu.au, Ph: (612) 9850 1928] of the Department of Accounting and Corporate Governance, Macquarie University.

If you decide to participate, you will be asked to complete a questionnaire. The questionnaire has three parts. Part one collects demographic data about the respondents. Part two consists of a small case study, and you are asked to provide your judgement on a scenario concerning the reporting of key audit matters. Part three requires you to indicate the significance of various issues that may arise in an audit. It will take approximately 20-25 minutes to complete the questionnaire.

As you participate in this study as an individual, you are not considered to be a representative of your work organization or institution. The information provided by you represents your personal views only and not the views of your workplace. No sensitive personal information will be collected. Any information or personal details gathered in this study are confidential, except as required by law. No individual will be identified in any publication of the results. Data will be analysed in aggregate form, held and accessed solely by the researchers (Associate Professor Parmod Chand, Dr Meiting Lu and Pranil Prasad) and will not be used for any other purpose. The results of this study will be incorporated into Pranil Prasad's PhD thesis, which will be available at the Macquarie University Library for public access. A summary of the research results can be made available to you on request by email to the researchers.

Participation in this survey is entirely voluntary. If you could complete the attached questionnaire, your time and co-operation will be greatly appreciated. If you do not wish to participate, simply do not return the questionnaire. Please note that completion and return of the questionnaire will be regarded as consent to use the information for research purposes.[1]

Please answer all questions. Your response is very important for the research which will contribute to understanding the factors affecting the professional judgement of auditors.

[1] The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics (telephone [02] 9850 7854, email: ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Section 1

YOUR PERSONAL PROFILE

Please respond to the following questions so that a profile for respondents can be developed.

1.	**Are you:** Male ☐ Female ☐
2.	**How old are you?** ☐ Under 20 years ☐ 20-24 ☐ 25-29 ☐ 30-34 ☐ 35-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over
3.	**In total, how many years of formal education (primary, secondary and tertiary) did you complete?** ☐ Less than 15 years ☐ 15 years ☐ 16 years ☐ 17 years ☐ 18 years or over
4.	**In which country did you complete your:** **Primary education** __________ **Secondary education** ____________ **Tertiary education** _________
5.	**What is your ethnicity?** ☐ Anglo-Celtic ☐ Chinese ☐ Indian __________________ Other (please specify)
6.	**Are you a member of:** ☐ ICAA ☐ CPA Australia ☐ IPA ____________ Other (please specify)
7.	**How many years of professional experience do you have as a qualified accountant?** _______ Years
8.	**In which of the following areas do you specialize or work?** ☐ Audit ☐ Accounting ☐ Tax ☐ Consulting _________________ Other (please specify)
9.	**What is your current position in your firm?** __________________
10.	**In which type of firm/organization do you work?** ☐ Big 4 Accounting Firm ☐ Non-Big 4 Accounting Firm ____________ Other (please specify)
11.	**How large (in terms of qualified professional accountants) is the firm/organization in which you work?** ☐ 1-5 ☐ 6-20 ☐ 21-100 ☐ Over 100
12.	**How familiar are you with Australian Auditing Standards (ASAs)?** ☐ Very familiar ☐ Familiar ☐ Somewhat familiar ☐ Not familiar
13.	**How frequently do you refer to ASAs in your professional practice?** ☐ Often ☐ Sometimes ☐ Seldom ☐ Never

Section 2

Case Study

Below is a case scenario that requires your judgement on the disclosure of key audit matters in the auditor's report.
The required judgement is based on Australian Auditing Standards (ASAs). You may refer to the relevant ASA in making your judgement.

The Client

Mantaka Industries is a publicly traded corporation founded in 1956. The firm manufactures a variety of large and small products for industrial application as well as engaging in large-scale construction projects. The diverse nature of the business is a result of two mergers that occurred in the early 1970s. The audit engagement has seldom produced major auditor-client disagreements. Joe Elias, is the partner in charge of the audit and you are the manager in charge of this audit. Most of the other members of the audit team were also on the audit last year.

This engagement

During the conduct of the current period audit, several audit issues were encountered of which the most significant ones are described below. These audit issues along with others have been communicated with the audit committee of Mantaka Industries in accordance with the auditing standards. Starting from this accounting period, the most significant audit issues encountered during an audit will have to be disclosed in the auditor's report as key audit matters.

The CEO, Bill and the CFO, Kim are **both strongly opposed** to disclosing any negative issue that was encountered during the audit as a key audit matter in the auditor's report because they believe that the audit opinion in itself reflects the overall conduct of the audit. Additionally, the Chairman of Mantaka Industries is **strongly opposed** to the idea of disclosing negative key audit matters.

It is now 1 June 2017, 61 days after year end and the audit is nearly complete. In 30 minutes you are to meet Joe, the partner in charge of the audit. One of the items on the agenda is the disclosure of key audit matters in the auditor's report.

During the audit, Joe has held several meetings with the audit committee and the management and discussed the issue of key audit matter disclosures. Despite agreeing that the list of audit issues that your team has identified are significant, the partner suggests that final disclosure decision rests with the firm, however, he has requested that you evaluate each issue and make an initial judgement on whether they should be presented in the audit report. On the next few pages are the list of significant audit matters on which you have to record your judgement after evaluating the scenarios and the findings of your audit team.

The clients' CEO, Bill and the CFO, Kim are **both strongly opposed** to disclosing any **negative issue** that was encountered during the audit as a key audit matter in the auditor's report because they believe that the audit opinion in itself reflects the overall conduct of the audit. Additionally, the Chairman of Mantaka Industries is **strongly opposed** to the idea of disclosing **negative key audit matters**.

#	Significant Audit Matters	Your Judgements (Please answer the following questions relating to the audit issues by marking an "X" on the answer corresponding to your judgement)
1	**Assessment of impairment for non-current assets** At 31 March 2017 the Company held $781.7m of property, plant and equipment. Due to varying levels of profitability during the year, the Company considered whether there were any indicators of impairment for each of its six cash generating units (CGUs). The Company performed impairment assessments for each CGU which performed below its forecast cash flows and had high underutilisation of property, plant and equipment. Indicators of possible impairment were identified in two of its CGUs. Following the identification of possible impairment of assets, the company engaged an independent valuer to undertake a valuation in relation to these assets. The valuations supported the carrying value of these assets. The Company concluded that no impairment charge was required in the two CGUs. The audit team focused on impairment of non-current assets because of the significant judgement involved in assessing impairment, including significant management judgement relating to cash flow forecasts (including discount rates, current work in hand and future contract wins and economic assumptions such as inflation and foreign currency rates) and estimations of the fair value of the assets. The value of the assets also has a potentially material impact on the financial statements. The audit team evaluated the impairment calculations including the testing of the recoverable amount of each CGU. The team also assessed the reasonableness of the cash flow projections used in the impairment models. Furthermore, the firms' Valuation Specialists were brought in to assess the impairment models and evaluated the reasonableness of key assumptions including the discount rate, terminal growth rates and forecast growth assumptions. The team also performed sensitivity analysis around the key drivers of the cash flow projections. **Findings:** The audit found that **cash flow projections were not reasonable** taking into account historical data, economic and market conditions. In addition, the cash flows used were not matched to the carrying amounts of all assets that generate those cash flows such as inventories and receivables. The Company also **performed sensitivity analyses** taking into consideration the numerous assumptions and estimates used in the impairment testing process. Our sensitivity analyses reveals that **very small changes in the key assumptions can lead to significant impairment write-downs which will be material** to the financial statements as a whole.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**
2	**Recognition of deferred tax assets** The Company had recorded $38.3m of deferred tax assets as at 31 March 2017. The Australian Accounting Standards require deferred tax assets to be recognised only to the extent that it is probable that sufficient future taxable profits will be generated in order for the benefits to be realised. The audit team focused on this matter because of the material impact the balance has on the financial statements and because the carrying forward of the balance requires significant judgement to assess future taxable profits. The audit team performed procedures to assess the calculations of forecast taxable profits for the next five years and compared these to the latest Board approved budget and forecast. The team also challenged management's key assumptions in the cash flow budget and forecasts. The auditors also evaluated if the accounting-based Board approved budget and forecast were appropriately adjusted to get taxable profit. Finally, the deferred tax asset balances were recalculated and disclosures in the financial statement were assessed. **Findings:** The audit found that **deferred tax assets were appropriately calculated and presented** and there were **no issues identified from the audit procedures performed**.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**

3	**Deficiency in internal control over reconciliation of intercompany transactions** The company processes a significant number of routine intercompany transactions on a monthly basis. Individual intercompany transactions are material and primarily relate to balance sheet activity, for example, cash transfers between business units to finance normal operations. The audit team focused on internal controls over reconciliation of intercompany transactions because the transactions are material (individually and collectively) and intercompany transactions represent an area of significant risk as most transactions are not at arms-length and involve related-parties which presents a higher risk of material misstatement. The audit procedures focused on the established internal controls over related party transactions. A formal management policy requires monthly reconciliation of intercompany accounts and confirmation of balances between business units. **Findings:** While the internal policies require monthly reconciliation and confirmation of balances between the businesses units involved in the intercompany transactions, **there are no processes in place to ensure performance of these procedures**. The audit testings identified that, as a result, **detailed reconciliations of intercompany accounts are not performed on a timely basis and neither are the balances confirmed**. There is also **an absence of any compensating controls**. This lacuna in the internal processes related to financial reporting significantly **increases the risk of material misstatement** in the Company's financial statements.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**
4	**Valuation of financial instruments** The company enters into various financial instruments including derivative financial instruments to hedge the company's exposure to variability in interest rates, foreign exchange movements and raw material prices. As at 31 March 2017, derivative financial assets totalled \$339m (current assets of \$192m and non-current assets of \$147m) and derivative financial liabilities totalled \$435 million (current liabilities of \$356m and non-current liabilities of \$79m). These financial instruments are recorded at fair value as required by the relevant accounting standard. The audit team focused on this area due to the complexities associated with the valuation and accounting for these financial instruments. The team obtained an understanding of the internal risk management procedures and the systems and controls associated with the origination and maintenance of complete and accurate information relating to derivative contracts. Additionally, utilising our treasury experts we also tested, on a sample basis, the existence and valuation of derivative contracts as at 31 March 2017. The audit procedures focused on the integrity of the valuation models, the incorporation of the contract terms and the key assumptions including future price assumptions and discount rates. We also obtained an understanding of key financial instrument contract terms to assess the appropriateness of accounting reflected in the financial report. **Findings:** The audit findings show that the Company employs **robust internal risk management procedures and controls on financial instruments and contracts**. The valuation models, key assumptions and estimations utilised in the valuation were **all reasonable**. This **greatly reduces any risk of material misstatement** in the balances for the derivative financial assets and liabilities. Furthermore, appropriate and adequate disclosures are included in the financial reports on derivative financial assets and liabilities.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**

5	**Accounting for legal claims** A large part of the Company's business is characterised by competition for individually significant contracts with customers which are often directly or indirectly associated with governments and the award of individually significant contracts to suppliers. The procurement processes associated with these activities are highly susceptible to the risk of corruption. In addition, the Company operates in a number of territories where the use of commercial intermediaries is either required by the government or is normal practice. The Company is currently under investigation by law enforcement agencies. Breaches of laws and regulations in this area can lead to fines, penalties, criminal prosecution, commercial litigation and restrictions on future business. This was an area of focus in the audit because of the range of potential outcomes and considerable uncertainty around the resolution of various investigations and litigation claims. The determination of the amount, if any, to be recorded in the financial statements as provision is also inherently subjective and therefore this is considered to be a significant audit risk. The audit team considered the Board meeting minutes, enquired with in-house legal counsel, evaluated relevant external legal advice received by the Company in connection with any of the investigations and litigation claims, and assessed the adequacy of any provisions and note disclosures relating to these legal issues. **Findings:** The Company's provisions relating to some of the litigation claims **did not adequately reflect** the fines, penalties and costs that the Company will have to incur for cases where the outcomes are very much unlikely to be in its favour. In addition, **inadequate disclosures were provided in the notes** on the investigations and litigations where the outcomes were more uncertain or where it was too early to determine the outcomes.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**
6	**Acquisition of T Holdings Ltd** During the year the Company acquired T Holdings Ltd for a gross purchase consideration of $120m. This was considered a significant purchase for the Company. Accounting for the acquisition is a complex process which involves significant judgement. In particular, significant management judgement is required to determine the fair value of assets and liabilities acquired and the allocation of purchase consideration to goodwill and other separately identifiable intangible assets (customer contracts and relationships). This acquisition transaction was a major focus in the audit because of its size and because of the estimation process involved in accounting for it. As part of the audit, the sale and purchase agreement was scrutinised along with the assumptions and estimations in the valuation of the assets and liabilities acquired. Valuation and finance experts were brought in to assess the valuation assumptions and compare these with external benchmarks and consider the assumptions based on the firms' knowledge of the Company. **Findings:** The valuations and allocation of purchase consideration to goodwill and other identifiable intangibles were **reasonable and supported by independent analyses** of the audit team and valuation experts. **The disclosures in respect of the business acquisition were also adequate**.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**
7	**Revenue Recognition** The Company has two distinct categories of revenue, being revenue from contracts to provide goods and revenue from construction contracts. Revenue recognition from construction contracts is complex because it is based on management judgement and estimates of the stage of completion, total contract revenue and costs, probability of customer approval of variations and claims and project completion dates. This was an area of significant attention in the audit because of the high volume of revenue transactions and the judgement required in recognising revenue from construction contracts. As part of the audit, the team assessed management's estimates of total contract revenue and costs and recalculated the state of completion based on actual costs incurred to date for a sample of transactions. The auditors also checked the start and end date of projects to supporting evidence and performed retrospective analysis of incomplete projects at year end. **Findings:** The audit **identified several instances where revenue from construction contracts were recognised ahead of time** based on incorrect assessment of stage of completion. These instances were mainly **concentrated towards end of each quarter** when quarterly financial statements were due. In most of these instances the amount of revenue was just below the quantitative materiality threshold for the audit but **collectively the amounts were material and enabled management to meet key performance thresholds** for payment of incentives such as bonuses.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**

8	**Reliance on automated processes and controls** A significant part of the Company's financial processes are heavily reliant on information technology (IT) systems with automated processes and controls over the capturing, valuing and recording of transactions. The IT systems were a key part of our audit because of the complexity of the IT environment supporting diverse business processes and the use of both manual and automated controls in the IT system. In addition, there are multiple internal and outsourced arrangements supporting the IT systems leading to increased complexity. The Company also continued to enhance its IT systems and during the year implemented new systems which were material to our audit. During the audit, the audit team understood and tested management's controls in systems relevant to financial reporting. When testing controls was not considered an appropriate or efficient testing approach, alternative audit procedures were performed on the financial information being produced by systems. The audit team also gained an understanding of material new systems including the design of the automated processes and controls. In addition, assessments were conducted in the processes put in place to migrate any data from the old systems to new systems and tested reconciliations between the systems. Finally, the team evaluated the design and tested the operating effectiveness of the controls in the new systems and performed additional audit testing procedures. **Findings:** These audit procedures revealed that **IT systems and related controls and procedures were operating effectively** and no major issues were identified. The implementation of the new systems was well controlled and **migration of data from old to new systems were performed appropriately**.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**
9	**Recoverability (valuation) of trade receivables** As outlined in the notes, there were trade receivables as at 31 March 2017 more than 60 days past due. The collectability of the Company's trade receivables, including unbilled contract revenue, and the valuation of the allowance for doubtful debts is a significant audit matter due to the judgement and estimations involved. During the audit, the Company's processes for trade receivables and unbilled contract revenue, including provisioning and collection processes were evaluated and tested. We also tested that trade receivables and unbilled contract revenue were subsequently collected. Where there were indicators that trade receivables were unlikely to be collected, we assessed the adequacy of allowance for doubtful debts. **Findings:** The audit tests and assessments reveal that the Company had **adequately provisioned for any bad debts** that may arise from non-payment of customer accounts.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**
10	**Valuation and existence of inventory** The Company had recognised inventory of $191.4m at 31 March 2017. Inventory is held by the entity in various locations around the country. Inventory is stored in warehouses, sheds, containers, and yards. Many of these are located in very remote areas due to nature of the construction industry. The valuation and existence of inventory was a significant audit issue because of the material value (both for profit and to the statement of financial position) and the complexity involved in determining inventory quantities on hand and judgement and estimations involved in its valuation. The audit team and members of our firms' component auditors attended inventory counts at locations, selected on financial significance and risk. Where locations were not attended, the team tested controls over inventory existence across the Company. For locations attended, a sample of inventory items were selected and the quantities that the team counted was compared to quantities recorded. The team also compared a sample of management's inventory count procedures to assess compliance with the Company's policy. Inquiries were also made of obsolete inventory items and while counting a note of the condition of the inventory was also recorded. A sample of inventory items were tested to see if the recorded value exceeded the amount at which they could be sold. **Findings:** Some of the inventory carried by the Company required estimations of the quantity remaining on hand that had margins for significant error if not conducted properly. For example, cement stored in silos required management to perform specific measurement and calculations to determine quantity on hand, which **we found were not performed according to Company guidelines**. This lead to **significant differences between our assessments of quantity on hand and the Company's recorded amounts**. Furthermore, **several items tested were found to be recorded at costs that were significantly higher than the amount for which they could be sold**.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**

In the preceding section, you have selected key audit matters that will be presented. **You are now asked to rank the order in which your selected key audit matters will be presented in the auditor's report.**

The key audit matter that will be presented first will be given a presentation rank of "1"; while the key audit matter that will be presented second will be given a rank of "2" and this will continue until all selected matters have been ranked for presentation.

Example:

If you had selected audit matter 2, 3, 5, 6, 7, 8, 9 and 10 for presentation and decided that you will present them in the following order: 6, 8, 3, 2, 10, 7, 9 and 5 then you will give key audit matter 6 a presentation rank of "1"; key audit matter 8 a presentation rank of "2"; key audit matter 3 a presentation rank of "3"; key audit matter 2 a presentation rank of "4"; key audit matter 10 a presentation rank of "5"; key audit mater 7 a presentation rank of "6"; key audit matter 9 a presentation rank of "7"; and key audit matter 5 a presentation rank of "8".

Please record your responses on presentation rank here:

Significant Audit Matter	**Presentation Rank (Write down the presentation rank)**
Matter No. 1: Assessment of impairment for non-current assets	
Matter No. 2: Recognition of deferred tax assets	
Matter No. 3: Deficiency in internal control over reconciliation of intercompany transactions	
Matter No. 4: Valuation of financial instruments	
Matter No. 5: Accounting for legal claims	
Matter No. 6: Acquisition of T Holdings Ltd	
Matter No. 7: Revenue Recognition	
Matter No. 8: Reliance on automated processes and controls	
Matter No. 9: Recoverability (valuation) of trade receivables	
Matter No. 10: Valuation and existence of inventory	

Do the CEO, CFO and the Board Chairman oppose or do not oppose the presentation of negative key audit matters in the auditor's report?

Did not oppose			Neutral			Strongly opposed
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Please indicate how motivated you were to perform well on this case on the following scale:

Not at All Motivated			Moderately Motivated			Extremely Motivated
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Please indicate how much effort you have expended on this case on the following scale:

Very Little Effort			Moderate Effort			A Great Deal of Effort
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Please indicate the level of complexity of this case on the following scale:

Not Complex			Moderately Complex			Extremely Complex
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Please indicate your level of familiarity in dealing with similar cases like this on the following scale:

Not Familiar			Moderately Familiar			Very Familiar
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Section 3

Below is a list of issues that auditors may encounter during an audit engagement. Indicate the significance of each issue to audits on a scale of 1 to 7 where 1 indicates that the issue is not significant at all and 7 indicates that the issue is extremely significant to audits.	Not significant at all						Extremely Significant
Audit Issue	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Significant risk of material misstatement due to fraud or error							
Management application of accounting estimates not in accordance with standards							
Management process for making accounting estimates e.g. use of models that are not appropriate							
Unreasonable assumptions of management in developing accounting estimates							
Inadequate financial statement disclosures (for e.g. regarding revenue recognition, remuneration, going concern or related party transactions)							
Significant weaknesses in the internal control structure							
Misapplication of accounting standards by management							
Significant delays by management, for example, in providing access to information							
Need to rely on specialised skill or knowledge to perform planned audit procedures or evaluate audit evidence							
Attitudes, awareness and actions of management							
Unavailability of entity personnel							
Unwillingness by management to provide necessary information							
Tight deadlines to complete an audit							
Extensive unexpected effort to obtain audit evidence							
Unavailability of expected information							
Restrictions imposed on the auditor by entity management							
Unwillingness of management to correct misstatements							
Lack of communication openness from management							

Please record the approximate time you spent to complete this survey:

- 10 -

Thank you for taking the time to complete this instrument. Your assistance is very much appreciated. If you have any further comments, please provide them in the space provided.

Please ensure that you have answered every question. Missing questions will mean all of your responses are unusable.

Pranil Prasad
Department of Accounting and Corporate Governance
Faculty of Business and Economics
Macquarie University
NSW 2109
Australia.

Thank you for your participation!

Appendix 3

Research Instrument – Paper 3

(Version 2 – No Client Pressure)

Department of Accounting and Corporate Governance
Faculty of Business and Economics
Macquarie University NSW 2109
Phone: +61 2 9850 6137
Fax: +61 2 9850 8497
Email: parmod.chand@mq.edu.au

Participant Information Form

JUDGEMENTS OF AUDITORS

You are invited to participate in a study which investigates judgements made by auditors. The purpose of this study is to examine the impact of various factors affecting the reporting judgements of auditors.

The study is being conducted by Pranil Prasad [Department of Accounting and Corporate Governance, Macquarie University, NSW, Australia, pranil.prasad@students.mq.edu.au, Ph: (614) 2435 7440]. It is being conducted to meet the requirements of Doctor of Philosophy in Accounting and Corporate Governance under the supervision of Associate Professor Parmod Chand [parmod.chand@mq.edu.au, Ph: (612) 9850 6137] and Dr Meiting Lu [meiting.lu@mq.edu.au, Ph: (612) 9850 1928] of the Department of Accounting and Corporate Governance, Macquarie University.

If you decide to participate, you will be asked to complete a questionnaire. The questionnaire has three parts. Part one collects demographic data about the respondents. Part two consists of a small case study, and you are asked to provide your judgement on a scenario concerning the reporting of key audit matters. Part three requires you to indicate the significance of various issues that may arise in an audit. It will take approximately 20-25 minutes to complete the questionnaire.

As you participate in this study as an individual, you are not considered to be a representative of your work organization or institution. The information provided by you represents your personal views only and not the views of your workplace. No sensitive personal information will be collected. Any information or personal details gathered in this study are confidential, except as required by law. No individual will be identified in any publication of the results. Data will be analysed in aggregate form, held and accessed solely by the researchers (Associate Professor Parmod Chand, Dr Meiting Lu and Pranil Prasad) and will not be used for any other purpose. The results of this study will be incorporated into Pranil Prasad's PhD thesis, which will be available at the Macquarie University Library for public access. A summary of the research results can be made available to you on request by email to the researchers.

Participation in this survey is entirely voluntary. If you could complete the attached questionnaire, your time and co-operation will be greatly appreciated. If you do not wish to participate, simply do not return the questionnaire. Please note that completion and return of the questionnaire will be regarded as consent to use the information for research purposes.[1]

Please answer all questions. Your response is very important for the research which will contribute to understanding the factors affecting the professional judgement of auditors.

[1] The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics (telephone [02] 9850 7854, email: ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Section 1

YOUR PERSONAL PROFILE

Please respond to the following questions so that a profile for respondents can be developed.

1.	**Are you:** Male ☐ Female ☐
2.	**How old are you**? ☐ Under 20 years ☐ 20-24 ☐ 25-29 ☐ 30-34 ☐ 35-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over
3.	**In total, how many years of formal education (primary, secondary and tertiary) did you complete?** ☐ Less than 15 years ☐ 15 years ☐ 16 years ☐ 17 years ☐ 18 years or over
4.	**In which country did you complete your:** **Primary education** __________ **Secondary education** ____________ **Tertiary education** _________
5.	**What is your ethnicity?** ☐ Anglo-Celtic ☐ Chinese ☐ Indian __________________ Other (please specify)
6.	**Are you a member of:** ☐ ICAA ☐ CPA Australia ☐ IPA ____________ Other (please specify)
7.	**How many years of professional experience do you have as a qualified accountant?** _______ Years
8.	**In which of the following areas do you specialize or work?** ☐ Audit ☐ Accounting ☐ Tax ☐ Consulting _________________ Other (please specify)
9.	**What is your current position in your firm?** __________________
10.	**In which type of firm/organization do you work?** ☐ Big 4 Accounting Firm ☐ Non-Big 4 Accounting Firm ____________ Other (please specify)
11.	**How large (in terms of qualified professional accountants) is the firm/organization in which you work?** ☐ 1-5 ☐ 6-20 ☐ 21-100 ☐ Over 100
12.	**How familiar are you with Australian Auditing Standards (ASAs)?** ☐ Very familiar ☐ Familiar ☐ Somewhat familiar ☐ Not familiar
13.	**How frequently do you refer to ASAs in your professional practice?** ☐ Often ☐ Sometimes ☐ Seldom ☐ Never

Section 2

Case Study

Below is a case scenario that requires your judgement on the disclosure of key audit matters in the auditor's report.
The required judgement is based on Australian Auditing Standards (ASAs). You may refer to the relevant ASA in making your judgement.

The Client

Mantaka Industries is a publicly traded corporation founded in 1956. The firm manufactures a variety of large and small products for industrial application as well as engaging in large-scale construction projects. The diverse nature of the business is a result of two mergers that occurred in the early 1970s. The audit engagement has seldom produced major auditor-client disagreements. Joe Elias, is the partner in charge of the audit and you are the manager in charge of this audit. Most of the other members of the audit team were also on the audit last year.

This engagement

During the conduct of the current period audit, several audit issues were encountered of which the most significant ones are described below. These audit issues along with others have been communicated with the audit committee of Mantaka Industries in accordance with the auditing standards. Starting from this accounting period, the most significant audit issues encountered during an audit will have to be disclosed in the auditor's report as key audit matters.
The CEO, Bill and the CFO, Kim **do not oppose** the disclosure of any negative issue that was encountered during the audit as a key audit matter in the auditor's report. Additionally, the Chairman of Mantaka Industries **does not oppose** the idea of disclosing negative key audit matters.
It is now 1 June 2017, 61 days after year end and the audit is nearly complete. In 30 minutes you are to meet Joe, the partner in charge of the audit. One of the items on the agenda is the disclosure of key audit matters in the auditor's report.
During the audit, Joe has held several meetings with the audit committee and the management and discussed the issue of key audit matter disclosures. Despite agreeing that the list of audit issues that your team has identified are significant, the partner suggests that final disclosure decision rests with the firm, however, he has requested that you evaluate each issue and make an initial judgement on whether they should be presented in the audit report. On the next few pages are the list of significant audit matters on which you have to record your judgement after evaluating the scenarios and the findings of your audit team.

The clients' CEO, Bill and the CFO, Kim **do not oppose** the disclosure of any **negative issue** that was encountered during the audit as a key audit matter in the auditor's report. Additionally, the Chairman of Mantaka Industries **do not oppose** the idea of disclosing **negative key audit matters**.

#	Significant Audit Matters	Your Judgements (Please answer the following questions relating to the audit issues by marking an "X" on the answer corresponding to your judgement)
1	**Assessment of impairment for non-current assets** At 31 March 2017 the Company held $781.7m of property, plant and equipment. Due to varying levels of profitability during the year, the Company considered whether there were any indicators of impairment for each of its six cash generating units (CGUs). The Company performed impairment assessments for each CGU which performed below its forecast cash flows and had high underutilisation of property, plant and equipment. Indicators of possible impairment were identified in two of its CGUs. Following the identification of possible impairment of assets, the company engaged an independent valuer to undertake a valuation in relation to these assets. The valuations supported the carrying value of these assets. The Company concluded that no impairment charge was required in the two CGUs. The audit team focused on impairment of non-current assets because of the significant judgement involved in assessing impairment, including significant management judgement relating to cash flow forecasts (including discount rates, current work in hand and future contract wins and economic assumptions such as inflation and foreign currency rates) and estimations of the fair value of the assets. The value of the assets also has a potentially material impact on the financial statements. The audit team evaluated the impairment calculations including the testing of the recoverable amount of each CGU. The team also assessed the reasonableness of the cash flow projections used in the impairment models. Furthermore, the firms' Valuation Specialists were brought in to assess the impairment models and evaluated the reasonableness of key assumptions including the discount rate, terminal growth rates and forecast growth assumptions. The team also performed sensitivity analysis around the key drivers of the cash flow projections. **Findings:** The audit found that **cash flow projections were not reasonable** taking into account historical data, economic and market conditions. In addition, the cash flows used were not matched to the carrying amounts of all assets that generate those cash flows such as inventories and receivables. The Company also **performed sensitivity analyses** taking into consideration the numerous assumptions and estimates used in the impairment testing process. Our sensitivity analyses reveals that **very small changes in the key assumptions can lead to significant impairment write-downs which will be material** to the financial statements as a whole.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**
2	**Recognition of deferred tax assets** The Company had recorded $38.3m of deferred tax assets as at 31 March 2017. The Australian Accounting Standards require deferred tax assets to be recognised only to the extent that it is probable that sufficient future taxable profits will be generated in order for the benefits to be realised. The audit team focused on this matter because of the material impact the balance has on the financial statements and because the carrying forward of the balance requires significant judgement to assess future taxable profits. The audit team performed procedures to assess the calculations of forecast taxable profits for the next five years and compared these to the latest Board approved budget and forecast. The team also challenged management's key assumptions in the cash flow budget and forecasts. The auditors also evaluated if the accounting-based Board approved budget and forecast were appropriately adjusted to get taxable profit. Finally, the deferred tax asset balances were recalculated and disclosures in the financial statement were assessed. **Findings:** The audit found that **deferred tax assets were appropriately calculated and presented** and there were **no issues identified from the audit procedures performed**.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**

3	**Deficiency in internal control over reconciliation of intercompany transactions** The company processes a significant number of routine intercompany transactions on a monthly basis. Individual intercompany transactions are material and primarily relate to balance sheet activity, for example, cash transfers between business units to finance normal operations. The audit team focused on internal controls over reconciliation of intercompany transactions because the transactions are material (individually and collectively) and intercompany transactions represent an area of significant risk as most transactions are not at arms-length and involve related-parties which presents a higher risk of material misstatement. The audit procedures focused on the established internal controls over related party transactions. A formal management policy requires monthly reconciliation of intercompany accounts and confirmation of balances between business units. **Findings:** While the internal policies require monthly reconciliation and confirmation of balances between the businesses units involved in the intercompany transactions, **there are no processes in place to ensure performance of these procedures**. The audit testings identified that, as a result, **detailed reconciliations of intercompany accounts are not performed on a timely basis and neither are the balances confirmed**. There is also **an absence of any compensating controls**. This lacuna in the internal processes related to financial reporting significantly **increases the risk of material misstatement** in the Company's financial statements.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**
4	**Valuation of financial instruments** The company enters into various financial instruments including derivative financial instruments to hedge the company's exposure to variability in interest rates, foreign exchange movements and raw material prices. As at 31 March 2017, derivative financial assets totalled $339m (current assets of $192m and non-current assets of $147m) and derivative financial liabilities totalled $435 million (current liabilities of $356m and non-current liabilities of $79m). These financial instruments are recorded at fair value as required by the relevant accounting standard. The audit team focused on this area due to the complexities associated with the valuation and accounting for these financial instruments. The team obtained an understanding of the internal risk management procedures and the systems and controls associated with the origination and maintenance of complete and accurate information relating to derivative contracts. Additionally, utilising our treasury experts we also tested, on a sample basis, the existence and valuation of derivative contracts as at 31 March 2017. The audit procedures focused on the integrity of the valuation models, the incorporation of the contract terms and the key assumptions including future price assumptions and discount rates. We also obtained an understanding of key financial instrument contract terms to assess the appropriateness of accounting reflected in the financial report. **Findings:** The audit findings show that the Company employs **robust internal risk management procedures and controls on financial instruments and contracts**. The valuation models, key assumptions and estimations utilised in the valuation were **all reasonable**. This **greatly reduces any risk of material misstatement** in the balances for the derivative financial assets and liabilities. Furthermore, appropriate and adequate disclosures are included in the financial reports on derivative financial assets and liabilities.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**

- 5 -

5	**Accounting for legal claims** A large part of the Company's business is characterised by competition for individually significant contracts with customers which are often directly or indirectly associated with governments and the award of individually significant contracts to suppliers. The procurement processes associated with these activities are highly susceptible to the risk of corruption. In addition, the Company operates in a number of territories where the use of commercial intermediaries is either required by the government or is normal practice. The Company is currently under investigation by law enforcement agencies. Breaches of laws and regulations in this area can lead to fines, penalties, criminal prosecution, commercial litigation and restrictions on future business. This was an area of focus in the audit because of the range of potential outcomes and considerable uncertainty around the resolution of various investigations and litigation claims. The determination of the amount, if any, to be recorded in the financial statements as provision is also inherently subjective and therefore this is considered to be a significant audit risk. The audit team considered the Board meeting minutes, enquired with in-house legal counsel, evaluated relevant external legal advice received by the Company in connection with any of the investigations and litigation claims, and assessed the adequacy of any provisions and note disclosures relating to these legal issues. **Findings:** The Company's provisions relating to some of the litigation claims **did not adequately reflect** the fines, penalties and costs that the Company will have to incur for cases where the outcomes are very much unlikely to be in its favour. In addition, **inadequate disclosures were provided in the notes** on the investigations and litigations where the outcomes were more uncertain or where it was too early to determine the outcomes.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**
6	**Acquisition of T Holdings Ltd** During the year the Company acquired T Holdings Ltd for a gross purchase consideration of $120m. This was considered a significant purchase for the Company. Accounting for the acquisition is a complex process which involves significant judgement. In particular, significant management judgement is required to determine the fair value of assets and liabilities acquired and the allocation of purchase consideration to goodwill and other separately identifiable intangible assets (customer contracts and relationships). This acquisition transaction was a major focus in the audit because of its size and because of the estimation process involved in accounting for it. As part of the audit, the sale and purchase agreement was scrutinised along with the assumptions and estimations in the valuation of the assets and liabilities acquired. Valuation and finance experts were brought in to assess the valuation assumptions and compare these with external benchmarks and consider the assumptions based on the firms' knowledge of the Company. **Findings:** The valuations and allocation of purchase consideration to goodwill and other identifiable intangibles were **reasonable and supported by independent analyses** of the audit team and valuation experts. **The disclosures in respect of the business acquisition were also adequate**.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**
7	**Revenue Recognition** The Company has two distinct categories of revenue, being revenue from contracts to provide goods and revenue from construction contracts. Revenue recognition from construction contracts is complex because it is based on management judgement and estimates of the stage of completion, total contract revenue and costs, probability of customer approval of variations and claims and project completion dates. This was an area of significant attention in the audit because of the high volume of revenue transactions and the judgement required in recognising revenue from construction contracts. As part of the audit, the team assessed management's estimates of total contract revenue and costs and recalculated the state of completion based on actual costs incurred to date for a sample of transactions. The auditors also checked the start and end date of projects to supporting evidence and performed retrospective analysis of incomplete projects at year end. **Findings:** The audit **identified several instances where revenue from construction contracts were recognised ahead of time** based on incorrect assessment of stage of completion. These instances were mainly **concentrated towards end of each quarter** when quarterly financial statements were due. In most of these instances the amount of revenue was just below the quantitative materiality threshold for the audit but **collectively the amounts were material and enabled management to meet key performance thresholds** for payment of incentives such as bonuses.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**

8	**Reliance on automated processes and controls** A significant part of the Company's financial processes are heavily reliant on information technology (IT) systems with automated processes and controls over the capturing, valuing and recording of transactions. The IT systems were a key part of our audit because of the complexity of the IT environment supporting diverse business processes and the use of both manual and automated controls in the IT system. In addition, there are multiple internal and outsourced arrangements supporting the IT systems leading to increased complexity. The Company also continued to enhance its IT systems and during the year implemented new systems which were material to our audit. During the audit, the audit team understood and tested management's controls in systems relevant to financial reporting. When testing controls was not considered an appropriate or efficient testing approach, alternative audit procedures were performed on the financial information being produced by systems. The audit team also gained an understanding of material new systems including the design of the automated processes and controls. In addition, assessments were conducted in the processes put in place to migrate any data from the old systems to new systems and tested reconciliations between the systems. Finally, the team evaluated the design and tested the operating effectiveness of the controls in the new systems and performed additional audit testing procedures. **Findings:** These audit procedures revealed that **IT systems and related controls and procedures were operating effectively** and no major issues were identified. The implementation of the new systems was well controlled and **migration of data from old to new systems were performed appropriately**.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**
9	**Recoverability (valuation) of trade receivables** As outlined in the notes, there were trade receivables as at 31 March 2017 more than 60 days past due. The collectability of the Company's trade receivables, including unbilled contract revenue, and the valuation of the allowance for doubtful debts is a significant audit matter due to the judgement and estimations involved. During the audit, the Company's processes for trade receivables and unbilled contract revenue, including provisioning and collection processes were evaluated and tested. We also tested that trade receivables and unbilled contract revenue were subsequently collected. Where there were indicators that trade receivables were unlikely to be collected, we assessed the adequacy of allowance for doubtful debts. **Findings:** The audit tests and assessments reveal that the Company had **adequately provisioned for any bad debts** that may arise from non-payment of customer accounts.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**
10	**Valuation and existence of inventory** The Company had recognised inventory of $191.4m at 31 March 2017. Inventory is held by the entity in various locations around the country. Inventory is stored in warehouses, sheds, containers, and yards. Many of these are located in very remote areas due to nature of the construction industry. The valuation and existence of inventory was a significant audit issue because of the material value (both for profit and to the statement of financial position) and the complexity involved in determining inventory quantities on hand and judgement and estimations involved in its valuation. The audit team and members of our firms' component auditors attended inventory counts at locations, selected on financial significance and risk. Where locations were not attended, the team tested controls over inventory existence across the Company. For locations attended, a sample of inventory items were selected and the quantities that the team counted was compared to quantities recorded. The team also compared a sample of management's inventory count procedures to assess compliance with the Company's policy. Inquiries were also made of obsolete inventory items and while counting a note of the condition of the inventory was also recorded. A sample of inventory items were tested to see if the recorded value exceeded the amount at which they could be sold. **Findings:** Some of the inventory carried by the Company required estimations of the quantity remaining on hand that had margins for significant error if not conducted properly. For example, cement stored in silos required management to perform specific measurement and calculations to determine quantity on hand, which **we found were not performed according to Company guidelines**. This lead to **significant differences between our assessments of quantity on hand and the Company's recorded amounts**. Furthermore, **several items tested were found to be recorded at costs that were significantly higher than the amount for which they could be sold**.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**

In the preceding section, you have selected key audit matters that will be presented. **You are now asked to rank the order in which your selected key audit matters will be presented in the auditor's report.**

The key audit matter that will be presented first will be given a presentation rank of "1"; while the key audit matter that will be presented second will be given a rank of "2" and this will continue until all selected matters have been ranked for presentation.

Example:

If you had selected audit matter 2, 3, 5, 6, 7, 8, 9 and 10 for presentation and decided that you will present them in the following order: 6, 8, 3, 2, 10, 7, 9 and 5 then you will give key audit matter 6 a presentation rank of "1"; key audit matter 8 a presentation rank of "2"; key audit matter 3 a presentation rank of "3"; key audit matter 2 a presentation rank of "4"; key audit matter 10 a presentation rank of "5"; key audit mater 7 a presentation rank of "6"; key audit matter 9 a presentation rank of "7"; and key audit matter 5 a presentation rank of "8".

Please record your responses on presentation rank here:

Significant Audit Matter	Presentation Rank (Write down the presentation rank)
Matter No. 1: Assessment of impairment for non-current assets	
Matter No. 2: Recognition of deferred tax assets	
Matter No. 3: Deficiency in internal control over reconciliation of intercompany transactions	
Matter No. 4: Valuation of financial instruments	
Matter No. 5: Accounting for legal claims	
Matter No. 6: Acquisition of T Holdings Ltd	
Matter No. 7: Revenue Recognition	
Matter No. 8: Reliance on automated processes and controls	
Matter No. 9: Recoverability (valuation) of trade receivables	
Matter No. 10: Valuation and existence of inventory	

Do the CEO, CFO and the Board Chairman oppose or do not oppose the presentation of negative key audit matters in the auditor's report?

Did not oppose			Neutral			Strongly opposed
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Please indicate how motivated you were to perform well on this case on the following scale:

Not at All Motivated			Moderately Motivated			Extremely Motivated
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Please indicate how much effort you have expended on this case on the following scale:

Very Little Effort			Moderate Effort			A Great Deal of Effort
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Please indicate the level of complexity of this case on the following scale:

Not Complex			Moderately Complex			Extremely Complex
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Please indicate your level of familiarity in dealing with similar cases like this on the following scale:

Not Familiar			Moderately Familiar			Very Familiar
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Section 3

Below is a list of issues that auditors may encounter during an audit engagement. Indicate the significance of each issue to audits on a scale of 1 to 7 where 1 indicates that the issue is not significant at all and 7 indicates that the issue is extremely significant to audits.	Not significant at all						Extremely Significant
Audit Issue	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Significant risk of material misstatement due to fraud or error							
Management application of accounting estimates not in accordance with standards							
Management process for making accounting estimates e.g. use of models that are not appropriate							
Unreasonable assumptions of management in developing accounting estimates							
Inadequate financial statement disclosures (for e.g. regarding revenue recognition, remuneration, going concern or related party transactions)							
Significant weaknesses in the internal control structure							
Misapplication of accounting standards by management							
Significant delays by management, for example, in providing access to information							
Need to rely on specialised skill or knowledge to perform planned audit procedures or evaluate audit evidence							
Attitudes, awareness and actions of management							
Unavailability of entity personnel							
Unwillingness by management to provide necessary information							
Tight deadlines to complete an audit							
Extensive unexpected effort to obtain audit evidence							
Unavailability of expected information							
Restrictions imposed on the auditor by entity management							
Unwillingness of management to correct misstatements							
Lack of communication openness from management							

Please record the approximate time you spent to complete this survey:

- 10 -

Thank you for taking the time to complete this instrument. Your assistance is very much appreciated. If you have any further comments, please provide them in the space provided.

Please ensure that you have answered every question. Missing questions will mean all of your responses are unusable.

Pranil Prasad
Department of Accounting and Corporate Governance
Faculty of Business and Economics
Macquarie University
NSW 2109
Australia.

Thank you for your participation!

Appendix 3

Research Instrument – Paper 3

(Version 3 – Healthy Financial Condition)

Department of Accounting and Corporate Governance
Faculty of Business and Economics
Macquarie University NSW 2109
Phone: +61 2 9850 6137
Fax: +61 2 9850 8497
Email: parmod.chand@mq.edu.au

Participant Information Form

JUDGEMENTS OF AUDITORS

You are invited to participate in a study which investigates judgements made by auditors. The purpose of this study is to examine the impact of various factors affecting the reporting judgements of auditors.

The study is being conducted by Pranil Prasad [Department of Accounting and Corporate Governance, Macquarie University, NSW, Australia, pranil.prasad@students.mq.edu.au, Ph: (614) 2435 7440]. It is being conducted to meet the requirements of Doctor of Philosophy in Accounting and Corporate Governance under the supervision of Associate Professor Parmod Chand [parmod.chand@mq.edu.au, Ph: (612) 9850 6137] and Dr Meiting Lu [meiting.lu@mq.edu.au, Ph: (612) 9850 1928] of the Department of Accounting and Corporate Governance, Macquarie University.

If you decide to participate, you will be asked to complete a questionnaire. The questionnaire has three parts. Part one collects demographic data about the respondents. Part two consists of a small case study, and you are asked to provide your judgement on a scenario concerning the reporting of key audit matters. Part three requires you to indicate the significance of various issues that may arise in an audit. It will take approximately 20-25 minutes to complete the questionnaire.

As you participate in this study as an individual, you are not considered to be a representative of your work organization or institution. The information provided by you represents your personal views only and not the views of your workplace. No sensitive personal information will be collected. Any information or personal details gathered in this study are confidential, except as required by law. No individual will be identified in any publication of the results. Data will be analysed in aggregate form, held and accessed solely by the researchers (Associate Professor Parmod Chand, Dr Meiting Lu and Pranil Prasad) and will not be used for any other purpose. The results of this study will be incorporated into Pranil Prasad's PhD thesis, which will be available at the Macquarie University Library for public access. A summary of the research results can be made available to you on request by email to the researchers.

Participation in this survey is entirely voluntary. If you could complete the attached questionnaire, your time and co-operation will be greatly appreciated. If you do not wish to participate, simply do not return the questionnaire. Please note that completion and return of the questionnaire will be regarded as consent to use the information for research purposes.[1]

Please answer all questions. Your response is very important for the research which will contribute to understanding the factors affecting the professional judgement of auditors.

[1] The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics (telephone [02] 9850 7854, email: ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Section 1

YOUR PERSONAL PROFILE

Please respond to the following questions so that a profile for respondents can be developed.

1.	**Are you:** Male ☐ Female ☐
2.	**How old are you**? ☐ Under 20 years ☐ 20-24 ☐ 25-29 ☐ 30-34 ☐ 35-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over
3.	**In total, how many years of formal education (primary, secondary and tertiary) did you complete?** ☐ Less than 15 years ☐ 15 years ☐ 16 years ☐ 17 years ☐ 18 years or over
4.	**In which country did you complete your:** **Primary education** __________ **Secondary education** ____________ **Tertiary education** _________
5.	**What is your ethnicity?** ☐ Anglo-Celtic ☐ Chinese ☐ Indian __________________ Other (please specify)
6.	**Are you a member of:** ☐ ICAA ☐ CPA Australia ☐ IPA ____________ Other (please specify)
7.	**How many years of professional experience do you have as a qualified accountant?** _______ Years
8.	**In which of the following areas do you specialize or work?** ☐ Audit ☐ Accounting ☐ Tax ☐ Consulting _________________ Other (please specify)
9.	**What is your current position in your firm?** __________________
10.	**In which type of firm/organization do you work?** ☐ Big 4 Accounting Firm ☐ Non-Big 4 Accounting Firm ____________ Other (please specify)
11.	**How large (in terms of qualified professional accountants) is the firm/organization in which you work?** ☐ 1-5 ☐ 6-20 ☐ 21-100 ☐ Over 100
12.	**How familiar are you with Australian Auditing Standards (ASAs)?** ☐ Very familiar ☐ Familiar ☐ Somewhat familiar ☐ Not familiar
13.	**How frequently do you refer to ASAs in your professional practice?** ☐ Often ☐ Sometimes ☐ Seldom ☐ Never

Section 2

Case Study

Below is a case scenario that requires your judgement on the disclosure of key audit matters in the auditor's report.
The required judgement is based on Australian Auditing Standards (ASAs). You may refer to the relevant ASA in making your judgement.

The Client
Mantaka Industries is a publicly traded corporation founded in 1956. The firm manufactures a variety of large and small products for industrial application as well as engaging in large-scale construction projects. The diverse nature of the business is a result of two mergers that occurred in the early 1970s. The audit engagement has seldom produced major auditor-client disagreements. Joe Elias, is the partner in charge of the audit and you are the manager in charge of this audit. Most of the other members of the audit team were also on the audit last year.
Mantaka's overall financial condition is **very good**. All of the firms' solvency and profitability ratios **compare favourably** to the industry averages. Net income has shown a modest but **steady growth** over the last 5 years.

This engagement
During the conduct of the current period audit, several audit issues were encountered of which the most significant ones are described below. These audit issues along with others have been communicated with the audit committee of Mantaka Industries in accordance with the auditing standards. Starting from this accounting period, the most significant audit issues encountered during an audit will have to be disclosed in the auditor's report as key audit matters.
It is now 1 June 2017, 61 days after year end and the audit is nearly complete. In 30 minutes you are to meet Joe, the partner in charge of the audit. One of the items on the agenda is the disclosure of key audit matters in the auditor's report.
During the audit, Joe has held several meetings with the audit committee and the management and discussed the issue of key audit matter disclosures. Despite agreeing that the list of audit issues that your team has identified are significant, the partner suggests that final disclosure decision rests with the firm, however, he has requested that you evaluate each issue and make an initial judgement on whether they should be presented in the audit report. On the next few pages are the list of significant audit matters on which you have to record your judgement after evaluating the scenarios and the findings of your audit team.

The client's financial condition is **very good**. All its' solvency and profitability ratios **compare favourably** to the industry averages. Net income has shown a modest but **steady growth** over the last 5 years.

#	Significant Audit Matters	Your Judgements (Please answer the following questions relating to the audit issues by marking an "X" on the answer corresponding to your judgement)
1	**Assessment of impairment for non-current assets** At 31 March 2017 the Company held $781.7m of property, plant and equipment. Due to varying levels of profitability during the year, the Company considered whether there were any indicators of impairment for each of its six cash generating units (CGUs). The Company performed impairment assessments for each CGU which performed below its forecast cash flows and had high underutilisation of property, plant and equipment. Indicators of possible impairment were identified in two of its CGUs. Following the identification of possible impairment of assets, the company engaged an independent valuer to undertake a valuation in relation to these assets. The valuations supported the carrying value of these assets. The Company concluded that no impairment charge was required in the two CGUs. The audit team focused on impairment of non-current assets because of the significant judgement involved in assessing impairment, including significant management judgement relating to cash flow forecasts (including discount rates, current work in hand and future contract wins and economic assumptions such as inflation and foreign currency rates) and estimations of the fair value of the assets. The value of the assets also has a potentially material impact on the financial statements. The audit team evaluated the impairment calculations including the testing of the recoverable amount of each CGU. The team also assessed the reasonableness of the cash flow projections used in the impairment models. Furthermore, the firms' Valuation Specialists were brought in to assess the impairment models and evaluated the reasonableness of key assumptions including the discount rate, terminal growth rates and forecast growth assumptions. The team also performed sensitivity analysis around the key drivers of the cash flow projections. **Findings:** The audit found that **cash flow projections were not reasonable** taking into account historical data, economic and market conditions. In addition, the cash flows used were not matched to the carrying amounts of all assets that generate those cash flows such as inventories and receivables. The Company also **performed sensitivity analyses** taking into consideration the numerous assumptions and estimates used in the impairment testing process. Our sensitivity analyses reveals that **very small changes in the key assumptions can lead to significant impairment write-downs which will be material** to the financial statements as a whole.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**
2	**Recognition of deferred tax assets** The Company had recorded $38.3m of deferred tax assets as at 31 March 2017. The Australian Accounting Standards require deferred tax assets to be recognised only to the extent that it is probable that sufficient future taxable profits will be generated in order for the benefits to be realised. The audit team focused on this matter because of the material impact the balance has on the financial statements and because the carrying forward of the balance requires significant judgement to assess future taxable profits. The audit team performed procedures to assess the calculations of forecast taxable profits for the next five years and compared these to the latest Board approved budget and forecast. The team also challenged management's key assumptions in the cash flow budget and forecasts. The auditors also evaluated if the accounting-based Board approved budget and forecast were appropriately adjusted to get taxable profit. Finally, the deferred tax asset balances were recalculated and disclosures in the financial statement were assessed. **Findings:** The audit found that **deferred tax assets were appropriately calculated and presented** and there were **no issues identified from the audit procedures performed**.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**

3	**Deficiency in internal control over reconciliation of intercompany transactions** The company processes a significant number of routine intercompany transactions on a monthly basis. Individual intercompany transactions are material and primarily relate to balance sheet activity, for example, cash transfers between business units to finance normal operations. The audit team focused on internal controls over reconciliation of intercompany transactions because the transactions are material (individually and collectively) and intercompany transactions represent an area of significant risk as most transactions are not at arms-length and involve related-parties which presents a higher risk of material misstatement. The audit procedures focused on the established internal controls over related party transactions. A formal management policy requires monthly reconciliation of intercompany accounts and confirmation of balances between business units. **Findings:** While the internal policies require monthly reconciliation and confirmation of balances between the businesses units involved in the intercompany transactions, **there are no processes in place to ensure performance of these procedures**. The audit testings identified that, as a result, **detailed reconciliations of intercompany accounts are not performed on a timely basis and neither are the balances confirmed**. There is also **an absence of any compensating controls**. This lacuna in the internal processes related to financial reporting significantly **increases the risk of material misstatement** in the Company's financial statements.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**
4	**Valuation of financial instruments** The company enters into various financial instruments including derivative financial instruments to hedge the company's exposure to variability in interest rates, foreign exchange movements and raw material prices. As at 31 March 2017, derivative financial assets totalled \$339m (current assets of \$192m and non-current assets of \$147m) and derivative financial liabilities totalled \$435 million (current liabilities of \$356m and non-current liabilities of \$79m). These financial instruments are recorded at fair value as required by the relevant accounting standard. The audit team focused on this area due to the complexities associated with the valuation and accounting for these financial instruments. The team obtained an understanding of the internal risk management procedures and the systems and controls associated with the origination and maintenance of complete and accurate information relating to derivative contracts. Additionally, utilising our treasury experts we also tested, on a sample basis, the existence and valuation of derivative contracts as at 31 March 2017. The audit procedures focused on the integrity of the valuation models, the incorporation of the contract terms and the key assumptions including future price assumptions and discount rates. We also obtained an understanding of key financial instrument contract terms to assess the appropriateness of accounting reflected in the financial report. **Findings:** The audit findings show that the Company employs **robust internal risk management procedures and controls on financial instruments and contracts**. The valuation models, key assumptions and estimations utilised in the valuation were **all reasonable**. This **greatly reduces any risk of material misstatement** in the balances for the derivative financial assets and liabilities. Furthermore, appropriate and adequate disclosures are included in the financial reports on derivative financial assets and liabilities.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**

5	**Accounting for legal claims** A large part of the Company's business is characterised by competition for individually significant contracts with customers which are often directly or indirectly associated with governments and the award of individually significant contracts to suppliers. The procurement processes associated with these activities are highly susceptible to the risk of corruption. In addition, the Company operates in a number of territories where the use of commercial intermediaries is either required by the government or is normal practice. The Company is currently under investigation by law enforcement agencies. Breaches of laws and regulations in this area can lead to fines, penalties, criminal prosecution, commercial litigation and restrictions on future business. This was an area of focus in the audit because of the range of potential outcomes and considerable uncertainty around the resolution of various investigations and litigation claims. The determination of the amount, if any, to be recorded in the financial statements as provision is also inherently subjective and therefore this is considered to be a significant audit risk. The audit team considered the Board meeting minutes, enquired with in-house legal counsel, evaluated relevant external legal advice received by the Company in connection with any of the investigations and litigation claims, and assessed the adequacy of any provisions and note disclosures relating to these legal issues. **Findings:** The Company's provisions relating to some of the litigation claims **did not adequately reflect** the fines, penalties and costs that the Company will have to incur for cases where the outcomes are very much unlikely to be in its favour. In addition, **inadequate disclosures were provided in the notes** on the investigations and litigations where the outcomes were more uncertain or where it was too early to determine the outcomes.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**
6	**Acquisition of T Holdings Ltd** During the year the Company acquired T Holdings Ltd for a gross purchase consideration of $120m. This was considered a significant purchase for the Company. Accounting for the acquisition is a complex process which involves significant judgement. In particular, significant management judgement is required to determine the fair value of assets and liabilities acquired and the allocation of purchase consideration to goodwill and other separately identifiable intangible assets (customer contracts and relationships). This acquisition transaction was a major focus in the audit because of its size and because of the estimation process involved in accounting for it. As part of the audit, the sale and purchase agreement was scrutinised along with the assumptions and estimations in the valuation of the assets and liabilities acquired. Valuation and finance experts were brought in to assess the valuation assumptions and compare these with external benchmarks and consider the assumptions based on the firms' knowledge of the Company. **Findings:** The valuations and allocation of purchase consideration to goodwill and other identifiable intangibles were **reasonable and supported by independent analyses** of the audit team and valuation experts. **The disclosures in respect of the business acquisition were also adequate**.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**
7	**Revenue Recognition** The Company has two distinct categories of revenue, being revenue from contracts to provide goods and revenue from construction contracts. Revenue recognition from construction contracts is complex because it is based on management judgement and estimates of the stage of completion, total contract revenue and costs, probability of customer approval of variations and claims and project completion dates. This was an area of significant attention in the audit because of the high volume of revenue transactions and the judgement required in recognising revenue from construction contracts. As part of the audit, the team assessed management's estimates of total contract revenue and costs and recalculated the state of completion based on actual costs incurred to date for a sample of transactions. The auditors also checked the start and end date of projects to supporting evidence and performed retrospective analysis of incomplete projects at year end. **Findings:** The audit **identified several instances where revenue from construction contracts were recognised ahead of time** based on incorrect assessment of stage of completion. These instances were mainly **concentrated towards end of each quarter** when quarterly financial statements were due. In most of these instances the amount of revenue was just below the quantitative materiality threshold for the audit but **collectively the amounts were material and enabled management to meet key performance thresholds** for payment of incentives such as bonuses.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**

8	**Reliance on automated processes and controls** A significant part of the Company's financial processes are heavily reliant on information technology (IT) systems with automated processes and controls over the capturing, valuing and recording of transactions. The IT systems were a key part of our audit because of the complexity of the IT environment supporting diverse business processes and the use of both manual and automated controls in the IT system. In addition, there are multiple internal and outsourced arrangements supporting the IT systems leading to increased complexity. The Company also continued to enhance its IT systems and during the year implemented new systems which were material to our audit. During the audit, the audit team understood and tested management's controls in systems relevant to financial reporting. When testing controls was not considered an appropriate or efficient testing approach, alternative audit procedures were performed on the financial information being produced by systems. The audit team also gained an understanding of material new systems including the design of the automated processes and controls. In addition, assessments were conducted in the processes put in place to migrate any data from the old systems to new systems and tested reconciliations between the systems. Finally, the team evaluated the design and tested the operating effectiveness of the controls in the new systems and performed additional audit testing procedures. **Findings:** These audit procedures revealed that **IT systems and related controls and procedures were operating effectively** and no major issues were identified. The implementation of the new systems was well controlled and **migration of data from old to new systems were performed appropriately**.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**
9	**Recoverability (valuation) of trade receivables** As outlined in the notes, there were trade receivables as at 31 March 2017 more than 60 days past due. The collectability of the Company's trade receivables, including unbilled contract revenue, and the valuation of the allowance for doubtful debts is a significant audit matter due to the judgement and estimations involved. During the audit, the Company's processes for trade receivables and unbilled contract revenue, including provisioning and collection processes were evaluated and tested. We also tested that trade receivables and unbilled contract revenue were subsequently collected. Where there were indicators that trade receivables were unlikely to be collected, we assessed the adequacy of allowance for doubtful debts. **Findings:** The audit tests and assessments reveal that the Company had **adequately provisioned for any bad debts** that may arise from non-payment of customer accounts.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**
10	**Valuation and existence of inventory** The Company had recognised inventory of $191.4m at 31 March 2017. Inventory is held by the entity in various locations around the country. Inventory is stored in warehouses, sheds, containers, and yards. Many of these are located in very remote areas due to nature of the construction industry. The valuation and existence of inventory was a significant audit issue because of the material value (both for profit and to the statement of financial position) and the complexity involved in determining inventory quantities on hand and judgement and estimations involved in its valuation. The audit team and members of our firms' component auditors attended inventory counts at locations, selected on financial significance and risk. Where locations were not attended, the team tested controls over inventory existence across the Company. For locations attended, a sample of inventory items were selected and the quantities that the team counted was compared to quantities recorded. The team also compared a sample of management's inventory count procedures to assess compliance with the Company's policy. Inquiries were also made of obsolete inventory items and while counting a note of the condition of the inventory was also recorded. A sample of inventory items were tested to see if the recorded value exceeded the amount at which they could be sold. **Findings:** Some of the inventory carried by the Company required estimations of the quantity remaining on hand that had margins for significant error if not conducted properly. For example, cement stored in silos required management to perform specific measurement and calculations to determine quantity on hand, which **we found were not performed according to Company guidelines**. This lead to **significant differences between our assessments of quantity on hand and the Company's recorded amounts**. Furthermore, **several items tested were found to be recorded at costs that were significantly higher than the amount for which they could be sold**.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**

In the preceding section, you have selected key audit matters that will be presented. **You are now asked to rank the order in which your selected key audit matters will be presented in the auditor's report.**

The key audit matter that will be presented first will be given a presentation rank of "1"; while the key audit matter that will be presented second will be given a rank of "2" and this will continue until all selected matters have been ranked for presentation.

Example:

If you had selected audit matter 2, 3, 5, 6, 7, 8, 9 and 10 for presentation and decided that you will present them in the following order: 6, 8, 3, 2, 10, 7, 9 and 5 then you will give key audit matter 6 a presentation rank of "1"; key audit matter 8 a presentation rank of "2"; key audit matter 3 a presentation rank of "3"; key audit matter 2 a presentation rank of "4"; key audit matter 10 a presentation rank of "5"; key audit mater 7 a presentation rank of "6"; key audit matter 9 a presentation rank of "7"; and key audit matter 5 a presentation rank of "8".

Please record your responses on presentation rank here:

Significant Audit Matter	**Presentation Rank (Write down the presentation rank)**
Matter No. 1: Assessment of impairment for non-current assets	
Matter No. 2: Recognition of deferred tax assets	
Matter No. 3: Deficiency in internal control over reconciliation of intercompany transactions	
Matter No. 4: Valuation of financial instruments	
Matter No. 5: Accounting for legal claims	
Matter No. 6: Acquisition of T Holdings Ltd	
Matter No. 7: Revenue Recognition	
Matter No. 8: Reliance on automated processes and controls	
Matter No. 9: Recoverability (valuation) of trade receivables	
Matter No. 10: Valuation and existence of inventory	

How would you assess your client's financial condition:

Very Poor			Moderate			Very Good
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Please indicate how motivated you were to perform well on this case on the following scale:

Not at All Motivated			Moderately Motivated			Extremely Motivated
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Please indicate how much effort you have expended on this case on the following scale:

Very Little Effort			Moderate Effort			A Great Deal of Effort
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Please indicate the level of complexity of this case on the following scale:

Not Complex			Moderately Complex			Extremely Complex
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Please indicate your level of familiarity in dealing with similar cases like this on the following scale:

Not Familiar			Moderately Familiar			Very Familiar
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Section 3

Below is a list of issues that auditors may encounter during an audit engagement. Indicate the significance of each issue to audits on a scale of 1 to 7 where 1 indicates that the issue is not significant at all and 7 indicates that the issue is extremely significant to audits.	**Not significant at all**						**Extremely Significant**
Audit Issue	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Significant risk of material misstatement due to fraud or error							
Management application of accounting estimates not in accordance with standards							
Management process for making accounting estimates e.g. use of models that are not appropriate							
Unreasonable assumptions of management in developing accounting estimates							
Inadequate financial statement disclosures (for e.g. regarding revenue recognition, remuneration, going concern or related party transactions)							
Significant weaknesses in the internal control structure							
Misapplication of accounting standards by management							
Significant delays by management, for example, in providing access to information							
Need to rely on specialised skill or knowledge to perform planned audit procedures or evaluate audit evidence							
Attitudes, awareness and actions of management							
Unavailability of entity personnel							
Unwillingness by management to provide necessary information							
Tight deadlines to complete an audit							
Extensive unexpected effort to obtain audit evidence							
Unavailability of expected information							
Restrictions imposed on the auditor by entity management							
Unwillingness of management to correct misstatements							
Lack of communication openness from management							

Please record the approximate time you spent to complete this survey:

- 10 -

Thank you for taking the time to complete this instrument. Your assistance is very much appreciated. If you have any further comments, please provide them in the space provided.

Please ensure that you have answered every question. Missing questions will mean all of your responses are unusable.

Pranil Prasad
Department of Accounting and Corporate Governance
Faculty of Business and Economics
Macquarie University
NSW 2109
Australia.

Thank you for your participation!

Appendix 3

Research Instrument – Paper 3

(Version 4 – Poor Financial Condition)

Department of Accounting and Corporate Governance
Faculty of Business and Economics
Macquarie University NSW 2109
Phone: +61 2 9850 6137
Fax: +61 2 9850 8497
Email: parmod.chand@mq.edu.au

Participant Information Form

JUDGEMENTS OF AUDITORS

You are invited to participate in a study which investigates judgements made by auditors. The purpose of this study is to examine the impact of various factors affecting the reporting judgements of auditors.

The study is being conducted by Pranil Prasad [Department of Accounting and Corporate Governance, Macquarie University, NSW, Australia, pranil.prasad@students.mq.edu.au, Ph: (614) 2435 7440]. It is being conducted to meet the requirements of Doctor of Philosophy in Accounting and Corporate Governance under the supervision of Associate Professor Parmod Chand [parmod.chand@mq.edu.au, Ph: (612) 9850 6137] and Dr Meiting Lu [meiting.lu@mq.edu.au, Ph: (612) 9850 1928] of the Department of Accounting and Corporate Governance, Macquarie University.

If you decide to participate, you will be asked to complete a questionnaire. The questionnaire has three parts. Part one collects demographic data about the respondents. Part two consists of a small case study, and you are asked to provide your judgement on a scenario concerning the reporting of key audit matters. Part three requires you to indicate the significance of various issues that may arise in an audit. It will take approximately 20-25 minutes to complete the questionnaire.

As you participate in this study as an individual, you are not considered to be a representative of your work organization or institution. The information provided by you represents your personal views only and not the views of your workplace. No sensitive personal information will be collected. Any information or personal details gathered in this study are confidential, except as required by law. No individual will be identified in any publication of the results. Data will be analysed in aggregate form, held and accessed solely by the researchers (Associate Professor Parmod Chand, Dr Meiting Lu and Pranil Prasad) and will not be used for any other purpose. The results of this study will be incorporated into Pranil Prasad's PhD thesis, which will be available at the Macquarie University Library for public access. A summary of the research results can be made available to you on request by email to the researchers.

Participation in this survey is entirely voluntary. If you could complete the attached questionnaire, your time and co-operation will be greatly appreciated. If you do not wish to participate, simply do not return the questionnaire. Please note that completion and return of the questionnaire will be regarded as consent to use the information for research purposes.[1]

Please answer all questions. Your response is very important for the research which will contribute to understanding the factors affecting the professional judgement of auditors.

[1] The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics (telephone [02] 9850 7854, email: ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

Section 1

YOUR PERSONAL PROFILE

Please respond to the following questions so that a profile for respondents can be developed.

1.	**Are you:** Male ☐ Female ☐
2.	**How old are you?** ☐ Under 20 years ☐ 20-24 ☐ 25-29 ☐ 30-34 ☐ 35-39 ☐ 40-49 ☐ 50-59 ☐ 60 or over
3.	**In total, how many years of formal education (primary, secondary and tertiary) did you complete?** ☐ Less than 15 years ☐ 15 years ☐ 16 years ☐ 17 years ☐ 18 years or over
4.	**In which country did you complete your:** **Primary education** ___________ **Secondary education** _____________ **Tertiary education** __________
5.	**What is your ethnicity?** ☐ Anglo-Celtic ☐ Chinese ☐ Indian ____________________ Other (please specify)
6.	**Are you a member of:** ☐ ICAA ☐ CPA Australia ☐ IPA ______________ Other (please specify)
7.	**How many years of professional experience do you have as a qualified accountant?** ________ Years
8.	**In which of the following areas do you specialize or work?** ☐ Audit ☐ Accounting ☐ Tax ☐ Consulting ___________________ Other (please specify)
9.	**What is your current position in your firm?** ____________________
10.	**In which type of firm/organization do you work?** ☐ Big 4 Accounting Firm ☐ Non-Big 4 Accounting Firm ______________ Other (please specify)
11.	**How large (in terms of qualified professional accountants) is the firm/organization in which you work?** ☐ 1-5 ☐ 6-20 ☐ 21-100 ☐ Over 100
12.	**How familiar are you with Australian Auditing Standards (ASAs)?** ☐ Very familiar ☐ Familiar ☐ Somewhat familiar ☐ Not familiar
13.	**How frequently do you refer to ASAs in your professional practice?** ☐ Often ☐ Sometimes ☐ Seldom ☐ Never

Section 2

Case Study

Below is a case scenario that requires your judgement on the disclosure of key audit matters in the auditor's report.
The required judgement is based on Australian Auditing Standards (ASAs). You may refer to the relevant ASA in making your judgement.

The Client

Mantaka Industries is a publicly traded corporation founded in 1956. The firm manufactures a variety of large and small products for industrial application as well as engaging in large-scale construction projects. The diverse nature of the business is a result of two mergers that occurred in the early 1970s. The audit engagement has seldom produced major auditor-client disagreements. Joe Elias, is the partner in charge of the audit and you are the manager in charge of this audit. Most of the other members of the audit team were also on the audit last year.

Mantaka's overall financial condition is **very poor**. All of the firms' solvency and profitability ratios **compare unfavourably** to the industry averages. Net income has shown a modest but **steady decline** over the last 5 years.

This engagement

During the conduct of the current period audit, several audit issues were encountered of which the most significant ones are described below. These audit issues along with others have been communicated with the audit committee of Mantaka Industries in accordance with the auditing standards. Starting from this accounting period, the most significant audit issues encountered during an audit will have to be disclosed in the auditor's report as key audit matters.

It is now 1 June 2017, 61 days after year end and the audit is nearly complete. In 30 minutes you are to meet Joe, the partner in charge of the audit. One of the items on the agenda is the disclosure of key audit matters in the auditor's report.

During the audit, Joe has held several meetings with the audit committee and the management and discussed the issue of key audit matter disclosures. Despite agreeing that the list of audit issues that your team has identified are significant, the partner suggests that final disclosure decision rests with the firm, however, he has requested that you evaluate each issue and make an initial judgement on whether they should be presented in the audit report. On the next few pages are the list of significant audit matters on which you have to record your judgement after evaluating the scenarios and the findings of your audit team.

The client's financial condition is **very poor**. All its' solvency and profitability ratios **compare unfavourably** to the industry averages. Net income has shown a modest but **steady decline** over the last 5 years.

#	Significant Audit Matters	Your Judgements (Please answer the following questions relating to the audit issues by marking an "X" on the answer corresponding to your judgement)
1	**Assessment of impairment for non-current assets** At 31 March 2017 the Company held $781.7m of property, plant and equipment. Due to varying levels of profitability during the year, the Company considered whether there were any indicators of impairment for each of its six cash generating units (CGUs). The Company performed impairment assessments for each CGU which performed below its forecast cash flows and had high underutilisation of property, plant and equipment. Indicators of possible impairment were identified in two of its CGUs. Following the identification of possible impairment of assets, the company engaged an independent valuer to undertake a valuation in relation to these assets. The valuations supported the carrying value of these assets. The Company concluded that no impairment charge was required in the two CGUs. The audit team focused on impairment of non-current assets because of the significant judgement involved in assessing impairment, including significant management judgement relating to cash flow forecasts (including discount rates, current work in hand and future contract wins and economic assumptions such as inflation and foreign currency rates) and estimations of the fair value of the assets. The value of the assets also has a potentially material impact on the financial statements. The audit team evaluated the impairment calculations including the testing of the recoverable amount of each CGU. The team also assessed the reasonableness of the cash flow projections used in the impairment models. Furthermore, the firms' Valuation Specialists were brought in to assess the impairment models and evaluated the reasonableness of key assumptions including the discount rate, terminal growth rates and forecast growth assumptions. The team also performed sensitivity analysis around the key drivers of the cash flow projections. **Findings:** The audit found that **cash flow projections were not reasonable** taking into account historical data, economic and market conditions. In addition, the cash flows used were not matched to the carrying amounts of all assets that generate those cash flows such as inventories and receivables. The Company also **performed sensitivity analyses** taking into consideration the numerous assumptions and estimates used in the impairment testing process. Our sensitivity analyses reveals that **very small changes in the key assumptions can lead to significant impairment write-downs which will be material** to the financial statements as a whole.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**
2	**Recognition of deferred tax assets** The Company had recorded $38.3m of deferred tax assets as at 31 March 2017. The Australian Accounting Standards require deferred tax assets to be recognised only to the extent that it is probable that sufficient future taxable profits will be generated in order for the benefits to be realised. The audit team focused on this matter because of the material impact the balance has on the financial statements and because the carrying forward of the balance requires significant judgement to assess future taxable profits. The audit team performed procedures to assess the calculations of forecast taxable profits for the next five years and compared these to the latest Board approved budget and forecast. The team also challenged management's key assumptions in the cash flow budget and forecasts. The auditors also evaluated if the accounting-based Board approved budget and forecast were appropriately adjusted to get taxable profit. Finally, the deferred tax asset balances were recalculated and disclosures in the financial statement were assessed. **Findings:** The audit found that **deferred tax assets were appropriately calculated and presented** and there were **no issues identified from the audit procedures performed**.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**

<table>
<tr>
<td>3</td>
<td>Deficiency in internal control over reconciliation of intercompany transactions
The company processes a significant number of routine intercompany transactions on a monthly basis. Individual intercompany transactions are material and primarily relate to balance sheet activity, for example, cash transfers between business units to finance normal operations.
The audit team focused on internal controls over reconciliation of intercompany transactions because the transactions are material (individually and collectively) and intercompany transactions represent an area of significant risk as most transactions are not at arms-length and involve related-parties which presents a higher risk of material misstatement.
The audit procedures focused on the established internal controls over related party transactions. A formal management policy requires monthly reconciliation of intercompany accounts and confirmation of balances between business units.
Findings:
While the internal policies require monthly reconciliation and confirmation of balances between the businesses units involved in the intercompany transactions, there are no processes in place to ensure performance of these procedures. The audit testings identified that, as a result, detailed reconciliations of intercompany accounts are not performed on a timely basis and neither are the balances confirmed. There is also an absence of any compensating controls. This lacuna in the internal processes related to financial reporting significantly increases the risk of material misstatement in the Company’s financial statements.</td>
<td>Do you believe that this audit issue should be disclosed as a key audit matter in the auditor’s report for the current period?
<table><tr><td>Your Judgement</td><td>YES</td><td>NO</td></tr></table></td>
</tr>
<tr>
<td>4</td>
<td>Valuation of financial instruments
The company enters into various financial instruments including derivative financial instruments to hedge the company’s exposure to variability in interest rates, foreign exchange movements and raw material prices. As at 31 March 2017, derivative financial assets totalled $339m (current assets of $192m and non-current assets of $147m) and derivative financial liabilities totalled $435 million (current liabilities of $356m and non-current liabilities of $79m). These financial instruments are recorded at fair value as required by the relevant accounting standard.
The audit team focused on this area due to the complexities associated with the valuation and accounting for these financial instruments.
The team obtained an understanding of the internal risk management procedures and the systems and controls associated with the origination and maintenance of complete and accurate information relating to derivative contracts. Additionally, utilising our treasury experts we also tested, on a sample basis, the existence and valuation of derivative contracts as at 31 March 2017. The audit procedures focused on the integrity of the valuation models, the incorporation of the contract terms and the key assumptions including future price assumptions and discount rates. We also obtained an understanding of key financial instrument contract terms to assess the appropriateness of accounting reflected in the financial report.
Findings:
The audit findings show that the Company employs robust internal risk management procedures and controls on financial instruments and contracts. The valuation models, key assumptions and estimations utilised in the valuation were all reasonable. This greatly reduces any risk of material misstatement in the balances for the derivative financial assets and liabilities. Furthermore, appropriate and adequate disclosures are included in the financial reports on derivative financial assets and liabilities.</td>
<td>Do you believe that this audit issue should be disclosed as a key audit matter in the auditor’s report for the current period?
<table><tr><td>Your Judgement</td><td>YES</td><td>NO</td></tr></table></td>
</tr>
</table>

5	**Accounting for legal claims** A large part of the Company's business is characterised by competition for individually significant contracts with customers which are often directly or indirectly associated with governments and the award of individually significant contracts to suppliers. The procurement processes associated with these activities are highly susceptible to the risk of corruption. In addition, the Company operates in a number of territories where the use of commercial intermediaries is either required by the government or is normal practice. The Company is currently under investigation by law enforcement agencies. Breaches of laws and regulations in this area can lead to fines, penalties, criminal prosecution, commercial litigation and restrictions on future business. This was an area of focus in the audit because of the range of potential outcomes and considerable uncertainty around the resolution of various investigations and litigation claims. The determination of the amount, if any, to be recorded in the financial statements as provision is also inherently subjective and therefore this is considered to be a significant audit risk. The audit team considered the Board meeting minutes, enquired with in-house legal counsel, evaluated relevant external legal advice received by the Company in connection with any of the investigations and litigation claims, and assessed the adequacy of any provisions and note disclosures relating to these legal issues. **Findings:** The Company's provisions relating to some of the litigation claims **did not adequately reflect** the fines, penalties and costs that the Company will have to incur for cases where the outcomes are very much unlikely to be in its favour. In addition, **inadequate disclosures were provided in the notes** on the investigations and litigations where the outcomes were more uncertain or where it was too early to determine the outcomes.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**
6	**Acquisition of T Holdings Ltd** During the year the Company acquired T Holdings Ltd for a gross purchase consideration of $120m. This was considered a significant purchase for the Company. Accounting for the acquisition is a complex process which involves significant judgement. In particular, significant management judgement is required to determine the fair value of assets and liabilities acquired and the allocation of purchase consideration to goodwill and other separately identifiable intangible assets (customer contracts and relationships). This acquisition transaction was a major focus in the audit because of its size and because of the estimation process involved in accounting for it. As part of the audit, the sale and purchase agreement was scrutinised along with the assumptions and estimations in the valuation of the assets and liabilities acquired. Valuation and finance experts were brought in to assess the valuation assumptions and compare these with external benchmarks and consider the assumptions based on the firms' knowledge of the Company. **Findings:** The valuations and allocation of purchase consideration to goodwill and other identifiable intangibles were **reasonable and supported by independent analyses** of the audit team and valuation experts. **The disclosures in respect of the business acquisition were also adequate.**	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**
7	**Revenue Recognition** The Company has two distinct categories of revenue, being revenue from contracts to provide goods and revenue from construction contracts. Revenue recognition from construction contracts is complex because it is based on management judgement and estimates of the stage of completion, total contract revenue and costs, probability of customer approval of variations and claims and project completion dates. This was an area of significant attention in the audit because of the high volume of revenue transactions and the judgement required in recognising revenue from construction contracts. As part of the audit, the team assessed management's estimates of total contract revenue and costs and recalculated the state of completion based on actual costs incurred to date for a sample of transactions. The auditors also checked the start and end date of projects to supporting evidence and performed retrospective analysis of incomplete projects at year end. **Findings:** The audit **identified several instances where revenue from construction contracts were recognised ahead of time** based on incorrect assessment of stage of completion. These instances were mainly **concentrated towards end of each quarter** when quarterly financial statements were due. In most of these instances the amount of revenue was just below the quantitative materiality threshold for the audit but **collectively the amounts were material and enabled management to meet key performance thresholds** for payment of incentives such as bonuses.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement | **YES** | **NO**

8	**Reliance on automated processes and controls** A significant part of the Company's financial processes are heavily reliant on information technology (IT) systems with automated processes and controls over the capturing, valuing and recording of transactions. The IT systems were a key part of our audit because of the complexity of the IT environment supporting diverse business processes and the use of both manual and automated controls in the IT system. In addition, there are multiple internal and outsourced arrangements supporting the IT systems leading to increased complexity. The Company also continued to enhance its IT systems and during the year implemented new systems which were material to our audit. During the audit, the audit team understood and tested management's controls in systems relevant to financial reporting. When testing controls was not considered an appropriate or efficient testing approach, alternative audit procedures were performed on the financial information being produced by systems. The audit team also gained an understanding of material new systems including the design of the automated processes and controls. In addition, assessments were conducted in the processes put in place to migrate any data from the old systems to new systems and tested reconciliations between the systems. Finally, the team evaluated the design and tested the operating effectiveness of the controls in the new systems and performed additional audit testing procedures. **Findings:** These audit procedures revealed that **IT systems and related controls and procedures were operating effectively** and no major issues were identified. The implementation of the new systems was well controlled and **migration of data from old to new systems were performed appropriately**.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement — **YES** — **NO**
9	**Recoverability (valuation) of trade receivables** As outlined in the notes, there were trade receivables as at 31 March 2017 more than 60 days past due. The collectability of the Company's trade receivables, including unbilled contract revenue, and the valuation of the allowance for doubtful debts is a significant audit matter due to the judgement and estimations involved. During the audit, the Company's processes for trade receivables and unbilled contract revenue, including provisioning and collection processes were evaluated and tested. We also tested that trade receivables and unbilled contract revenue were subsequently collected. Where there were indicators that trade receivables were unlikely to be collected, we assessed the adequacy of allowance for doubtful debts. **Findings:** The audit tests and assessments reveal that the Company had **adequately provisioned for any bad debts** that may arise from non-payment of customer accounts.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement — **YES** — **NO**
10	**Valuation and existence of inventory** The Company had recognised inventory of $191.4m at 31 March 2017. Inventory is held by the entity in various locations around the country. Inventory is stored in warehouses, sheds, containers, and yards. Many of these are located in very remote areas due to nature of the construction industry. The valuation and existence of inventory was a significant audit issue because of the material value (both for profit and to the statement of financial position) and the complexity involved in determining inventory quantities on hand and judgement and estimations involved in its valuation. The audit team and members of our firms' component auditors attended inventory counts at locations, selected on financial significance and risk. Where locations were not attended, the team tested controls over inventory existence across the Company. For locations attended, a sample of inventory items were selected and the quantities that the team counted was compared to quantities recorded. The team also compared a sample of management's inventory count procedures to assess compliance with the Company's policy. Inquiries were also made of obsolete inventory items and while counting a note of the condition of the inventory was also recorded. A sample of inventory items were tested to see if the recorded value exceeded the amount at which they could be sold. **Findings:** Some of the inventory carried by the Company required estimations of the quantity remaining on hand that had margins for significant error if not conducted properly. For example, cement stored in silos required management to perform specific measurement and calculations to determine quantity on hand, which **we found were not performed according to Company guidelines**. This lead to **significant differences between our assessments of quantity on hand and the Company's recorded amounts**. Furthermore, **several items tested were found to be recorded at costs that were significantly higher than the amount for which they could be sold**.	**Do you believe that this audit issue should be disclosed as a key audit matter in the auditor's report for the current period?** Your Judgement — **YES** — **NO**

In the preceding section, you have selected key audit matters that will be presented. **You are now asked to rank the order in which your selected key audit matters will be presented in the auditor's report.**

The key audit matter that will be presented first will be given a presentation rank of "1"; while the key audit matter that will be presented second will be given a rank of "2" and this will continue until all selected matters have been ranked for presentation.

Example:

If you had selected audit matter 2, 3, 5, 6, 7, 8, 9 and 10 for presentation and decided that you will present them in the following order: 6, 8, 3, 2, 10, 7, 9 and 5 then you will give key audit matter 6 a presentation rank of "1"; key audit matter 8 a presentation rank of "2"; key audit matter 3 a presentation rank of "3"; key audit matter 2 a presentation rank of "4"; key audit matter 10 a presentation rank of "5"; key audit mater 7 a presentation rank of "6"; key audit matter 9 a presentation rank of "7"; and key audit matter 5 a presentation rank of "8".

Please record your responses on presentation rank here:

Significant Audit Matter	**Presentation Rank (Write down the presentation rank)**
Matter No. 1: Assessment of impairment for non-current assets	
Matter No. 2: Recognition of deferred tax assets	
Matter No. 3: Deficiency in internal control over reconciliation of intercompany transactions	
Matter No. 4: Valuation of financial instruments	
Matter No. 5: Accounting for legal claims	
Matter No. 6: Acquisition of T Holdings Ltd	
Matter No. 7: Revenue Recognition	
Matter No. 8: Reliance on automated processes and controls	
Matter No. 9: Recoverability (valuation) of trade receivables	
Matter No. 10: Valuation and existence of inventory	

How would you assess your client's financial condition:

Very Poor			Moderate			Very Good
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Please indicate how motivated you were to perform well on this case on the following scale:

Not at All Motivated			Moderately Motivated			Extremely Motivated
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Please indicate how much effort you have expended on this case on the following scale:

Very Little Effort			Moderate Effort			A Great Deal of Effort
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Please indicate the level of complexity of this case on the following scale:

Not Complex			Moderately Complex			Extremely Complex
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Please indicate your level of familiarity in dealing with similar cases like this on the following scale:

Not Familiar			Moderately Familiar			Very Familiar
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

Section 3

Below is a list of issues that auditors may encounter during an audit engagement. Indicate the significance of each issue to audits on a scale of 1 to 7 where 1 indicates that the issue is not significant at all and 7 indicates that the issue is extremely significant to audits.	**Not significant at all**						**Extremely Significant**
Audit Issue	**1**	**2**	**3**	**4**	**5**	**6**	**7**
Significant risk of material misstatement due to fraud or error							
Management application of accounting estimates not in accordance with standards							
Management process for making accounting estimates e.g. use of models that are not appropriate							
Unreasonable assumptions of management in developing accounting estimates							
Inadequate financial statement disclosures (for e.g. regarding revenue recognition, remuneration, going concern or related party transactions)							
Significant weaknesses in the internal control structure							
Misapplication of accounting standards by management							
Significant delays by management, for example, in providing access to information							
Need to rely on specialised skill or knowledge to perform planned audit procedures or evaluate audit evidence							
Attitudes, awareness and actions of management							
Unavailability of entity personnel							
Unwillingness by management to provide necessary information							
Tight deadlines to complete an audit							
Extensive unexpected effort to obtain audit evidence							
Unavailability of expected information							
Restrictions imposed on the auditor by entity management							
Unwillingness of management to correct misstatements							
Lack of communication openness from management							

Please record the approximate time you spent to complete this survey:

- 10 -

Thank you for taking the time to complete this instrument. Your assistance is very much appreciated. If you have any further comments, please provide them in the space provided.

Please ensure that you have answered every question. Missing questions will mean all of your responses are unusable.

Pranil Prasad
Department of Accounting and Corporate Governance
Faculty of Business and Economics
Macquarie University
NSW 2109
Australia.

Thank you for your participation!