School of Accounting

Mandatory Accounting Compliance by Australian Mineral Resources Firms: The Affect of Auditor Independence and Specialisation

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Declaration

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made.

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

Signature: Joshua Heniro

Date: 17 November 2010

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Abstract

The two objectives of this thesis are to investigate the magnitude of compliance with AASB 6 *Exploration for and Evaluation of Mineral Resources* and AASB 136 *Impairment of Assets*; and to examine the influence of audit quality on the compliance levels utilising data from 305 Australian mineral resources public listed firms. Consistent with agency theory auditor independence and audit specialisation are considered pivotal determinants of the magnitude of a disclosure compliance index that comprises 62 mandatory disclosure items.

Findings reveal there is 76% compliance rate with both AASB 6 and AASB136 by Australian mineral resource listed firms. The average fees paid to the incumbent auditors for non-audit services is AUD $74,183. The ratio of non-audit fees to total fees earned by Australian accounting firms is 26% whilst 53% of the firms engage the services of a specialist auditor.

OLS regression analysis reveals a statistically significant negative association between the ratio of non-audit fees to total fees and level of compliance. This suggests that in the Australian mineral resources sector context, large non-audit fees paid to the incumbent auditors seem to influence the auditor's independence. Yet, this thesis does not find any evidence that firms that employ services from a specialist auditor result in a higher level of compliance. Additional sensitivity analyses indicate that the results are generally robust across alternative measures.

These findings have important implication for accounting bodies, regulators, investors and other interested parties. Based on the findings, regulators could either: (1) do nothing, and allow the market to assess the risk imposed of the non-disclosure made by firms and take necessary action to reflect on the firms' market share prices (though such a option is unlikely given tenets of regulation theory); (2) enforce and penalize any non-compliance with the mandatory disclosures via tougher regulations; or (3) indirectly improve the level of compliance by means of auditor independence. The results show auditor independence (i.e., non-audit fees) is significantly associated with magnitude of compliance; regulators could regulate these non-audit services to boost the magnitude of compliance.

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List of Abbreviations

AAS	Australian Accounting Standard
AAER	Accounting and Auditing Enforcement Releases
AARF	Australian Accounting Research Foundation
AASB	Australian Accounting Standards Board
ACCA	Association of Chartered Certified Accountants
AICD	Australian Institute of Company Directors
AIFRS	Australian Equivalents of International Financial Reporting Standards
AIMR	Association for Investment Management and Research
APRA	Australian Prudential Regulation Authority
ASA	Australian Society of Accountants
ASC	Australian Securities Commission
ASEAN	Association of Southeast Asian Nations
ASIC	Australian Securities and Investments Commission
ASRB	Accounting Standards Review Board
ASX	Australian Stock Exchange
ASXCGC	Australian Stock Exchange Corporate Governance Council
AUASB	Australian and Assurances Standards Board
AUSTRAC	Australian Transaction Reports and Analysis Centre
CALDB	Company Auditors and Liquidators Disciplinary Board
CEO	Chief Executive Officer
CFO	Chief Financial Officer
CGC	Corporate Governance Council
CGU	Cash Generating Unit
CLERP	Corporate Law Economic Reform Program

CLRA98	Company Law Review Act 1998
CPA	Certified Practising Accountants
CPAA	Certified Practising Accountants Australia
CPC	Code of Professional Conduct
DCI	Disclosure Compliance Index
ESIC	Enterprise Standard Industrial Classification
ESO	Executive Stock Option
FASB	Financial Accounting Standards Board
FISDI	Financial Information System Design and Implementation
FRC	Financial Reporting Council
FRP	Financial Reporting Panel
GAAP	Generally Accepted Accounting Principles
GAAS	Generally Accepted Auditing Standards
GFS	Government Finance Statistics
GICS	Global Industry Classification Standard
IAS	International Accounting Standards
IASB	International Accounting Standards Board
IASC	International Accounting Standards Committee
ICAA	Instituted of Chartered Accountants in Australia
IFAC	International Federation of Accountants
IFRIC	International Financial Reporting Interpretations Committee
IFRS	International Financial Reporting Standards
IFSA	Investment and Financial Services Association Limited
IPO	Initial Public Offerings
IT	Information Technology
ITSA	Insolvency and Trustee Service Australia

MAS	Management Advisory Services
MRR	Mineral Resources Reserves
NAB	National Australia Bank
NAS	Non-Audit Services
NCSC	National Companies and Securities Commission
NIA	National Institute of Accountants
OECD	Organisation for Economic Co-operation and Development
OLS	Ordinary Least Square
SEC	Securities and Exchange Commission
UIG	Urgent Issues Group
UNCTAD	United Nations' Conference on Trade and Development

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Related Past Publications

Refereed Papers:

Heniro, J., 2005, 'Shifting Sands of Compliance with Mandatory Disclosure Requirements amongst Australian Mineral Resource Firms: Case of AASB 6 and AASB 136', *National Business Student Research Conference*, Perth, Australia, pp. 32 - 46

Conference Papers:

Heniro, J., Van der Zahn, J.L.W.M., and Tower, G., 2007, 'Influence of Audit Values on Mandatory Disclosure Requirements of Mining and Natural Resource Sector Firms', *European Accounting Association (EAA) Conference*, Lisbon, Portugal

Chapter 1 INTRODUCTION

1.1 Overview of Research Study

Globalisation of the world economy has led companies to seek international resources to finance expansion, modernisation and materials to compete in the world market. Similarly, investors are seeking potential investments and risk diversification across companies and nations. However, differences in accounting practices amongst countries are the biggest hindrance to global trading and expansion (Choi and Mueller, 1984; Alexander, Britton and Jorissen, 2007).

Accounting standards have economic consequences such as increased volatility in the net income figure, changing financial ratios and possible violations of debt covenant agreements, which have direct impact on share prices (Tower, Hancock and Taplin, 1999; Bailey, Karolyi and Salva, 2006). As a result, the need/demand for internationally comparable financial reports and, therefore, internationally comparable accounting standards, has never been greater to facilitate the international flow of capital and exchange of information (Taylor and Jones, 1999; Alexander, Britton and Jorissen, 2007).

The Australian Accounting Standards Board (AASB) is the Australian body responsible for setting accounting standards for all reporting entities (Australian Securities and Investments Commission Act 2001, Section 227). The AASB has been developing accounting standards with a view to international harmonisation for a number of years. In July 2002 the Australian Financial Reporting Council (FRC), the statutory body responsible

for overseeing the setting of accounting standards, issued a FRC Bulletin (2002/4) recommending formal adoption of international accounting standards (now known as the International Financial Reporting Standards (IFRS)). This was formally adopted in March 2003 and the AASB's harmonisation[1] policy was fundamentally changed to a 'convergence' approach. The AASB announced that International Financial Reporting Standards (IFRS) would be adopted as equivalent AASB Standards, with some minor exceptions (i.e., the exception of the accounting standards that relate to domestic issues and/or no equivalent IFRSs). The ratification was finalised on 15 July 2004. Subsequently, entities that comply with AASB standards (also known as IFRS-equivalents) are deemed to be simultaneously in compliance with those of International Accounting Standards Board (IASB).

The AASB adopted a 'big-bang' approach to transition; thus, Australian entities are required to comply with the applicable accounting standards (i.e., IFRS-equivalents) from 1 January 2005 (Deloitte Touche Tohmatsu, 2004). At the time of the decision to adopt international accounting standards the impact on mineral resource sector firms[2] was considered to have far-reaching complications (Lowes, 2004). Various mineral resource insiders, commentators, accounting professionals and scholars alike (e.g., Lowes, 2004; Jubb, 2005) expressed concern regarding the adoption of international accounting standards verbatim would significantly increase earnings volatility, impact reported profits, alter balance sheet presentations and cause possible breaches of

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[1] Harmonisation is defined as 'the process of increasing the consistency and comparability of accounts in order to remove the barriers to the international movement of capital and exchange of information by reducing the differences in accounting and company law' (Nobes, 1994, p.33).

[2] It is acknowledged the decision to adopt international accounting standards provided a major shake-up of the accounting practices of all Australian listed firms. This study, however, is limited to the mineral resources sector. Consequently, for brevity discussion is limited to the sector.

debt covenants. In particular, the accounting treatment for impaired assets is one issue identified as a specific driver of these concerns (Jubb, 2005) [3].

In July and December 2004, AASB issued Accounting Standard AASB 6 – *Exploration for and Evaluation of Mineral Resources* (Australian equivalent to IFRS 6) and AASB 136 – *Impairment of Assets* (Australian equivalent to International Accounting Standard (IAS) 36), as part of Australia's convergence with IFRSs[4]. Both standards apply for reporting periods ending on or after 1 January 2005. AASBs 6 and 136 are standards that have fundamental far-reaching implications for assets revaluation[5]. Siy (2009, p. 378) provides further explanation of the importance of assets revaluation as follow:

> Estimates of mineralization are crucial to the determination of mining companies' financial results. They underpin much of the value that investors place on the natural resource assets of extractive business. Financial reporting contends not only with the presentation of mineral MRR [mineral resources reserves] but how financial statements are impacted in terms of financial position and earnings. This is demonstrated by MRR's direct impact on key accounting policies. Shifts in mineral projections influence asset carrying values and returns through periodic charges against income as a result of depreciation, depletion or amortization. Accounting of mine stripping, exploration and evaluation costs is also significantly affected by these estimates. The aforementioned are critical areas of judgement which can alter a mining company's resource valuation, profitability and net worth.

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[3] Other industry-specific issues projected to have a pronounced impact include exploration expenditures, hedging foreign exchange and commodity risks, joint venture and production sharing arrangements (Jubb, 2004; Jubb, 2005).
[4] International Accounting Standards (IASs) were issued by the International Accounting Standards Committee (IASC) from 1973 to 2000. The IASB replaced the IASC in 2001. Since then, the IASB has amended some IASs, has proposed to amend other IASs, will replace some IASs with new IFRSs, and has adopted or proposed certain new IFRSs on topics for which there was no previous IAS. The terms 'AASB(s)', 'IFRS(s)' and 'IAS(s)' will be used synonymously with 'standard(s)' unless stated otherwise.
[5] See Chapter 2 for discussion.

Therefore, non-compliance with AASB 6 (*Exploration for and Evaluation of Mineral Resources*) and AASB 136 (*Impairment of Assets*) would definitely induce more uncertainty and volatility on earnings quality for the mineral resource sector. This in turn will have an impact on the cost of capital (Minton and Schrand, 1999; Francis, Nanda and Olsson, 2008).

These standards (AASB 6 and AASB 136) are the key focus of the study, in particular the mandatory disclosure requirements. This study contributes to an understanding of the influence of audit quality features on the extent of a firm's accounting standards compliance. Auditor quality has been defined in numerous ways (see Gramling and Stone (2001) for a review). The majority of the most recent prevalent definitions generally define audit quality as a function of independence and specialisation (competency). This study addresses these two key dimensions by focusing on auditor independence and specialisation.

Agency theory provides an appropriate conceptual framework for examining the extent of the compliance with AASBs 6 and 136. Jensen and Meckling (1976) posit that the segregation of ownership (principals) and control (agents) present an opportunity for agents to act in the agents' interests instead of the principals'. The presence of asymmetry information between agents and investors presents opportunities for agents to act in the agents' own best interest, such as to comply less with AASBs 6 and 136. Given that auditors' levels of audit quality are not the same; issues arise as to the auditors' capability of finding non-compliance and reporting it. This study seeks to investigate the influence of auditor quality on this level of compliance.

1.2   Research Questions

Recent research (e.g., Becker, DeFond, Jiambalvo and Subramanyam, 1998; Francis, Mayhew and Sparks, 1999; Kim, Chung, Firth, and Kim, 2003; Hogan et al., 2008; Lin, Liu and Wang, 2009) shows that higher quality audit firms are more effective in monitoring corporate management, providing greater assurance of reported financial figures and increasing confidence in the financial reporting system's validity. It may further be postulated that higher quality audit firms are more likely to seek to ensure clients comply with accounting standards mandatory disclosure requirements.

Recent audit research literature has paid particular attention to auditor independence (e.g., Gore, Pope and Singh, 2001; Antle, Narayanmoorthy and Zhou, 2002; Ashbaugh, LaFond and Mayhew, 2003; Larcker and Richardson, 2004) and also in a smaller percentage of the literature examined auditor specialisation (e.g., Gramling and Stone, 2001; Ferguson and Stokes, 2002; Balsam, Krishnan and Yang, 2003). An audit firm's quality is likely to be a function of various attributes. Auditor independence and specialisation are the two key features that are of interest to this study.

For auditor independence, it is commonly argued (e.g., Ramsay, 2001; Firth, 2002; Warming-Rasmussen, 2005) that if the external auditor's independence is impaired then this will compromise their willingness to conduct an effective audit. Therefore, this impairment of independence gives corporate management great room to manipulate earnings or decline from complying with mandatory disclosure requirements.

With respect to auditor specialisation, an industry specialist is more likely to be familiar with how mandatory disclosures affect that specific industry than a non-industry specialist. This is likely to be particularly true in respect to AASB 6 which is attuned to a specific industry. Further, having indicated their position as an industry specialist the audit firm is more likely to enforce compliance with mandatory disclosures affecting that industry than a non-specialist so as to preserve their reputation capital (Healy and Palepu, 2001; Krishnan, 2003b).

Based on the discussion in this chapter thus far, it is clear that the decision of the FRC and AASB to formally adopt international accounting standards is likely to have had profound implications for the accounting practices (AASB 6) of all Australian listed firms. Given the complexity surrounding asset impairment (AASB 136) and how it applies to mineral resource firms, effective communication with shareholders and the investment community is essential.

AASB 6 *Exploration for and Evaluation of Mineral Resources* related disclosures such as key accounting policy on revaluation of extractive assets is a critical area which can influence a mineral resource firm's profitability and net worth (Siy, 2009). Such information is crucial to investors to place value on natural resource firm value. Disclosures required by AASB 136 *Asset Impairment* such as the assumptions applied in assessing and determining recoverable amounts are considered sensitive issues (KPMG, 2009). If asset impairment related information is indeed sensitive, mineral resource firms may be reluctant to comply with these mandatory disclosure requirements. It is important, therefore, for influential factors such as the external auditor to ensure mineral resource firms provide the required details. In

addition, audit quality factors such as independence and specialisation, may affect the monitoring effectiveness of the external auditor.

This study seeks to investigate the issues related to compliance with mandatory disclosure requirements in AASBs 6 and 136 by Australian mineral resource firms; and the resulting influence of auditor independence and specialisation by addressing the three primary questions as follows:

(1) *What is the extent of compliance with AASBs 6 and 136 mandatory disclosures for Australian mineral resources firms?*

(2) *Does auditor independence influence the level of compliance with AASBs 6 and 136 mandatory disclosures for Australian mineral resources firms?*

(3) *Does auditor specialisation influence the level of compliance with AASBs 6 and 136 mandatory disclosures for Australian mineral resources firms?*

1.3   Significance of the Study

This study is significant for several key reasons. First, previous disclosure research (Raffournier, 1995; Chau and Gray, 2002; Makhija and Patton, 2004) primarily focuses on voluntary compliance with IAS and firms' level characteristics underlying voluntary compliance. This study differs by focusing on an external influential factor that may impact on compliance (i.e., the external auditor) and characteristics of that external force (i.e., auditor independence and specialisation) that may influence its effect.

Second, previous compliance studies focus mainly on industrial and manufacturing firms (e.g., Naser, 1998; Owusu-Ansah, 2005). In

Australia's domestic setting, the mineral resource sector is considered to be a major sector[6] in contribution to Australian GDP. Empirical evidence within this sector of compliance with accounting standards – in particular the new AASBs – is non-existent. This study aims to fill the void by providing evidence on compliance with IAS of mineral resources firms in the Australian context.

Third, most compliance studies apply limited content analysis on IAS required disclosures and measurements/presentations as a means of managing the scale of research (such as Glaum and Street, 2003; Ali, Ahmed and Henry, 2004). Cairn (2002) notes that such practices are cause for a much greater concern as these practices restrict severely the value of the conclusions. It is true that the subjectively selected disclosure checklist focuses on IAS practices that past studies have identified as 'problematic'. However, Carins (2002) claims that there is scant evidence that these are the only 'problematic' practices. This study enhances the methodological strengths by including all disclosures required by AASBs 6 and 136.

Finally, this is the first analysis of the extent of compliance with all AASBs 6 and 136[7] disclosure requirements since the convergence with IAS on 1 January 2005. This study is the first known study on the mandated compliance with IAS in an Australia context. Findings are expected to greatly enhance understanding of the role and contribution of auditor independence and specialisation to the degree of compliance. The findings will have important implications

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[6] This sector is important given the role it plays in Australia growing economy. In the year of 2002-03 mineral resources contributed about 5% and 28% to Australia GDP and exports respectively (Australian Bureau of Statistics, 2003).

[7] It is important to have a basic understanding of key terms and fundamental concepts that are adopted in this study. This will confine the boundaries of this research and will in turn assist the readers in their interpretation of the research. See Appendix A for Key Terms and Concepts.

for standard setters, law enforcers, accounting organisations, international investors and international capital providers.

1.4 Conceptual Schema

The conceptual schema underlying the study is defined in Figure 1.1.

Figure 1.1: Conceptual Schema
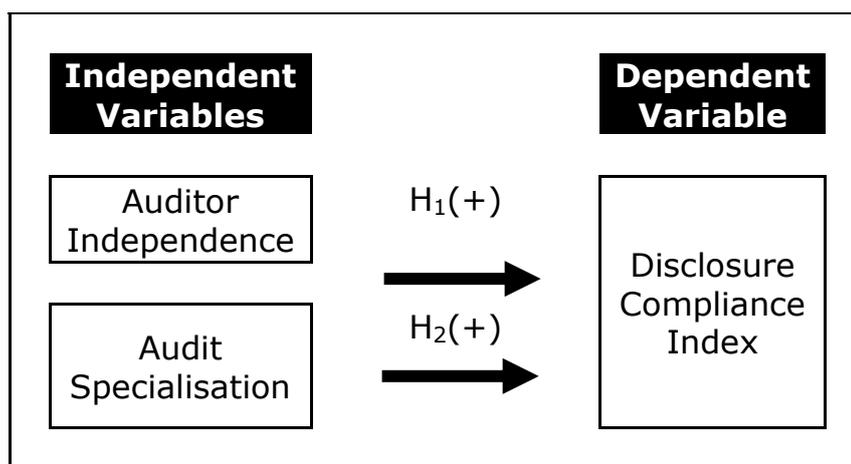
This study investigates the relationship between the level of compliance with AASB 6 *Exploration for and Evaluation of Mineral Resources* and AASB 136 *Impairment of Assets* with Audit Quality. Audit quality is segregated into auditor independence and audit specialisation. It is anticipated that auditor independence and audit specialisation are positively associated with the level of compliance (see Figure 1.1). The level of compliance is measured by a disclosure compliance index (DCI).

1.5 Thesis Outline

This thesis is organised into seven chapters. Chapter 1 provides an overview of the study, research questions, significance of this research and a conceptual schema. Chapter 2 presents the main two general conflicting regulation theories (Private and Public theories) and then narrows down to the more specific regulation in

governing auditor independence. This is augmented by a discussion on the Australian financial reporting framework and the main two key standards AASB 6 *Exploration for and Evaluation of Mineral Resources* and AASB 136 *Asset Impairment*, with which companies should conform in promoting compliance and transparent communication. This chapter also identifies and reviews the literature relevant to compliance with mandatory disclosures. This is followed by a critical review on auditor independence and audit specialisation literature in Chapter 3. A theoretical framework using agency theory is then provided and a set of testable hypotheses are developed. Chapter 4 details the process of data collection. The chapter also describes the construction and application of the disclosure index as well as the definitions and proxies for independent and control variables. The main model of and the statistical method is constructed and discussed respectively. Descriptive statistics for dependent, independent and control variables are presented in Chapter 5. The statistical results for univariate and multivariate are performed and discussed in this chapter. Chapter 6 contains the results of a series of robustness checks. The results of sub-sample regression analysis based on firm size, firm performance, type of auditor, level of board independence and duality of management, are discussed. Finally, implications of the study, limitations, and suggestions for future research are set out in Chapter 7.

Chapter 2 REGULATION AND COMPLIANCE

2.1 Chapter Overview

This chapter presents an overview of the relevant regulatory theories, regulatory framework and reviewing relevant literature in compliance with mandatory disclosure of accounting standards. Section 2.2 discusses theories of regulation. The Australian financial reporting framework is presented in Section 2.3. In Section 2.4 insights on audit independence regulation are explored. Section 2.5 outlines the current development of Australian mineral resource accounting regulations. The two key standards, AASB 6– *Exploration and Evaluation of Mineral Resources* and AASB 136 *Impairment of Assets,* are reviewed. Finally, prior accounting compliance research studies are analysed in Section 2.6 and the chapter concludes with a summary in Section 2.7.

2.2 Regulation Theories

Most theories of regulatory origin and development can be seen as types of interest theory. The main two distinct and conflicting theories that have evolved over time in the attempt to explain both the origins and practice of regulation are: (i) public interest and (ii) private interest theories (Baldwin and Cave, 1999; Shinnick and McEnry, 2006; Singh, 2007). Public interest theory assumes regulation is for the 'public good' by improving societal welfare (Leftwich, 1983; Watts and Zimmerman, 1986; Beaver, 1998; Bozeman, 2007). In contrast, private interest theorists argue that regulation gives rise to opportunities for wealth maximisation for the profession (Taplin, Tower and Hancock, 2002). Public interest theory is normative, that posits what should be, whilst private

theory seeks to describe and explain a more positive perspective (Tower, 1991).

Under public interest theories regulation is established for the protection and benefit of the public at large or some large subclasses of the public largely in response to public-interest related objectives (Stigler, 1971; Mitnick, 1980; Hantke-Domas, 2003). Public interest theorists view government regulation as a response to public demands for "the rectification of palpable and remediable inefficiencies and inequities in the operation of the free market" (Posner, 1974, p. 336). This implies an assumption about public interest theory that activities do not always function in the public interest without supervision and control (Posner, 1974; Uche, 2001, Baldwin and Cave, 2001; Quick, Turley and Willekens, 2008). Such a view draws on a historical antecedent that regulation in the past followed some forms of crisis or public dissent (Uche, 2001). For example, the establishment of the Securities and Exchange Commission (SEC) in the USA is as a result of a crisis driven regulation[8] (Reagan, 1987). Similarly the enactment of Corporate Law Economic Reform Program (CLERP) in Australia is yet another example of a response to significant corporate misconduct and failures.

To achieve the aim of protecting the public at large, regulation in the public interest should strive to equip the public with all relevant information for decision making and protect the public from monopolies and industries that generate substantial external costs and benefits (Uche, 2001). However, this does not always take

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[8] After the 1929 great crash, equity and investment markets had been chaotic. Stocks were issued for worthless companies without true information being made to the public and investment firms were affiliated with commercial banks to manipulate market prices to their advantage. The legislation passed in 1933 and 1934 with regards to mandatory disclosures for new securities and regulation for securities market respectively that eventually lead to the establishment of SEC (Reagan, 1987).

place in practice as argued by Posner (1974) and Bozeman (2007). Mitnick (1980) provides views on deviations of the original public interest theories (as to why regulation ceases to serve the public welfare). First, regulators are or become venal or evil. This view holds that regulators are corrupted and mainly act to the best of personal gain due to conflict of interests. For instance, regulators accept bribes, embezzle or divert public funds to enhance personal benefits, and amend regulation of which they have business interest stake. Second, the regulators are or become incompetent. This incompetency in the agencies results from inadequacies in salary, status, and working conditions that fails to attract or retain competent human resources (Mitnick, 1980; Baldwin and Cave, 2001). Another possible explanation for incompetence is the lack of specific industry knowledge of how to regulate effectively in rapid changing industries. In line with Mitnick (1980), Landis (1960, p.66) argues that "the prime key to the improvement of the administrative process is the selection of qualified personnel. Good men can make poor laws workable; poor men can wreak havoc with good laws". Furthermore, public interest theory presumes that relevant information can be obtained by government at low cost, and politicians and other actors are motivated by altruism (Jordana and Levi-Faur, 2004).

A contrasting view to public interest theory is contained in the private interest theory which is initiated by Stigler (1971) and expanded by Pelzman (1976) and Becker (1983). Private interest theorists perceive regulation as a mechanism designed to confer benefits on politically effective groups (Peirson and Ramsay, 1983; Gagnepain and Ivaldi, 2008). In other words, regulation is perceived to be "the product of coalitions between regulated industry and related interest groups, the former obtaining some monopoly profits from regulation, the latter obtaining higher

prices" (Taplin, Tower and Hancock, 2002, p.175). Gagnepain and Ivaldi (2008) added that through the market and political regulatory processes, interest groups may pursue own private-interest and hence establish the rules for private interest behaviour. Likewise, regulated companies may willingly choose to cooperate in their own regulation so as to create and/or protect their own self-interest.

Private interest theory exhibits a more damaging motive by which "the special interests act specifically against the public interest in their own favour, either wielding covert influence, or abusing their monopoly power over asymmetric information" (Bartle and Vass, 2008, p. 2). This is in line with the agency argument (bureaucratic theory) that typically alludes to regulators, nationalised industry boards, and company boards where, under conditions of incomplete information and uncertainty, the boards (agents) promote their bureaucratic self-interest over the interest of the governments or shareholders (principals) who delegated the boards to carry out a particular public function (Bartle and Vass, 2008).

In the case of accounting standards

> "the regulatees could be accountants, represented by the professional accounting bodies, or alternatively, those entities that provide financial statements through the use of the standards. To some extent, these two groups' interests overlap. However, there can be tension if, for example, entities prefer standards allowing them to report favourably but not necessarily realistically, whereas the professional accounting bodies prefer standards that promote professionalism and high-quality reporting" (Godfrey and Langfield-Smith, 2005, p. 1983).

The following section details and discusses the Australian financial reporting framework as the key focus of regulation in this study.

2.3 Australian Financial Reporting Framework[9]

The production of high-quality financial reports is considered to be a vitally important factor in capital markets as it promotes the efficient operation of those markets (Brown and Tarca, 2005). As a result, a well established framework of the financial reporting process plays a crucial role in achieving such efficiencies. As shown in Table 2.1 the Australian financial reporting framework is presented in three main categories: (1) rule-makers; (2) financial report preparers; and (3) rule-enforcers. Each group plays significant and distinct roles in the production of high-quality financial information. Those roles, however, materially changed in the period 2002 to 2004. The two key factors contributing to the change of roles of these three groups are as follows: (1) the decision made by FRC (Financial Reporting Council) to adopt IFRS (International Financial Reporting Standards) with effect from 1 January 2005 (FRC, 2002); and (2) the enactment of the CLERP 9[10] (Corporate Law Economic Reform Program) with effect from 1 July 2004 (Blake Dawson Waldron, 2004) in response to significant corporate misconduct and failures (such as HIH, One.Tel, and Harris Scarfe, among others).

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[9] This section mainly overview the roles of rule-makers and rule-enforcers of the reporting framework. For details on financial report preparers, see Brown and Tarca (2005). The discussion in this section draws heavily on information from Brown and Tarca (2005). Discussion in relation to impact on audit independence will be presented in Section 2.4. *Regulation in Audit Independence*.

[10] CLERP 9 was the ninth series of reform. In March 1997, the Australian Treasurer announced a comprehensive program of corporate law reform, known as the Corporate Law Economic Reform Program (CLERP). It is to improve key areas of Australia's business and company regulation as part of the Commonwealth government's drive to promote business, economic development and employment (Leo et al., 2005). The Corporate Law Economic Reform Program (Audit Reform and Corporate Disclosure) Act 2004 was passed on 25 June 2004. On June 30 June 2004, the enactment of the CLERP 9 Act includes a number of reforms to the Corporations Act 2001 and is based on the reform proposals contained in the CLERP 9 'Discussion Paper: Corporate Disclosure – Strengthening the Financial Reporting Framework' which was released by the federal government in September 2002

Table 2.1: Australian Financial Reporting Framework

Rule-Makers	Role(s)	Changes
Federal Government	Legislate financial reporting requirements that promote capital market development and investor protection	Additional requirements in relation to the production, auditing and oversight of financial reports (CLERP 9, operative 1 July 2004)
Accounting standard-setter: Australian Accounting Standards Board (AASB)	Provide high-quality accounting standards to be used in financial reporting by private and public sector and not-for-profit entities	National accounting standards introduced based on IASB standards to be used by all reporting entities. Work as a liaison standard-setter with the IASB
Auditing standard-setter: Australian Auditing Standards Board (AUSSDB)	Provide high-quality auditing standards to be used in auditing financial statements	Auditing standards to have the force of law from 1 July 2006 (CLERP 9)
Standards interpretation body: Urgent Issues Group (UIG)	Provide interpretations of Australian accounting standards	Forward matters of interpretation relating to IASB standards to the International Financial Reporting Interpretations Committee (IFRIC). The UIG was disbanded by the AASB at the end of June 2006.
Stock exchange: Australian Stock Exchange (ASX)	Regulate financial reporting and disclosure to promote efficient and equitable financial markets	Issued "Principles of Good Corporate Governance and Best Practice Recommendations" (2003) that may influence financial reporting practices
Professional accounting bodies: Institute of Chartered Accountants in Australia (ICAA), CPA Australia (CPAA), National Institute of Accountants (NIA)	Provide guidelines in relation to member behaviour that will influence financial reporting and auditing practice	The ICAA and CPAA issued F1 *Statement of Professional Independence* in 2002 and amended it in 2004 to reflect CLERP 9 requirements for audit independence
Financial statement preparers	**Role(s)**	**Changes**
Directors	Responsible for the preparation of the company's financial statements for presentation to shareholders, regulatory bodies (ASIC, APRA, and the taxation office) and other interested parties	a) Additional and new reporting requirements from CLERP 9, other than (1): b) New accounting standards based on IFRS for financial years ending after 1 January 2005 c) Civil liability for breach of ASX continuous disclosure requirements extended to individuals d) Additional operating and financial review information required in directors' report e) Disclosure of remuneration to auditors for non-audit services in the directors' report f) Statement in the directors' report that the provision of non-audit services is compatible with the Corporations Act requirements for auditors' independence g) Statement in the directors' report that audit independence has not been compromised h) Disclosure of remuneration for the opt five directors and executives
Executives and employees	Prepare financial statements on behalf of the directors	A company's CEO and CFO are to provide a signed statement to directors that: a) The financial records have been properly maintained b) The financial statements comply with accounting standards; and c) The financial statements provide a true and fair view

Table 2.1: Australian Financial Reporting Framework (continued)

Rule-enforcers	*Role(s)*	*Changes*
Auditors	Provide assurance to shareholders in relation to the information provided in the financial statements	Changes to promote auditor independence (CLERP 9): a) Provide an independence declaration to the company b) Two-year period before engagement or review partner can become an officer of a company previously audited c) Limit of one former audit partner being a director of a company being audited d) Five-year rotation of lead and review audit partners (with limited ASIC discretion for seven-year rotation) e) Additional disclosure by companies about the audit and the auditor, including disclosure of remuneration for non-audit services
Professional accounting bodies (ICAA and CPAA)	Require members to comply with standards relating to conduct competency and independence	CLERP 9 extended the roles of the FRC and ASIC in relation to audit regulation and oversight. CPAA and ICAA can discipline members and refer matters to the Company Auditors and Liquidators Disciplinary Board (CALDB)
Financial Reporting Council (FRC)	• Oversight of the AASB and AUASB • 'Monitor and assess' the independence of auditors	• In addition to oversight of the AASB (from 2001) the FRC will oversee the AUASB (CLERP 9) • Oversight of auditors' power to gather information from accounting bodies and auditors (CLERP 9)
Australian Securities and Investment Commission (ASIC)	• Promote compliance with financial reporting requirements • Promote compliance with auditing standards and audit independence • Promote quality of audit	• Increased financial reporting surveillance activities. Power to issue "on-the-spot" infringement notices for non-compliance with ASX continuous disclosure rules. Fines to range from $33,000 to $100,000 depending on company market capitalisation (CLERP 9) • Auditors must report to ASIC all significant breaches of the Corporations Act and all attempts to "unduly influence or interfere" with the audit (CLERP 9). ASIC may refer matters relating to auditors' conduct to the CALDB • Registration of auditors and determination competency standards. An annual statement to be provided by auditors (CLERP 9)
Australian Prudential Regulation Authority (APRA)	Supervision of financial reporting of financial institutions and insurance companies	Changes to APRA's organisation and practices following recommendation of the HIH royal commission. New standards for supervision of: a) Superannuation entities b) Banking groups in relation to capital adequacy c) Medical indemnity insurers Adoption of IFRS will require APRA to revise its prudential standards and statistical requirements
Financial Reporting Panel (FRP)	Review disputes between financial report preparers, auditors, and ASIC about compliance with financial reporting requirements	Review panel to be set up to assist in dispute resolution without recourse to legal action (CLRP 9). ASIC can refer matters to the FRP or consent to a company referring a matter to the FRP

Adapted from Brown and Tarca (2005)

Rule-makers are the key parties who formulate the policies/rules that direct the form and content of financial reports. The federal government is the primary rule-maker that enacts laws to govern the process of financial reporting most notably via the Corporations Act. This Act is the primary legislation that regulates firms in Australia in matters of company formation, operation, officers' duties and takeovers, among others. Changes to the Act were implemented after the 2004 CLERP 9 reform to simplify the statute and introduce additional requirements in relation to the production, auditing and oversight of financial reports.

The Federal Government has established two statutory bodies, the AASB and AUASB, whose main mission is to develop and maintain high-quality financial reporting standards and auditing standards respectively. The AASB and AUASB's roles and responsibilities were fundamentally changed due to Australia's decision to adopt IFRS. From 1 January 2005 Australia adopted the IFRSs and introduced the IFRSs into Australian law rather than rely on long-standing tradition of developing standards from an initial conception. With respect to auditing standards, prior to 1 July 2004 (before the inception of CLERP 9) the auditing standards were mandatory for members of professional bodies, such as ICAA and CPAA, but not legally binding. With the enactment of CLERP 9 Australian Auditing Standards have the force of law from 1 July 2006 (the Corporations Acts, section 336). The consequences are that any contravention of the auditing standards is a matter for the courts and may result in criminal penalties (Walker, Green, and McKinnon, 2008).

Another key player in Australian rule-making is the ASX (Australian Stock Exchange). The ASX issues listing rules to promote efficient and equitable financial markets. Apart from the listing rules, corporate governance is also developed by the ASX Corporate

Governance Council (ASXCGC). With the intention of restoring investor confidence after many corporate scandals, in March 2003 the Council released its first edition[11] of *Principles of Good Corporate Governance and Best Practice Recommendations*, which consists of 10 principles and 28 recommendations. Even though the Council's recommendations are not legally binding, listed companies in Australia are subject to three sources of mandatory disclosure: company law (The Corporation Act 2001), accounting standards (AASB) and listing rules (ASX) (Shailer, 2004). One important point to note is that the amendments to the Listing Rules 4.10.3 on corporate governance disclosure in the annual report now require a company to disclose its corporate governance practices, and the extent of compliance with the recommendations. If the recommendations are not fully complied with, the company is obliged to provide reasons for the non-compliance.

To ensure the high-quality of financial reports and the way audit functions are prepared and carried out in accordance with the rules, guidance, and principles, a number of parties are empowered to enforce compliance with financial reporting and audit requirements. One of the enforcement organisations is external auditors whose role is to ascertain that the financial statements are prepared in compliance with the current Australian accounting standards and presented in true and fair values of the firms (Corporation Act, Sections 292 – 295). The Institute of Chartered Accountants in Australia (ICAA) and Certified Practising Accountants of Australia (CPAA) are rule-making bodies that provide specific rules and guidelines, for example the *Code of Professional Conduct*, which are compulsory for members. One important component is the Code *F1 Statement of Professional*

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[11] In August 2007, the second edition *Corporate Governance Principles and Recommendations* was released. The second edition guidelines apply to listed entities on and from the commencement of a listed entities financial year for 2008.

Independence that provides a list of threats to an auditor's independence. This in turn may influence the process of preparing financial reports and the conduct of audits.

Other enforcement bodies include the statutory regulators such as ASIC (Australian Securities and Investment Commission), APRA[12] (Australian Prudential Regulation Authority) and ASX (Australian Stock Exchange). The ASX can enforce its listing rules through control over whether a firm is allowed to list and trade on the exchange.

The Australian Securities and Investments Commission (ASIC) are Australia's corporate, markets and financial services regulator. ASIC is also an independent government body that enforces and administers the Corporations Law. The role of ASIC is to promote compliance with the financial reporting requirements of the Corporations Act and with accounting and auditing standards. ASIC's (2007) stated aim is to reduce fraud and unfair practices in financial markets and financial products so investors and financial consumers can invest confidently, and companies and markets perform effectively. To achieve that, ASIC administers the law, enforces, and gives effect to the law. With the passing of CLERP 9 the authority of ASIC with respect to financial enforcement increased. A higher increment of government funding was received which better empowered ASIC to impose larger sanctions/penalties for breaches of the Corporations Act. If a disagreement occurs between ASIC and public companies in relation to the treatment of accounting standards the dispute is presented before the newly

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[12] APRA is the prudential regulator of the Australian financial services industry. It oversees banks, credit unions, building societies, general insurance and reinsurances companies, life insurance, friendly societies, and most members of the superannuation industry. APRA establish and enforce prudential standards and practices designed to ensure appropriate management and financial reporting practices are complied by financial sector entities (APRA, 2009).

created FRC (Financial Reporting Panel). CLERP 9 legislation introduced the FRC into the Australian financial reporting framework. The FRC is an independent third party mechanism which alleviates ASIC from initiating court proceedings whenever a dispute regarding the application of accounting standards arises between companies and ASIC. Such disputes are predominantly referred to FRC by ASIC. However with consent from the ASIC it also can be referred to it by the lodging entity (FRC, 2009).

2.4 Regulation in Auditor Independence

The previous section outlines the Australian accounting compliance system wherein the Corporations Act 2001 governs the audit of a company's annual financial reports and mandates that publicly listed firms must have annual financial reports audited by accounting firms (Gay and Simnett, 2005; Corporations Act, Sections 292-295). A number of high-profile Australian corporate failures[13] have induced a great direct interest in the accounting and auditing profession with substantial scrutiny being directed upon auditor independence. The perceived audit failures have resulted in allegations in the financial press of the role played by the accounting and auditing professions in allowing these situations to evolve (Brandon, Crabtree and Maher, 2004).

The need for an auditor's independence is formally recognised in some provisions of the Australian Corporations Act 2001 as shown in Appendix B. Section 307C requires auditors to provide a written declaration to the board of directors stating any (or none) of no violations of the auditor independence as required by the Act or

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[13] HIH Insurance Ltd was placed into provisional liquidation by the Supreme Court of New South Wales and One.Tel was placed into voluntary administration in March and May 2001 respectively. In the same year, Harris Scarfe went into administration.

any applicable code of professional conduct[14]. To promote audit independence Section 308 requires auditors to report directly to members of the company rather than to management. Further, the auditor is to be appointed by members as prescribed in Section 327B. Under Section 324CA it is a violation of the general auditor independence requirements for the auditor to be aware of a conflict of interest situation and to not take reasonable steps to resolve it as soon as possible. In line with Section 324CA the accounting bodies' Code of Professional Conduct (CPC) F.1[15] requires auditors to identify and evaluate threats to independence and to apply safeguards to reduce the identified threats to an acceptable level if not eliminated. The complete sections of the Corporations Act 2001 with respect to auditor independence are presented in Appendix B.

The Corporate Law Economic Reform Program (Audit Reform and Corporate Disclosure) Act 2004 was passed by both Houses of Parliament on 25 June 2004. The enactment of the CLERP 9 Act includes a number of reforms to the Corporations Act 2001 and is based on the reform proposals contained in the CLERP 9 'Discussion Paper: Corporate Disclosure – Strengthening the Financial Reporting Framework' released by the government in September 2002. The reforms give effect at restoring public confidence in corporate Australia after some significant corporate misconduct and failures.

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[14] On 6 September 2005 ASIC issue a Class Order 'CO 05/910'*Auditor's independence declaration – exemption.* The exemption will excuse an auditor from making a declaration provided there are any violations under section 324CE(2), section 324CF(2) or section 324CG(2) of the Act. This exemption will apply provided the auditor had reasonable grounds to believe that it had in place, at the time of the contravention, a quality control system that provided reasonable assurance that the auditor would comply with the auditor independence requirements. An auditor will still be required to make a written statement to its audit client disclosing any contraventions of the other auditor independence requirements.

[15] The CFC F.1 is based on the ethical rules set by the International Federation of Accountants (IFAC), of which made up by 120 nations. Certified Practising Accountants (CPA) Australia and the Institute of Chartered Accountants in Australia (ICAA) adopted the CPC F.1 the professional independence standard in May 2002; and ratified on 31 December 2003.

The reforms of CLERP 9 can be grouped into the following eight categories:

1. remuneration of directors and executives;
2. financial reporting;
3. shareholder participation and information;
4. continuous disclosures;
5. audit reform;
6. management of conflicts of interest by financial services licensees;
7. disclosures rules; and
8. enforcement (Blake Dawson Waldron, 2004).

The fifth reform of the CLERP 9 titled 'Audit Reform' arguably has had the greatest impact on auditors. The 'Audit Reform' focused on the following main issues:

- auditor appointment, independence and rotation;
- auditors and annual general meetings;
- submission of questions to the auditor;
- expansion of auditor's duties;
- retention of audit working papers;
- qualified privilege for auditors;
- oversights in audit;
- audit regulation and oversight regime;
- qualifications of auditors; and
- registration of authorised audit companies.

As detailed in the 'Audit Reform' categories of CLERP 9 the auditor independence in the financial reporting process is a major area of concern. Some of the most significant changes made by the CLERP 9 Act are increased regulation of additional disclosures in the directors' report on auditor and the audit process, auditor independence, restrictions and rotation. These changes are

embossed in the expanded Part 2M.4 of the Corporation Act. Overall, changes are classified into five categories (Blake Dawson Waldron, 2004; Rusmin, 2006):

1. additional disclosures in the directors' report on the auditor and the audit;
2. general auditor independence requirements;
3. specific auditor independence requirements;
4. restrictions on auditors being employed by an audit client; and
5. auditor rotation for listed companies.

These five changes affecting auditor independence, restrictions and rotation are exhibited in more depth in Appendix C.

2.5   AASB 6 and 136: Australian Mineral Resource Sector

Australia has traditionally had a national industry-specific statement pertaining to extractive industries, AASB 1022, that was superseded by Australian Accounting Standard (AAS) 7. When the decision to adopt international accounting standards was made no equivalent international accounting standard specific to extractive industries existed. The adoption of IFRS led to significant changes in some standards and minor changes in others. One area where significant changes occurred relates to the assets impairment test which had significant implications for assets revaluations with serious implications to the mineral resource firms.

Following concerns raised by mineral resource industry constituents worldwide to the verbatim adoption of IFRSs, the IASB acknowledged a need to develop an extractive industry specific international accounting standard (Honey, 2004; Deloitte Touche Tohmatsu, 2005). This resulted in the issuance of an Issue Paper in

2000. Subsequent to this, however, minimal development had taken place. The extractive industry specific international accounting standard was removed from the active list of research topics in 2001 due to time constraints (IASB, 2003). The second setback came in 2002 when the IASB (2004) announced that it could not complete the project in time for the implementation of International Accounting Standards (IAS) in many territories. With its initial timeframe not met, the IASB came up with an interim measure. IFRS 6-*Exploration for and Evaluation of Mineral Resources* was issued in the European Union and several other countries worldwide (Siy, 2009)[16].

AASB 6 allows mineral resource firms to use the option to continue to utilise existing practices in accounting for exploration and extraction costs (only *area of interest* is allowed in Australia under AASB 1022 / AAS 7). In particular, AASB 6:

- requires Australian entities to use *area of interest*[17] to account for exploration and evaluation expenditures (generally these expenditures are to be treated in the same manner as under AASB 1022 / ASS 7 *Accounting for the Extractive Industries* subject to any impairment testing requirements);

- requires entities to perform an impairment test in accordance to IFRS 36 *Impairment of Assets* (or its AASB equivalent AASB 136) on recognised exploration and evaluation assets

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[16] This standard has been issued to facilitate the introduction of Australian equivalents to IFRSs in respect of the treatment of exploration and evaluation expenditures, pending the completion of a comprehensive project on accounting for extractive activities. The IASB has commissioned national standard-setters in Australia, Canada, Norway and South Africa to work jointly in providing a new definitive IFRS for extractive industries. The last update was in January 2006.

[17] A number of accounting practices are currently used throughout the world in accounting for costs of extraction and exploration. The following four other methods: costs written off, costs written off and reinstated, successful efforts, and full cost method, are not allowed to be used in Australia.

when facts and circumstances suggest that the carrying amount of an asset may exceed its recoverable amount;

- requires an impairment test on exploration and evaluation assets to be assessed at a CGU (Cash Generating Unit) or group of CGUs level where the level is not to be larger than the lesser of an area of interest or segment (based on either the entity's primary or secondary reporting format under AASB 114 *Segment Reporting*); and
- requires disclosures that identify and explain the amounts in the entity's financial report arising from the exploration for and evaluation of mineral resources, and help users of those financial reports to understand the amount, timing and certainty of future cash flow from any exploration and evaluation assets recognised.

Under the *area of interest* approach costs are to be accumulated by the area of interest. According to AASB (2004, p. 20) *Area of interest* is defined as "an individual geological area which is considered to constitute a favourable environment for the presence of a mineral deposit or an oil or natural gas field, or has been proved to contain such a deposit or field". Under this method, pre-production costs, such as exploration and evaluation costs, each area of interest is to be either written off when incurred, or be partially or fully capitalised. The (partially or fully) capitalisation is to be accounted as an exploration and evaluation asset provided the rights to tenure of the area of interest are current and at least one of the following conditions is met:

- exploration and evaluation expenditures are expected to be recouped through successful development and exploitation of the area of interest, or alternatively, by its sales; or
- exploration and evaluation activities in the area of interest have not at the reporting date reached a stage which permits

a reasonable assessment of the existence or otherwise of *economically recoverable reserve*[18], and active and significant operations in, or in relation to, the area of interest are continuing (AASB 6, para AUS7.2).

Whilst AASB 6 provides a useful service in the interim (such as pressures on mineral resource firms to comply with requirements of AASB 136) it does present a sizeable juxtaposition. When a final extractive industry-specific international accounting standard is produced there is no guarantee it will closely align with AASB 6[19].

With respect to AASB 136, the scope of assets subject to the impairment test is broader than in the past. For instance, deferred exploration and evaluation costs for areas in the development or production phases for mineral resource firms were now subject to the impairment test as defined in AASB 136 (KMPG, 2003).

AASB 136 also requires that the carrying value of an asset should not exceed its recoverable amount. By definition the majority of mineral resource firms are unlikely to predict, with any certainty, how a given exploration will influence future revenue streams. Therefore, applying AASB 136 as written would then likely lead to a sizeable proportion of existing and future exploration and evaluation costs to be expensed immediately. Further, AASB 136 requires that when the impairment test is applied, assets need to be aggregated to the smallest identifiable group of assets generating cash flows. This is commonly known as the CGU concept. The CGU concept contrasts with traditional practices of the Australian mineral resource firms where impairment is

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[18] *Economically recoverable reserves* can be defined as "the estimated quantity of product in an area of interest that can be expected to be profitably extracted, processed and sold under current and foreseeable economic conditions" (AASB 6, 2004, p. 20).
[19] The last review of tentative agenda decisions for the scope of IFRS 6 was in 2006. The current IFRS 6 still serves as an interim standard.

assessed under a broader *area of interest* concept[20]. If the CGU concept is to be enforced rigorously this would require mineral resource firms to apply the impairment test to individual oil rigs, gas pumps and mines as opposed to a geological basin as a whole[21]. Consequently, this would force mineral resource firms to make impairment charges more frequently.

In the absence of a definitive industry-specific standard, accounting treatments on key issues like asset impairment are open to interpretation for mineral resources firms. This open interpretation can result in wider variations across the industry. If variations increase this is likely to make comparisons between firms more difficult, which could ultimately affect investment and shareholder decisions within the industry. For example, the transition to IFRS goodwill accounting and reporting results in substantially increased complexity, technical expertise, and the nature of disclosure in relation to its impairment (Carlin and Finch, 2008). Consequently, such complexity increases the risk of inconsistent compliance and varying levels of mandatory disclosure quality by firms under the new and complex IFRS regime (Carlin and Finch, 2008). If this is so, then it raises a number of key questions relevant to auditing. For example, does the increased complexity in both technical expertises result in lower compliance? Does auditor competency (i.e., audit specialisation) have influences on the level of compliance? This thesis seeks to answer these questions by examining the level of compliance with the mandatory disclosures post adoption of IFRS (i.e., AASB 6 and AASB 136). Furthermore,

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[20] Under an 'area of interest' concept asset impairment would assess oil production, gas and mineral assets at the geological basin level. In contrast, under the "cash generating unit" concept oil production, gas and mineral extraction assets would be assessed at the individual oil and gas well, and mine site.

[21] For instance, if an oil and gas company has three proven fields supplying a single processing plant the 'area of interest' concept as applied previously in Australia would see this combination as a single source of net cash inflows. According to the CGU concept specified in AASB 136 each field and processing plant may have to be considered separately.

this research seeks to investigate the influences, if any, of auditor independence and audit specialisation on the extent of compliance. The following section reviews the key past literature on compliance with mandatory disclosure studies.

2.6   Studies on Mandatory Disclosure

The benefits of corporate disclosure to market participants (this includes both users and preparers) are well documented in the literature (e.g., Botosan, 1997). Owusu-Ansah (1998, p. 608) defines disclosure as "the communication of economic information, whether financial or non-financial, quantitative or otherwise concerning a company's financial position and performance". There is an extensive literature on disclosures of accounting information by management. It can be broadly grouped into two main categories; voluntary and mandatory.

Though disclosure is recognised as having countless benefits, a major question is whether regulators should actively mandate and enforce the disclosure of financial accounting information. And further still, if regulators are to mandate and enforce disclosure then what disclosures should be mandatory and those left as voluntary (if at all)? Whilst firms acknowledge the importance of disclosure, management are reluctant to provide full disclosure. Furthermore, empirical research indicates the level of disclosure varies between firms, industries and nations. Consequently, this places investors and other direct and indirect market participants at a disadvantage. Given the value of disclosure to overcome asymmetrical information concerns between informed and uninformed investors to ensure an efficient market, there is ground and arguments for regulators to act to provide a level playing field though the creation and enforcement of mandatory disclosures.

This view is consistent with the tenets of public interest regulation theories.

Meek, Roberts and Gray (1995, p. 555) define voluntary disclosure as "disclosures in excess of requirements, represent free choices on the part of company managements to provide accounting and other information deemed relevant to the decision needs of users of their annual reports". It implies that voluntarily disclosed information is beyond mandated disclosures and it leaves gaps for open interpretation. Clarkson, Van Bueren and Walker (2006, p. 773) assert that "high quality disclosures might only come about when mandated by detailed requirements that leave little opportunity for interpretative discretion". This thesis focuses on compliance with mandatory disclosure specifically to AASB 6 and AASB 136.

In line with Owusu-Ansah's (1998) definition of mandatory disclosure, this study defines compliance as the minimum amount of accounting information that is required to be disclosed, insofar as applicable to companies under a disclosure regulatory regime (Owusu-Ansah, 1998). There is an implication that statutory requirements become the minimum standard of disclosure. Table 2.2 summarises past studies on mandatory disclosure studies. This section reviews only compliance with mandatory disclosures. With regards to firm characteristics as determinants of the level of compliance, voluntary disclosures and aggregate (of both mandatory and voluntary) disclosures, these are also reviewed and documented in Appendix D.

Table 2.2: Summary of Studies on Mandatory Disclosure

Study	Country	Level of Compliance	Reporting Year	Disclosure Items	Multinationality	Leverage	Size	Profitability	Industry	Size of Audit Firm	Stock Exchange Listing	Ownership Diffusion	Age	Liquidity
Tai, Au-Yeung, Kwok & Lau (1990)	Hong Kong	78%	1987	11			+		*	*				
Ahmed & Nicholls (1994)	Bangladesh	71%	1988	94	+	*	*			+				
Wallace, Naser, Mora (1994)	Spain	Na	1991	79		*	+	*	*	*	-			-
Wallace & Naser (1995)	Hong Kong	73%	1991	142		*	+	-		-		*	*	*
Patton & Zelenka (1997)	Czech Republic	Na	1993	Ns		*	*	+	*	+				
Owusu-Ansah (1998)	Zimbabwe	75%	1994	214	+		+	+	*	*		+	+	*
Street, Grey & Bryant (1999)	Multiple countries	70%	1998	63	*		*	*		+				
Glaum & Street (2003)	Germany	84%	2000	153	*		*	*		+	+		*	
Ali, Ahmed & Henry (2004)	India, Pakistan & Bangladesh	80%	1998	131	+	*	+	+		*				
Owusu-Ansah & Yeoh (2005)	New Zealand	93%	1992-1993 & 1996-1997	Ns			+	+	*	-		*	*	*

Legend: Na= study conducted on comprehensiveness of disclosure; Ns= Not specified; * = Insignificant; + = Significant positive relationship; - = Significant negative relationship

Table 2.2: Summary of Studies on Mandatory Disclosure

Study	Country	Level of Compliance	Reporting Year	Disclosure Items	Multinationality	Leverage	Size	Profitability	Industry	Size of Audit Firm	Stock Exchange Listing	Ownership Diffusion	Age	Liquidity
Clarkson, VanBueren & Walker (2006)	Australia	36%	1998-2004	10			+	+	*					
Goodwin & Ahmed (2006)	Australia	56%	2005	45		+	+	+						
Lim, Matolcsy and Chow (2007)	Australia	Na	2004	67					+					
Gallery, Cooper & Sweeting (2008)	Australia	45%	2005	78			+	+	+	+				
Kent & Stewart (2008)	Australia	Ns	2004	51			+							
Palmer (2008)	Australia	36%	2005	53		+	+			+				
Nelson, Gallery & Percy (2010)	Australia	Ns	2001 - 2004	35			+		+	+				

Legend: Na= study conducted on comprehensiveness of disclosure; Ns= Not specified; * = Insignificant; + = Significant positive relationship; - = Significant negative relationship

Interestingly, none of the studies shown in Table 2.2 are industry-specific. The number of firms of each study has varied from 49 firms in Zimbabwe (Owusu-Ansah, 1998) to 566 firms in India, Pakistan and Bangladesh (Ali, Ahmed and Henry, 2004). Most of the studies in Table 2.2 adopt some type of disclosure index as the dependent variable. The disclosure items that form the disclosure index have varied from a minimum of 11 (Tai et al., 1990) to a maximum of 214 items (Owusuh-Ansah, 1998). Some studies assign different weights to items (e.g., Belkaoui and Kahl, 1978; Firth, 1979; McNally, Lee and Hasseldine, 1982; Chow and Wong-Boren, 1987; Malone et al., 1993) whilst many others apply equal weight to all items[22]. Based on the literature reviewed, past accounting compliance studies predominantly examine the levels of compliance with accounting standards in two major streams: (i) level of compliance of measurement, presentation and disclosure; and (ii) determinants of level of compliance.

Building on Cairns' (1997) study, Grey and Bryant (1999) conduct an empirical study of the accounting policies and disclosures of firms claiming to have complied with IASs in 1996. The key research objective of Grey and Bryant's (1999) study is to investigate to what extent the firms really comply with IASs in practice. Grey and Bryant (1999) document evidence of significant non-compliance with IASs 2 (Inventory), 8 (Net profit or Loss for the Period), 9 (Research and Development Costs), 16 (Property, Plant and Equipment), 18 (Revenue), and 19 (Retirement Benefit Costs). In particular, the main areas of non-compliance include: use of inventory valuation not endorsed by the IAS; violation of the strict definition of extraordinary items; failure to capitalise certain development costs; failure to disclose information pertaining to revaluation on property, plant and equipment; and charging

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[22] Refer to Chapter 4 for methodology discussion.

goodwill to reserves, or amortising goodwill over a period in excess of the 20 year limit. Grey and Bryant's (1999) findings reveal that 41% (20 out of 49 companies) state full compliance with all IASs. However, the evidence shows that there is a significant extent of non-compliance with the individual IAS on measurement and disclosure, especially with the disclosure requirements.

A research monograph[23] by Street and Gray (2001) examines the extent of compliance of a worldwide sample of 1998/99 financial reports and footnotes of 279[24] companies that were examined in respect to compliance with IAS-required disclosures and measurement/presentation practices. Street and Gray (2001) developed four compliance indices with two related to disclosures and two to measurement/presentation[25]. Street and Gray's (2001) results show that overall disclosure compliance indices of DC1 and DC2 are 72% and 74% level of compliance with IAS-required disclosures respectively.

In a similar study, Glaum and Street (2003) assess the extent of compliance with mandatory disclosures by companies listed on Germany's New Market (Neuer Markt). Firm listed on the New Market are required to prepare financial statements in accordance with either IAS or US GAAP. The sample used in the study was drawn from 100 firms that applied IAS and US GAAP in the year-

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[23] The research monograph was sponsored by the Association of Chartered Certified Accountants (ACCA).

[24] An initial sample of 831 companies obtained from the IASC's (1999) list of 'Companies Referring to their Use of IAS'. Companies in the sectors of finance, oil and gas, not for profit organisations, merged companies and annual reports that are not in English, are eliminated. The sample of annual reports obtained are as follows: 63(China), 62 (Switzerland), 47 (Germany), 19 (France), 9 (each from Hong Kong and Zimbabwe), 7 (each from Austria, Denmark and South Africa), 6 (each from Canada and Hungary), 5 (Finland), 4 (Sweden), 3 (each from Italy, Luxembourg and Poland), 2 (each from Barbados, Czech Republic and Netherlands) and 1 (each from Australia, Bahrain, Botswana, Croatia, Grand Cayman Island, Guyana, Japan, Jordan, Malta, Mexico, Papua New Guinea, Russia and Turkey).

[25] Since this thesis focuses on disclosures, therefore measurement/presentation compliance is not discussed. Henceforth, the terms "compliance" and "compliance with IAS-required disclosures" are used interchangeably.

2000 financial reports (excluding Financial Services and Media & Entertainment industry). Glaum and Street's (2003) findings show the extent of compliance with mandatory disclosures of IAS varies from 41.6% to 100%, with an average of 83.7%; and of US GAAP ranges from 52.4% to 98.8%, with an average of 86.6%. This implies that compliance level is lower for firms that apply IAS for preparing financial statements. The results reveal that IAS firms are particularly problematic in regard to certain disclosure relation to pension, leasing, financial instruments, business combination and capitalisation of interest costs.

Ali, Ahmed and Henry (2004) empirically examine the magnitude of compliance with the mandatory disclosure of the East Asia countries of India, Pakistan and Bangladesh. The final sample consists of 219, 229 and 118 firms from India, Pakistan and Bangladesh respectively. Ali, Ahmed and Henry's (2004) findings show that on aggregate, the average compliance level is 80% for the whole sample, with 79% for Indian, 81% for Pakistani and 78% for Bangladeshi firms. The authors assert that the different levels of compliance might be due to institutional or regulatory differences. Ali, Ahmed and Henry (2004) note that the compliance level varies significantly across 14 standards examined. The results show that a higher disclosure level is observed for standards in relation to depreciation, inventories, and property, plant and equipment. Ali et al., (2004) argue that the higher extent of compliance is due to detailed disclosure requirements embedded in the Companies Act of each country. The lower magnitude of compliance is associated with accounting for leases and accounting for business combinations.

Clarkson, Van Bueren, and Walker (2006) examine mandatory disclosures on chief executive officer (CEO) remuneration in

Australia from 1998 to 2004. Disclosures on remuneration paid to directors and executives have been made compulsory since the induction of the Company Law Review Act 1998 (CLRA98). However, Clarkson et al. (2006) show that firms generally did not comply until the formalisation of accounting standard *Director and Executive disclosures by disclosing Entities* (AASB 1046) became operative in 2004.

Utilising on the sample of 124 Australian firms for the period of 7 years (1998 to 2004), Clarkson et al. (2006) find a systematic increase in the level of disclosure in each successive year from 1999 to 2003 which mainly due to the extent of public scrutiny. Clarkson et al. (2006, p. 772) conclude that "allowing discretion in disclosure choices leads to poor quality disclosure, and that this is so despite ongoing media and regulatory interest in the disclosure. A far more effective regulatory strategy is to clearly stipulate precisely what is considered minimal disclosure at the outset, leaving as few issues as possible open to interpretation".

On or post 1 January 2005 Australian firms are required to comply with AIFRS. To smooth the transition, a broadly defined standard AASB 1047 (*Disclosing the Impacts of Adopting Australian Equivalents to International Financial Reporting Standards*) mandated pre-adoption firms to disclose the AIFRS's (Australian Equivalents of International Financial Reporting Standards) impacts. AASB 1047 allows firms to exercise discretion in complying with the mandatory disclosures. Gallery, Cooper, and Sweeting (2008) investigate if such discretion influences the quality of pre-adoption AIFRS. In particular, Gallery et al. (2008) examine how the quality of pre-adoption AIFRS mandatory disclosures differ across Australian top 500 firms and what determinants affect the disclosure quality.

Gallery et al. (2008) find that a wide variation in the types and levels of disclosures on AIFRS information in firms' financial reports. Such variation can be attributed to AIFRS financial impact, size, industry, profitability factors and Big-4 accounting firms. One interesting finding by Gallery et al. (2008) is that firms seem to rely on their external auditor for guidance on how to meet the mandatory disclosures requirements rather than to exercise level of discretion as observed in other disclosures studies. This implies that accounting firms play significant role in firm AIFRS disclosures.

Goodwin and Ahmed (2006) investigate the impact of AIFRS on the accounts of small, medium and large sized companies. Using a final sample of 135 Australian firms with 31 December reporting date, Goodwin and Ahmed (2006) find that the transition to AIFRS has not been onerous for small companies. Goodwin and Ahmed (2006) show that there is no impact of net income or equity from AIFRS on most of the studied small firms. However, a positive relation between increase in the number of adjustments to net income and equity, and firm size is documented. The findings also reveal small firms have higher earnings volatility than medium or large firms under AIFRS.

Goodwin and Ahmed (2006) acknowledge one of the research limitation in its implications may be due to the sample is constraint to firms with 31 December financial year end and it is noted that not all AIFRS have to be complied with when firms restate their comparatives.

In a similar study, Kent and Stewart (2008) conduct a study to examine the relationship between the level of disclosures on AASB 1047 and corporate governance quality. Kent and Steward (2008)

proxy corporate governance quality as a composite of board independence (ratio of independent non-executive directors to total directors), CEO-Duality (value 1 assigned if the roles of the chairperson and CEO is segregated, otherwise 0), board size (number of directors on the board), board diligence (number of board meetings per year), existence of audit committee (takes value 1 if there is an audit committee else 0), audit committee independence (ration of non-executive and independent to total members), audit committee expertise (ratio of members with accounting and financial expertise), audit committee diligence (number of audit committee meeting held during the year) and audit committee size (number of directors in the committee).

Utilising on a final sample of 965 Australian listed companies, Kent and Stewart (2008) provide evidence of an association between corporate governance quality and a greater level of disclosures, in particular, with regards to board and audit committee diligence.

Utilising on agency theory framework, Lim, Matolcsy and Chow (2007) examines the relationship between board composition and voluntary disclosure of 67 items from 181 Australian firms' financial reports. Using a two-stage regression method, Lim et al. (2007) test the relation between total voluntary disclosure, voluntary disclosure of forward looking quantitative information, voluntary disclosure of strategic information, voluntary disclosure of historical financial information and board composition. Lim et al. (2007) provide evidence of a significant positive association between board composition and total voluntary disclosures. The evidence also shows that more forward looking quantitative and strategic information are disclosed by firms with boards that comprised of largely independent directors. However, there is no influence of board structure on non-financial and financial voluntary disclosure.

Nelson, Gallery and Percy (2010) examine the nature and level of compliance with ESO (Executive Stock Option) of Top 300 constituent list as on 30 June 2004. The study period spans over 4 years (2001-2004). Nelson's et al. (2010) study focuses on two main research questions. First, the nature and level of compliance with the ESO mandated disclosures. Second, the association of corporate governance determinants affect the level of compliance with the ESO required disclosures.

The documented results show that generally firms did not fully comply with the mandated disclosures of ESO. The results also reveal that firms were significantly less likely to disclosure the more sensitive price and value-related information about ESO, in comparison to non-sensitive information. In terms of the determinants, Nelson et al. (2010) find higher compliance with ESO mandated disclosures in firms that with more independent and effective audit committees. The compliance level is found to be incremental from 2001 to 2004 which implies that additional media and regulatory attention on both the use of ESO disclosures by firms has a positive motivation impact.

In a similar context, Palmer (2008) examines the extent and quality of 150 Australian listed firms' compliance with the mandated disclosures AASB 1047 (Disclosing the Impacts of Adopting Australian Equivalents to International Financial Reporting Standards).

Palmer (2008) finds that firm size, leverage and auditor firm size affect the extent and quality of compliance with AASB 1047. Of the three variables, Palmer (2008) shows that auditor firm size makes the strongest contribution to the both extent and quality of the

mandatory disclosures. Palmer (2008, p. 867) suggests that "many companies might have relied extensively, if not solely, on the example disclosures provided by their auditors as a means of meeting the requirements of AASB 1047". Palmer (2008, p. 868) concludes that if this is the case, "then the disclosures might not provide an accurate reflection of the impact of adopting AIFRS on them, or their preparedness for adoption".

This review of the past literature indicates that there is no known study on compliance with mandatory disclosure in the mineral resources sector. Therefore, the research methodology approach in this thesis is based on the broader mandatory disclosure studies. To explain variation in companies' compliance level, several past studies have addressed the association between compliance with IASs disclosures and firm's characteristics (see Appendix D). As discussed above the findings are mixed. This may well be due to the fact that each of the past studies has subjectively selected certain items covering a limited set of IASs when developing a checklist for the compliance analysis. To avoid similar shortcomings, this thesis utilises the complete disclosure items of AASB 6 and AASB 136. Furthermore, most past studies have included auditor quality (proxies by the Big-5[26] accounting firms) as one of the determinants of the extent of compliance, and the findings yield to mixed results. This thesis seeks to provide better insights by segregating auditor quality into audit independence and audit specialisation. Analysis is then conducted to determine the

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[26] In the 1970s, the then Big 8 were: Arthur Andersen, Arthur Young, Coopers & Lybrand, Deloitte Haskins and Sells, Ernst and Whinney, Peat Marwick Main, Price Waterhouse, and Touche Ross. In the 1990s the Big 6 were referring to Arthur Andersen, Ernst & Young, Coopers & Lybrand, Peat Marwick Main, Price Waterhouse, and Deloitte Touche Tohmatsu. In the late 1990s to early 2000s, the Big 5 were made up by Arthur Andersen, Deloitte Touche Tohmatsu, Ernst & Young, KMPG, and PriceWaterhouse Coopers. From 2002 to present the Big 4 consists of Deloitte Touche Tohmatsu, Ernst & Young, KMPG, and PriceWaterhouse Coopers. To avoid confusion unless specify this study will use generic Big 4 to refer to Big 8/6/5/4.

association of auditor independence and audit specialisation with mandatory disclosure as required by AASBs 6 and 136.

2.7 Chapter Summary

The two mainstream theories of regulation provide contrasting explanations. The public interest regulation theory seeks to explain regulation as a drive to strive towards public interest related objectives. In stark contrast, private interest theories are less altruistically-oriented. The private interest theorists more prosaically assume that regulation is driven by the pursuit of group, sector or individual interest, and is not necessarily for societal benefit.

The roles of the current Australian financial reporting framework's three main groups, rule-makers, financial statement preparers and rule enforcers, are reviewed. With effect from 1 January 2005, IFRS was adapted into Australian law in the form of AASB. With the enactment of CLERP 9, the AASB have been made mandatory and have the force of law from 1 July 2006. Both these rule changes offer the potentially for fundamentally improved accounting regulation and related compliance rates.

Table 2.2 presents a detailed review of the past literature on compliance with mandatory disclosure. In general results of past research reveal that on average the range of compliance level is usually 70% to 93%. The review shows that almost all past studies examined firms' characteristics, (such as leverage, size, profitability, type of auditing firms, among others) as determinants of the extent of compliance.

In Chapter 3 the theoretical framework of this thesis is reviewed. Furthermore, empirical literature on audit quality, which is a

function of auditor independence and audit specialisation, is also discussed. Last but not least, utilising the tenets of agency theory, a set of testable hypotheses is then developed.

Chapter 3 HYPOTHESIS DEVELOPMENT

3.1 Chapter Overview

Chapter 2 presents a review on the past literature of mandatory and aggregate disclosure studies. The review reveals that none of the studies, conducted in many different countries, show complete compliance with IASs and/or GAAP. Quite the contrary, significant levels of non-compliance are documented throughout the globe including both developed and developing countries.

In this chapter, testable hypotheses based on the key research questions addressed in Chapter 1 are developed. Section 3.2 reviews the theoretical framework of agency theory. In Section 3.3, various determinants of the level of mandatory disclosure compliance of prior research are deliberated. Section 3.4 discusses the importance of the key audit quality theme, leading to a formal statement of hypotheses. Section 3.5 concludes this chapter.

3.2 Agency Theory

Agency theory is used to study a relationship between owners of a firm and managers who are in charge of the firm (Fama and Jensen, 1983a). An agency relationship is defined as "a contract under which one or more persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent" (Jensen and Meckling, 1976, p. 308). The separation of ownership from management is one of the basic tenets of a free-market society because it allows specialisation (Copeland, Weston, and Shastri, 2005). The separation of the ownership and control of wealth gives rise to so-called agency problems.

In her review, Eisenhardt (1989) posits that agency theory is concerned with resolving the agency problems which arise predominantly because of goal conflicts and information asymmetry between the principal and the agent. In an agency relationship, the agent (the insider) has an information advantage; therefore, it is difficult and expensive for the principal to determine whether the agent is acting in the principal's best interest.

Agency theorists assume that agent-principal interests are divergent and both agent and principal are utility maximisers. Consequently, given the opportunity the agent will rationally seek to maximise his/her own utility at the expense of the principal's (Davis, Schoorman and Donaldson, 1997). The principal's task is to elicit optimal behaviour from the agent given the principal's expectations about an uncertain future. The principal attempts to do this by monitoring the agent's activities (Underdown and Taylor, 1987). Benston (1980), Watts and Zimmerman (1980), and Chow (1982) argue that the audit function is one method to constrain aberrant behaviour.

The crux of agency theory is that the inevitable delegation of decision making authority to the agent gives rise to the potential misuse of such delegation by the agent. According to Jensen and Meckling (1976), the principal can limit, if not minimise, the potential abuse of the delegation by aligning the interest of the agent to the principal's and/or establishing appropriate control mechanisms. The costs incurred to align the principal-agent interests are known as agency costs. The costs are born by the principals.

Jensen and Meckling (1976) define agency costs as the aggregate of:

- monitoring costs: incurred to curb the aberrant activities of the agent (e.g., external and internal audit);
- bonding costs: incurred to ensure the agent will act on the interests of the principal (e.g., remuneration that includes stock options); and
- residual costs/loss: incurred as not all activities of the agent are controllable.

Using the tenets of agency theory, this study examines whether the level of compliance with mandatory disclosure of AASBs 6 *Exploration for and Evaluation of Mineral Resources* and 136 *Impairment of Assets* is associated with 'audit quality'. The next section presents a discussion on past literature of key determinants of both mandatory and voluntary disclosures.

3.3   Determinants Compliance with Mandatory Disclosures

A review of literature examining compliance with the mandatory disclosures (as presented in Chapter 2), indicates very little industry-based research has been conducted. To the knowledge of the author there is no known specific study in the mineral resources sector. This study aims to fill the void by providing an in-depth analysis of the level of compliance with mandatory disclosures from within the Australian mineral resources sector.

Past compliance studies predominantly investigate the relation between various firm characteristics (i.e., endogenous variables) and the extent of compliance level. Ahmed and Courtis (1999) noted the relationship between corporate attributes and disclosures in corporate financial reports was documented as early as 1961. The number of firm attributes investigated as possible determinants of the level of disclosure range from two (Stanga, 1976) to thirteen (Naser, Al-Khatib and Karbhari, 2002).

Tables 3.1 and 3.2 present[27] a summary of studies on mandatory disclosure and determinants of compliance[28]. As shown in Tables 3.1 and 3.2, *Firm Size* is the most favoured firm attribute that has been studied in relation to mandatory disclosure compliance. This is followed by *Leverage*, *Profitability* and *Size of the Audit Firm*. Each of these potential determinants is discussed below.

An overwhelming majority of prior studies in different countries across different time frames (1961 to 2005) find that firm size is significantly positively related with the extent of corporate disclosure, both mandatory and voluntary (see Cerf, 1961; Buzby, 1975; Chow and Wong-Boren, 1987; Cooke, 1989a, 1991; Naser and Al-Khatib, 2000; Owusu-Ansah and Yeo, 2005). This implies that larger firms make significantly more mandatory and voluntary disclosures.

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[27] Additional information is also documented in Table 2.3.
[28] A summary of voluntary disclosure studies is presented in Appendix D.

Table 3.1: Mandatory Disclosure Determinants Studies

Study	Age	Firm Size	Industry	Leverage	Liquidity	Multi-nationality	Ownership Diffusion	Profitability	Size of Audit Firm
Tai, Au-Yeung, Kwok & Lau (1990)		*	X						X
Ahmed & Nicholls (1994)		X		X		*			*
Wallace, Naser, Mora (1994)		*	X	X	*			X	X
Wallace & Naser (1995)		*		X	X		X	*	*
Patton & Zelenka (1997)		X	X	X				*	*
Owusu-Ansah (1998)	*	*	X		X	*	*	*	X
Glaum & Street (2003)	X	X				X		X	*
Ali, Ahmed & Henry (2004)		*		X		*		*	X
Owusu-Ansah & Yeoh (2005)	X	*	X		X		X	*	*

Legend: * = significant; and X = insignificant

Table 3.1: Mandatory Disclosure Determinants Studies[29] (continued)

Study	Age	Firm Size	Industry	Leverage	Liquidity	Multi-nationality	Ownership Diffusion	Profitability	Size of Audit Firm
Cerf (1961)		*						*	
Singhvi (1968)		*						*	X
Singhvi & Desai (1971)		X					X	X	X
Buzby (1975)		*							
Belkaoui & Kahl (1978)		*	*	*	*			*	
Malone, Fries & Jones (1993)		X	X	*		X	*	X	X
Solas (1994)		X						X	
Zarzeski (1996)		*	*			*			
Ahmed (1996)		X		X		*			X
Al-Bastaki (1997)		*		X				X	
Inchausti (1997)		*	X	X		*		X	*
Naser (1998)		*	*	*	X		X	*	X
Craig and Diga (1998)		*		X		*			
Naser, Al-Khatib & Karbhari (2002)		*	X	*	*		X	X	*
Al-Shayeb (2003)	X	*	*			X		X	

Legend: * = significant; and X = insignificant

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[29] Aggregate disclosure consists of both mandatory and voluntary disclosures. *Adapted from*: Al-Shammari (2005)

Most studies, if not all, predict firm size is positively related with level of corporate disclosure (see Tables 3.1 and 3.2). In line with Buzby (1975), majority past studies argue that it is more costly in terms of affordability for smaller firms, which have limited resources to collect and present an array of information in a financial statement, than it is for larger firms that have greater resources. Furthermore, management of smaller firms may believe that disclosure in greater detail would put the firms at a competitive disadvantage to larger counterparts in the industry (Singhvi and Desai, 1971; Mautz and May, 1978; Nalikka, 2008). Such perception suggests that smaller firms are exposed to higher opportunity costs than larger firms. In addition, it has been well established that cost of capital (cost of equity and cost of debt) reduces with increased disclosure (Elliot and Jacobson, 1994; Botosan, 1997; Sengupta, 1998; Karamanou and Nishiotis, 2009). This motivates larger firms to disclose in more details than smaller firms due to larger firms greater reliance on external finance from the securities market (Salomon and Dhaliwal, 1980).

Empirical evidence supports the postulation that firm size is positively associated with compliance levels. For example, Owusu-Ansah's (1998) findings reveal that firm size has a significantly positive impact on mandatory disclosure practices. This is subsequently supported by Ali et al., (2004), among others, who reveal that the size of a firm is statistically significantly associated with mandatory disclosure compliance at the 1% level. This implies that larger firms more strongly comply with accounting standard disclosure requirements than the smaller ones (Ali et al., 2004; Owusu-Ansah and Yeoh, 2005).

Another firm attribute commonly examined as a determinant of compliance levels is firm leverage. Ali et al., (2004) argue that

external finance increases a firm's financial risk, and agency costs between shareholders and creditors. Dumontier and Raffournier (1998) postulate that increased disclosure by way of complying with mandatory disclosure improves the monitoring role of financial statements which in turn reduces agency costs and information asymmetry. In line with the arguments by Dumontier and Raffournier (1998) and Ali et al., (2004), most of the past studies reviewed propose that the higher the leverage, the more likely the higher levels of disclosure, as a means to signal firms' ability to fulfil its obligation (Watts and Zimmerman, 1990).

Jensen and Meckling (1976) suggest that there is a negative association between a firm's leverage and the extent of disclosure. However, the empirical evidence on the direction of such association is mixed. Table 3.1 and Table 3.2 show 31% of the studies (four out of thirteen) document a significant relationship between leverage and level of disclosure compliance. These are Belkaoui and Kahl (1978), and Malone, Fries and Jones (1993) who note a negative relation in contrast to Naser (1998) and Naser et al., (2002) who find a positive association. The remaining in Table 3.1 and Table 3.2 observe insignificant results.

The empirical findings shown in Table 3.1 and Table 3.2 indicate the association between the leverage and the extent of disclosure yields mixed results. Craig and Diga (1998) conclude that the degree of leverage has an effect on the level of compliance with mandatory disclosure and the impact is country-specific (for instance, Belkaoui and Kahl (1978) for Canada, Zarzeski (1996) for France, Germany, and Japan, Naser (1998) and Naser et al., (2002), both for Jordan, Wallace et al., (1994) for Spain, Wallace and Naser (1995) for Hong Kong, Raffournier (1995) for Switzerland, Owusu-Ansah and Yeoh (2005) for New Zealand).

Profitability is another firm characteristic that is examined as a potential determinant of disclosure compliance studies. The influence of profitability on corporate disclosure levels, including mandatory disclosure, has been well established (Wallace et al., 1994; Raffournier, 1995; Inchausti, 1997, Owusu-Ansah, 1998; and Street et al., 1999; cited in Ali et al., 2004). Using different theories, arguments have been put forward to support a positive relation between profitability and level of disclosure.

Applying agency theory Wallace and Naser (1995) posit that managers of very profitable companies will seek to use information for personal advantage. For example, management of very profitable firms will disclose greater information to support continued employment and increased compensation. Utilising signalling theory, Inchausti (1997) proposes that firms with good news tend to disclose greater information than those with bad news so as to avoid undervaluation of the firm's shares value. Based on political process theory, Inchausti (1997) argues that very profitable firms also tend to disclose more information to justify profit level.

Empirical evidence supports the positive relationship between profitability and the level of mandatory disclosure compliance, such as Patton and Zelenka (1997) for Czech Republic, Owusu-Ansah (1998) for Zimbabwe, Ali et al., (2004) for India, Pakistan and Bangladesh, and Owusu-Ansah and Yeoh (2005) for New Zealand. These studies reveal that more profitable firms disclose more required information in annual reports than those of less profitable firms. In contrast, using Hong Kong data Wallace and Naser (1995) report profitability is negatively associated with the level of mandatory disclosure. This implies that Hong Kong firms with low

profit margins tend to disclose greater information in corporate annual reports; hence, more compliance. Wallace and Naser's (1995, p. 347) explanation for the contrasting finding is that it is due to "the cultural reluctance of the Chinese to attribute glory to themselves and their eagerness to provide explanation for failures but not for success" (Bond 1991, p. 42). Another reason provided, may be that many firms are closely held by a few wealthy Chinese families in Hong Kong (Phenix, 1994, p. 160) whose demand for information might be different from those of U.S. investors.

The fourth main common/popular variable is auditing firm size. Past mandatory disclosure compliance studies as presented in Table 3.1 show that audit firm size has been included in all studies as one of the potential key determinants of compliance level. Building on DeAngelo's (1981b) audit quality theory framework, most studies reviewed in Table 3.1 postulate that the level of mandatory disclosure compliance is positively associated with audit firm size. Past studies, such as Wallace and Naser (1995), Owusu-Ansah (1998), and Ali et al., (2004) argue that large audit firms are less likely to depend on (or financially bond with) a particular client; therefore, larger firms are able to and have greater incentives to maintain independence from clients. Consequently, larger audit firms are more likely to exert more influence over disclosure compliance of clients than smaller audit firms. Furthermore, large audit firms are more likely to report any breach or non-compliance in order to maintain reputation capital and audit quality. Depending on when the study was conducted, the size of audit firm is generally surrogated by the Big 4 as a proxy of audit quality.

The empirical findings of association between audit firm size and level of compliance with mandatory disclosure requirements are not

consistent. Research such as Patton and Zelenka (1997), Owusu-Ansah (1998), and Ali et al., (2004) find that firms audited by the Big 4 tend to have higher compliance levels with mandatory disclosure requirements (i.e., a positive relation). On the other hand, Firth (1979), Wallace et al., (1994), and Glaum and Street (2003) find no relationship between audit firm size and the level of mandatory disclosure. Interestingly, a negative association is observed by Wallace and Naser (1995) and Owusu-Ansah and Yeo (2005).

The mixed results regarding the association between audit firm size and compliance with mandatory disclosure requirements may be due to using a crude measure such as audit firm size which generally takes a dichotomous form[30]. This study argues that should the Big 4 auditing firms' status represent higher audit quality, then this implies that the quality of an audit is dependent on the name of the auditor (Firth, 1997a). Consequently, the Big 4 are all assumed to be the 'experts' across all industries in the market. Should this be the case, then what was rationality behind the complete and rapid demise of Arthur Andersen? In line with Firth (1997a), it is argued that stakeholders may look beyond the name of an auditor when assessing the audit quality. Indeed, stakeholders may also be concerned with economic bonding between the auditor and the client. This implies alternative measures are needed to better understand the audit quality and mandatory disclosure compliance link.

In consolidating the mixed results of the extant literature, this thesis contributes to the literature by investigating the relationship between levels of compliance with mandatory disclosure and the

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[30] The crude measure of audit quality employed by past literature may be due to data availability/constraints.

external institutional factors (i.e., the external auditor) and values of that external force (i.e., audit quality) that may influence its effect.

Arguably, the past research on compliance with mandatory disclosure only examines its association with endogenous variables (i.e., firms' attributes) and employs a crude measure of audit firm size for audit quality. There is virtually no study that takes one step further by directly examining the affect of auditor independence and audit specialisation on mandatory disclosure compliance. This thesis aims to fill the void. In the following sections, crucial roles played by external auditors are discussed. The definition and attributes of audit quality are defined and explored respectively. Subsequently formal statements of hypotheses are developed.

3.4 Audit Quality

Berle and Means (1932) were one of the first to raise concerns about generation of agency costs and information asymmetry problems due to the separation of control and ownership. Jensen and Meckling (1976) argue that enforcement of the contract between principal and agent requires monitoring the agent's activities. Key authors such as Watts (1977), Benston (1980), Watts and Zimmerman (1980), and Chow (1982) assert the audit is one type of monitoring activity that increases the value of firm. This gives rise to the demand for auditing services as to be "a need to facilitate dealings between the parties involved in business relationships – shareholders, creditors, public authorities, employees and customers, etc. Exchanges between such parties are usually costly since informational asymmetries give rise to uncertainty concerning the performance of the contractual obligations" (Arrunada, 2000, p. 205).

Agency theory suggests that it is in the interest of management to engage an external audit to express an independent opinion on the company's financial statement as well as to provide monitoring and verification on management's actions (Firth, 1997a). Engagement of the external auditor reduces agency costs. Firth (1997, p.7), for example, argues the lack of a credible external "audit will likely to increase the cost of capital, restrict access to capital, and impose severe restrictions on management's actions". This implies the external auditing processes add value to the quality of financial statements.

Furthermore, an external auditor derives value from its role in reducing agency costs and information asymmetries between corporate management and owners. The agency cost is reduced, if not eliminated, by providing external verification of the reliability of the firm's financial statements (Leftwich, 1980; Ferguson, Francis and Stokes, 2003) and the effectiveness of the external monitory by the audit firm. DeAngelo (1981a, 1981b) argues that the effectiveness of such external monitoring depends on audit quality of the auditing firm.

External auditors play a major role in disclosure policies and practices (Owusu-Ansah, 1998; Apostolou and Nanopoulos, 2009) and in enhancing the credibility of financial statements (Healy and Palepu, 2001; Almer, Gramling and Kaplan, 2008). The important role held by auditors is well-recognised even before the U.S. Securities Acts mandated external auditing. For example, DeFond (2002) concludes that the research of Watts and Zimmerman (1983) shows 84% of NYSE firms voluntarily engaged external auditor in 1926 many years before it was made compulsory by the U.S. Securities Acts. However, "what investors and creditors do observe all too often lately are instances where it appears the

auditor and/or the audit committees were not effective. These are the cases of fraud, material errors or misstatements, material omissions [non-compliance with mandatory disclosure]" (Imhoff, 2003, p.122). Examples include big icons such as AOL Time Warner, WorldCom, Boeing, Computer Associates, Xerox, Enron, Tyco, IBM and HIH. Imhoff (2003) asserts that the dissolving of one of the largest accounting firms (Arthur Andersen) in the world was due to audit failures.

In line with Jensen and Meckling (1976), Al-Shammari (2005) notes the quality of financial reporting is not only determined by the quality of the accounting standards (such IASs) but also by the effectiveness of the enforcement of these accounting standards (Ball, Robin and Wu, 2003; Francis, Jhurana and Pereira, 2003; Saudagaran, 2004). One mechanism designed to enforce compliance with IASs (including mandatory disclosure) is the external audit (Glaum and Street, 2003).

Audit quality has been one of the most important issues affecting the auditing profession (Vanstraelen, 2000). Further, it is also a service and attribute highly valued by equity market participants (Moreland, 1995; Franz, Crawford and Johnson, 1998). It is perceived that a high audit quality reduces the uncertainty associated with financial statements in the eyes of other contracting parties not involved in the preparation of such statements (Wallace, 1980). In addition contractual costs will also fall as auditing quality increases (Vanstraelen, 2000).

The most commonly utilised definition of audit quality is by DeAngelo[31] (1981b, p. 186) who stated "the market-assessed joint probability that a given auditor will *both*: (a) discover a breach in the client's accounting system, and (b) report the breach". This implies a perceived audit quality definition, as the author defines audit quality as 'the market-assessed'. The definition implies that DeAngelo (1981b) views audit quality as a function of the ability of the auditor to perform a thorough examination of the financial accounts and detect possible errors or anomalies (technical competence) and the willingness to report any breach if discovered (independence) (Arrunada, 2000; Vanstraelen, 2000). Therefore, for an audit to be of value to the consumer of audit services, the auditor must be perceived as being both technically competent and independent (Watts and Zimmerman, 1980; Citron and Taffler, 1992; Srinidhi and Gul, 2007). Hypotheses for these two primary audit quality features (auditor independence and audit specialisation) are developed and discussed in the following two subsections.

3.4.1   Auditor Independence

Agency theory suggests that external auditors are in demand to monitor and verify the actions of management. A deficiency of a credible independent audit will likely increase agency costs (Firth, 1997a). An audit will only be a success "in changing expectations and hence reducing the opportunistic behaviour costs (agency costs) borne by the manager only if it is expected that the auditor will report some discovered breaches of contract" (Watts and Zimmerman, 1983, p. 615). "The probability that the auditor will report a discovered breach is effectively the auditing profession's definition of independence" (Watts and Zimmerman, 1983, p. 615).

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[31] DeAngelo's definition of audit quality has been widely used. See Ahmed and Nicholls (1994), Wallace and Naser (1995), Owusu-Ansah (1998), and Ali et al., (2004) for examples.

Auditor independence has been regarded as a vital attribute of a statutory audit (Firth, 1997a) and has been labelled as the cornerstone (Mautz and Sharaf, 1961), essence (Stamp and Moonitz, 1979), and foundation (Whittington and Pany, 1995) of auditing. Past literature has segregated independence into independence in fact and independence in appearance (Ramsay, 2001). Auditor independence, both in *fact* and *appearance*, has long been recognised as an important aspect of audit quality (DeAngelo, 1981a). Firth (2002) contends that independence in fact (i.e., actual independence) is generally unobservable; therefore, independence in appearance assumes prime importance (Beattie and Fearnley, 2002). Frequently, independence in appearance is perceived as representative of actual independence (Olazabal and Almer, 2001).

If financial statement users perceive there is an impairment to auditor independence (i.e., appearance), then users are likely to impose a cost-of-capital premium for information risk associated with the inability to rely on the audit (Firth 1997a; Johnstone et al., 2001). This suggests that if the auditor is not perceived to be acting independently of management, the audit loses its values to market participants (Beattie and Fearnely, 2002). Such a perception of an impairment of auditor independence in appearance, may be as damaging to the audit firm as if an actual independence violation occurs (Olazabal and Almer, 2001). Correspondingly, this study effectively examines auditor independence from the perspective of appearance.

An independent audit is a vital component of the capital markets disclosure mechanism in protecting the interests of the investing public (Campbell and Parker, 1992). In an efficient capital market

rational agents forecast that an auditor's independence is impaired when the auditor forms an economic bond with clients (i.e., have increased incentives for misrepresentation) (DeAngelo, 1981a; Salehi, 2009).

The Securities and Exchange Commission (SEC, 2000) posits that accounting firms that provide significant non-audit services to audit clients may increase economic bonding between the audit firm and the client. If economic bonding increases it is argued this will reduce investor confidence in auditor independence leading to a decline in confidence in public capital markets (Kinney, Palmrose and Scholz, 2004). Regulators also express concern that some audit fees are too low because auditors may lowball audit fees to secure lucrative non-audit services such as consulting contracts (SEC, 2001; McMeeking, Peasnell and Pope, 2007).

The provision of non-audit services (NAS) by incumbent auditors has long been considered by regulators in Australia and overseas as a threat to auditor independence (Craswell, 1999). There has been a strong growth in the provision of NAS[32] to clients by accounting firms. For instance, Abbott, Parker, Peters and Rama, (2003) show that the SEC estimated that 25% of (USA) public firms purchase non-audit services from incumbent auditors (this estimate was for the time period prior to non-audit fee data being made a compulsory disclosure). More recently in 2000, SEC-required disclosures show that 96% of public companies purchased non-audit services. Significantly 51% of firms were paying more for non-audit services than audit services. Time series evidence from

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[32] The scope of services offered by large audit firms to both public and private firms may include, among others: systems and information technology (IT); training; services for SME such as payroll; risk management advice; taxation, including tax compliance and tax planning and advice; corporate recovery and insolvency; legal, forensic and litigation support; mergers and acquisitions; transaction support and follow up including due diligence and initial public offerings (IPO); recruitment and human resources; and portfolio monitoring (Beattie and Fearnley, 2002).

Australia is broadly consistent with US trends. That is, evidence reveals that much of the growth of a public accounting firm's total revenues from 1982 to 1989 (a cumulative average annual increase of 30%) is due to the provision of non-audit services (Wines, 1994).

As the scope of NAS provided by audit firms has broadened (particularly with respect to management advisory services (hereafter MAS)) the worry is that the relationship between auditor and management becomes more proximate (Ramsay, 2001). Furthermore, Ramsay (2001, p. 118) argues that the existence of "an inherent scepticism about how close the relationship between the auditor and the management of the audit client can be without creating, in fact or in perception, a mutuality of interest that could impair the auditor's independence".

Beattie and Fearnley (2002, p. 20) postulate that a real or perceived threat to independence in the case of an audit client may arise if some of these NAS are jointly provided, the main threats are:

- self interest: the increase of economic dependence;
- self review: taking management decisions and auditing one's own work;
- advocacy: acting for the client's management in adversarial circumstances; and
- familiarity: becoming too close to the client's management through the range of services provided.

Research shows that NAS have been perceived by corporate stakeholders to be an impairment of auditor independence. For example, a survey conducted by Quick and Warming-Rasmussen (2005) find that shareholders, bank loan officers and journalists feel that auditor independence may be at risk when NAS are

provided. Additionally, Firth (1997a) using data observations from 500 firms, documents evidence that firms with higher agency costs are negatively associated with the size of NAS purchased from the external auditor.

Many empirical studies (e.g., Frankel et al., 2002; Reynolds, Deis and Francis, 2004; Kinney et al., 2004) have investigated the issue whether the provision of NAS would impair auditor independence; thereby, leading to reduced quality of audit and/or financial reporting. Earnings management, a major topic of interest in the past decade, has been examined in relation to the provision of NAS. For instance, Frankel, Johnson and Nelson (2002) assess the impact of NAS on auditor independence by examining the association between non-audit fees and earnings management (surrogated by discretionary accruals). They (Frankel et al., 2002) present evidence that firms with higher NAS levels supplied by the incumbent auditors are more likely to just meet or beat earnings forecasts. Frankel et al., (2002) also find evidence of a positive relation between non-audit fees and small earnings surprises and the extent of discretionary accruals. They (Frankel et al., 2002) conclude that the provision of NAS can threaten auditor independence as higher-fee-ratio clients receive preferential treatment from the incumbent auditor.

Challenging the findings of Frankel et al., (2002), Ashbaugh, LaFond and Mayhew (2003) report no association between earnings management and the provision of NAS when discretionary current accruals for firm performance are adjusted. Ashbaugh et al., (2003) argue that the results of Frankel et al., (2002) are due to sensitivity to research design choices. They (Ashbaugh et al., 2003) conclude that no systematic evidence sustaining the claim of

purchasing more NAS would result in impairment of auditor independence.

Using a similar approach, Reynolds et al., (2004) use the base model to replicate the results of Frankel et al., (2002). The initial results documented by Reynolds et al., (2004) support the findings of Frankel et al., (2002); that are a significant positive relation between the level of non-audit fees and discretionary accruals. However, the significant positive association is found to disappear when additional controls for high-growth clients are included in an expanded model. Reynolds et al., (2004) deduce that the findings of Frankel et al., (2002) may be partially a result of a weakness in the research design for failing to adequately control for factors unrelated to auditor objectivity such as firm growth.

Raghunandan, Read and Whisenant (2003a) assess whether the provision of NAS has an impact on auditor independence in terms of restated financial statements[33]. They (Raghunandan et al., 2003a) sampled 110 companies that restated financial statements filed with the SEC during 2000 and 2001. Raghunandan et al., (2003a) find the level of non-audit fees do not result in an inappropriate influence from incumbent auditors on the audit that lead to restatements. Similarly, Kinney et al., (2004) partition NAS into financial information system design and implementation (FISDI), internal audit, tax, and unspecified NAS[34]. Insignificant results are documented for the relation between non-audit fees and FISDI, and non-audit fees and internal audit. However, their (Raghunandan et al., 2003a) evidence shows that unspecified non-audit fees are positively associated with restatement.

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[33] Restatement refers to firms that have to restate their financial statement to bring it to conformity with the existing GAAP.
[34] Unspecified NAS may include some Sarbanes-Oxley Act of 2002 (SOX) banned services such as expert services unrelated to the audit.

Another perspective of auditor's objectivity that has been associated with NAS provision is the type of audit opinions issued. The controversy is whether the non-audit fees influence (an) a (un)qualified audit opinion issued by auditors. Barkess and Simnett (1994), Craswell (1999), and Craswell, Stokes and Laughton (2002) all document evidence that the extent of non-audit fees do not affect the propensity to issue unqualified audit opinions. However, Wines (1994) and Firth (2002) conclude otherwise. They (Wines, 1994; Firth, 2002) find that when higher levels of non-audit fees are obtained the less likely auditors are to issue a qualified audit opinion. Hence, they (Wines, 1994; Firth, 2002) both draw the conclusion that the auditor independence may have been impaired as a result of higher level of non-audit fees.

There is no clear and unequivocal empirical evidence showing NAS negatively affects audit independence in *fact* (DeFond, Raghunandan and Subramanyam, 2002; Francis and Ke, 2002; Frankel et al., 2002; Ashbaugh et al., 2003; Chung and Kallapur, 2003; Reynolds, Deis and Francis, 2004). However, recent research suggests that NAS may impair an investor's perception of the auditor based on *appearance* of independence (e.g., Glezen and Millar, 1985; Frankel et al., 2002; Francis and Ke, 2003; Hackenbrack, 2004; Joshi, Bremser, Hemalatha and Al-Mudhaki, 2007). This is further supported by the fact that some countries (e.g., Japan (Nakase, 1985), France (Schilder, 1994), Belgium (Moizer, 1997) and Italy (CAJIC, 1996; Kinney, 1999) (quoted in Firth, 2002)) have taken the extreme step of prohibiting the joint provision of audit and NAS.

In summary, empirical results reported in the extant literature are mixed results. DeFond et al., (2002) argue that because of market-

based institutional incentives an auditor will act independently For example, Benston (1975) and Duh, Lee and Hua (2009) maintain that loss of reputation and litigation costs are likely to create strong incentives for auditors to maintain independence. DeFond et al., (2002, p. 1251) contend that "although there are market-based incentives for an auditor to maintain independence, there are also forces that potentially threaten auditor independence".

Kinney et al., (2004) claim that income generated from non-audit services may result in an auditing firm being economically dependent on an audit client. A long held assertion in the auditing literature is that such dependence could lead to the perception of impaired auditor independence (Arrunada, 1999) and reduce auditor independence (DeAngelo, 1981b; Beck, Frecka and Salamon, 1988; Magee and Tseng, 1990). This in turn, reduces the auditor's willingness to challenge possible non-compliance of a client's financial statements, such as non-disclosure of mandatory information (Simunic, 1984; Arrunada, 1999). For example, the auditor's lack of independence could result in an unqualified audit opinion on financial statements even though they do not fully comply with accounting standards.

Tai et al., (1990) show that in spite of the assurance function provided by auditors, non-disclosure of mandatory information still is in existence (see Chapter 2). In line with Ramsay (2001, p. 105), it is argued in this study that "given the close working relationship between auditors and clients and the fact that auditors are paid by their clients, it is psychologically impossible for an auditor to be free from bias". Therefore, it is expected that the higher the level of auditor independence the more likely the greater compliance with accounting standards by firms (i.e., AASBs 6 *Exploration for*

and Evaluation of Mineral Resources and 136 *Impairment of Assets*).

Based on the above arguments and prior literature, the following hypothesis is proposed:

H$_1$:   *There is a positive association between the level of auditor independence and the firm's level of compliance with mandatory disclosures of AASB 6 and AASB 136*.

3.4.2   Audit Specialisation

Audit quality, as mentioned above, is a function of auditor independence and technical competence. Maines (2001) claims that auditor's competence is linked to task-specific knowledge and auditor's expertise. Whilst most research has focused brand name (audit firm size Big 4) (e.g., Becker et al., 1998; Francis, Mayhew and Sparks, 1999; Reynolds and Francis, 2001) others suggest an auditor's industry specialisation (e.g., Craswell et al., 1995, Solomon et al., 1999; Zhou and Elder, 2002; Balsam et al., 2003; and Krishnan, 2003b) is a relevant proxy of an auditor's technical competence.

Solomon, Shields and Whittington (1999, p. 191) define industry specialists as "auditors who are so designated by their firms and whose training and practice experience largely are in a particular industry". Solomon et al., (1999) infer that a preferred way for auditors to gain industry specialisation is through specialised indirect experience (training) combined with focused direct experience (working exclusively in a particular industry).

Casterella et al., (2004) note that in the early 1990s big accounting firms began changing the organisational structure and marketing expertise around industry specialisations[35] (De Belde, 1997; Hogan and Jeter, 1999; Solomon et al., 1999). Furthermore, Mayhew and Wilkins (2003) indicate that audit firms make costly investment to become industry specialist. This gives rise to the question as to why accounting firms develop industry expertise in the market for audit services since it has been argued to be costly[36]. Craswell et al., (1995, p. 299) provide an explanation as follow:

> Agency theory can be extended to explain … industry specialisation as a function of increasing agency costs. There is an interplay of firm-specific factors (such as financing an ownership structure) as well as more general industry-wide factors (such as industry-specific transactions and contracts) which determine a company's agency cost structure and corresponding monitoring needs….Thus, the combination of firm-specific and industry-wide factors results in cross-sectional variation in the demand for monitoring and, consequently, for different levels of audit quality. Differential demand for auditing allows multiple types of audit quality to co-exist in the same industry and leads to … product differentiation through industry specialisation.

Al-Basteki (2000) points out that the effectiveness of the audit function depends on the competency of the auditor. In the same view, Healy and Palepu (2001) assert that differences in the auditor's qualifications and professional training have an impact on the credibility of audit reports. Therefore, it could be argued that it is more likely for a better trained auditor (or a specialist) to detect and question non-compliance with IASs than that of a non-specialist. This is further supported by Abbott and Parker (2000)

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[35] For example, merging of Price Waterhouse and Coopers & Lybrand resulted from complementary strengths/synergy in industry markets; where Coopers & Lybrand's specialisation was in telecommunications as complementary to Price Waterhouse's specialisation in entertainment and media (Hogan and Jeter, 1999).

[36] See Gramling and Stone (2001) for a detailed discussion on objectives of audit firms to develop an industry specialisation.

and Krishnan (2003b) who argues that given specialised auditors have the expertise, resources and incentives to separate the information component from noise. Therefore, the higher the competency of auditors, the more likely the auditors to deter and detect irregularities, financial misstatement and questionable accounting practices, whether by error or fraud than are non-specialist auditors.

Some studies have investigated the association between audit specialisation and the quality of financial reporting such as those related to earnings management. Zhou and Elder (2002), for example investigate whether industry specialist auditors provide higher quality audits in the IPO process in terms of lower earnings management (measured by discretionary accruals). Zhou and Elder (2002) use 1,048 IPO observations from 1996 to 1998 spread over 17 industries. They (Zhou and Elder, 2002) find that IPOs audited by industry specialists exhibit less underpricing and smaller discretionary accruals.

Similarly, Krishnan (2003a; 2003b) utilises a much bigger sample size and finds that discretionary accruals reported by clients audited by specialist auditors was on average 1.2% lower than those audited by the non-specialist auditors. The result is consistent with the view that specialist auditors better alleviate accruals-based earnings management than non-specialist auditors, which implies a higher market valuation of earnings suggesting greater earnings quality (Francis et al., 2005). This conclusion is fully supported by Chen, Lin, and Zhou (2005) whose findings are consistent with firms audited by audit specialists which exhibit smaller abnormal accruals (i.e., earnings management).

Extending the literature on audit specialisation and earnings management, Balsam et al., (2003) compare the absolute level of discretionary accruals and earnings response coefficients of firms audited by audit specialists with those of firms audited by non-specialists. Balsam et al., (2003) show that firms audited by industry specialist auditors have lower discretionary accruals and higher earnings response coefficients than clients of non-specialist auditors. Again, this is consistent with the notion that industry specialists improve a client's earnings quality than that of non-specialists.

The association between industry specialist auditors and fraudulent financial reporting has also attracted research. Utilising a logit regression model based on a matched sample of 1990 and 2001 Carcello and Nagy (2004) reveal a negative relationship between audit specialisation and fraudulent financial reporting. Carcello and Nagy (2004) conclude that financial fraud reporting is lower for firms audited by industry specialist than by non-industry specialist.

Another stream of research has looked to explain the relationship between audit specialisation and disclosure quality. Dunn and Mayhew (2004) provide evidence of the effect of hiring an industry specialist auditor on client disclosure quality. The disclosure quality is measured by analysts disclosure quality evaluations reported in the annual Association for Investment Management and Research (AIMR) Corporate Information Committee Reports. Using rank regression methods, Dunn and Mayhew (2004) show that an analyst's ranking of disclosure quality in unregulated industries is higher for firms audited by industry specialist auditors than that those audited by non-specialist auditors. Likewise, O'Keefe, King and Gaver (1994) document evidence of audit (industry) specialisation being associated with fewer violations of Generally

Accepted Auditing Standards (GAAS) reporting standards. Hence, it can be argued that firms audited by an industry specialist results in higher level of compliance and; therefore, better quality (in this case with fewer violations of GAAS reporting standards).

The evidence in support of industry audit specialisation is somewhat consistent. In line with Beatty (1989) and Krishnan (2003b), this study argues that specialist auditors are more likely to deter and detect questionable accounting practices and report material errors and irregularities than non-specialist auditors. First, specialist auditors are likely to invest more in staff recruitment, training, information technology, and state-of-the art audit technologies than non-specialists (Dopuch and Simunic, 1982; Chin and Chi, 2009). Second, specialist auditors have the expertise, resources, and incentives which motivate the specialist accounting firms seeking to protect their reputation capital. Third, auditor industry specialisation is reported to be positively related to a firm's compliance with GAAS, and non-compliance might be due to some audit firms lack of industry-specific knowledge (O'Keefe et al., 1994).

In line with agency theory, past literature, and prior empirical findings, it is expected that financial statements audited by a specialist auditor will result in higher levels of compliance with accounting standards; and that an industry specialist auditor will be more likely to be pro-active in challenging corporate management (Balsam et al., 2003; Krishnan, 2003b).

The mineral resources industry, the central focus of this study, has 'specialised' accounting rules, reporting, measurement and disclosure requirements such as the valuation of mineral/oil reserves, income determination, and complex forward sales and

hedging contracts (Craswell et al., 1995). Therefore, this study argues that auditor specialists in this industry will lead to a higher level of audit assurance relative to audits performed by non-specialist auditors. Hence, it is hypothesised that:

> *H$_2$:* *There is a positive association between auditor specialisation and the firm's level of compliance with mandatory disclosures of AASB 6 and AASB 136*.

3.5   Chapter Summary

Theoretical framework of agency theory is reviewed. Using the tenets of agency theory, this chapter discusses theoretical and empirical literature on audit quality which is a function of auditor independence and auditor specialisation (technical competence). Agency theory suggests that external auditors are one of the crucial factors in demand to monitor and verify the actions of agents (management). Consequently, impairment of auditor independence, whether in fact or in appearance, is deemed to increase the agency cost. Furthermore, the higher the level of auditor independence the more likely results in the greater compliance with accounting standards (i.e., AASB 6 and AASB 136). Specialist auditors are likely to deter and detect irregularities in accounting practices and non-compliance with accounting standards than non-specialists auditors. This is due to specialist auditors put more resources in investment in staff recruitment, training, information technology and state-of-the art audit technologies than non-specialists. Therefore, it is expected financial reports audited by a specialist auditor will result in a higher level of compliance with accounting standards (AASB 6 and AASB 136).

This thesis hypothesises that the level of compliance with mandatory disclosure of AASB 6 *Exploration for and Evaluation of*

Mineral Resources and AASB 136 *Impairment of Assets* is positively related with both auditor independence and audit specialisation.

The following chapter deliberates on how these hypotheses are to be tested, sample selection criteria, and measurement on both dependent and independent variables. The construction of a disclosure compliance index for AASBs 6 and 136 mandatory disclosure, and details on statistical methodology employed in this research are presented and discussed.

Chapter 4 DATA AND METHOD

4.1 Chapter Overview

Chapter 3 reviews various determinants of the extent of both mandatory disclosure compliance and the level of aggregate (mandatory and voluntary) disclosures noted in past studies. Chapter 3 also defines audit quality as a function of the ability of the auditor to perform a thorough examination of the financial accounts and detect possible errors or anomalies (technical competence) and the willingness to report if any breach is discovered (independence). The review shows that audit firm size has been predominantly used to proxy for audit quality. Using the tenets of agency theory, two hypotheses for the two features of auditor quality (i.e., auditor independence and audit competency) are then developed.

This chapter documents the data collection process, research design and methods. Sample selection, data source, and data collection procedures are detailed in Section 4.2. Section 4.3 presents the construction and measurement of the dependent variable, referred to as the Compliance Disclosures Index (CDI). The measurements for independent variables (auditor independence and audit specialisation) and various control variables are discussed in Section 4.4 and 4.5 respectively. Section 4.6 describes the statistical methodology used to test the

hypotheses developed. Finally, Section 4.7 presents a brief summary of this chapter.

4.2   Data Sources and Sample Selection

Public listed firms in ASX under the Australian mineral resources sector are the target population of this study. This thesis covers a 1-year period of 2005/06 financial year (i.e., 1 July 2005 to 30 June 2006). This is a crucially important time period to study as this is the first year after AASB 6 *Exploration for and Evaluation of Mineral Resources* and AASB 136 *Impairment of Assets* were adopted and thus became compulsory for compliance. The listed companies' consolidated financial statements are the main source of data for the investigation of the extent of compliance with AASB 6 and AASB 136, and for firms' attributes. These financial reports are collected from Aspect Huntley DatAnalysis database. Other information (such as market capitalisation) not available in Aspect Huntley DatAnalysis is obtained from DataStream and Connect 4 databases.

Table 4.1 summarises the number of companies in the final sample in relation to the population. The entire population of mineral resource firms listed on the ASX totalled 320 public firms as at 30 June 2006. Four exclusions were made due to being delisted or suspended from the ASX, two that changed financial year end from 30 June to 31 December, and nine firms that had incomplete data. Table 4.1 Panel A shows final sample of 289 firms that are applicable to compliance with AASB 6 after additional exclusion of 16 non-applicable firms to AASB 6.

Table 4.1 Panel B shows that additional of 9 non-applicable firms are excluded due to non-applicable to compliance with AASB 136. In Table 4.1 Panel C reveals an additional of 97 firms that are

excluded due to being non-applicable to compliance with both AASB 6 *and* AASB 136. Therefore, the final sample consists of 208 firms which are applicable to both AASB 6 and AASB 136. The distribution of final sample firms as shown in Table 4.1 Panel C[37] consists of 65% of the whole population. With such an extensive representation, it is argued that the results can then be generalised to mineral resources firms listed in Australia.

Table 4.1: Final Sample

Description	No. Firms	% to Total Population
PANEL A: DCI AASB 6		
Sample of listed firms	320	100
Less: Delisted / Suspended	4	1.25
Less: Change Financial Year to 31-December	2	0.63
Less: Incomplete Data	9	2.81
Less: N/A to the DCI	16	5.00
No. of firms in the final sample	**289**	**90.31**
PANEL B: DCI AASB 136		
Sample of listed firms	320	100
Less: Delisted / Suspended	4	1.25
Less: Change Financial Year to 31-December	2	0.63
Less: Incomplete Data	9	2.81
Less: N/A to the DCI	81	25.31
No. of firms in the final sample	**224**	**70.00**
PANEL C: DCI AASB 6 and AASB 136		
Sample of listed firms	320	100
Less: Delisted / Suspended	4	1.25
Less: Change Financial Year to 31-December	2	0.63
Less: Incomplete Data	9	2.81
Less: N/A to the DCI AASB 6 **AND** AASB 136	97	30.31
No. of firms in the final sample	**208**	**65.00**

AASB 6 is for Exploration for and Evaluation of Mineral Resources and AASB 136 is for Impairment of Assets. Those 'N/A to the DCI' mainly are firms that do not fall into the scope of AASB 6 and/or AASB 136. See Appendix E for a complete listing of the sample companies.

4.3   Dependent Variable

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[37] The main sample used to test for the developed hypotheses are based on the sample shown in Table 4.1 Panel C which consists of 208 firms that are applicable to compliance with both AASB 6 and AASB 136.

Chapter 1 discusses the significant role of mineral resources[38] in the Australia economy. As at 30 June 2006 the total assets in the Sector Energy and Material firms listed on ASX show a value of more than AUD $337.8 billion. Nearly 75% (AUD $ 252.2 billion) of the AUD 337.8 billion are categorised as non-current assets. This indicates that Australian resource companies have an enormous investment in their non-current assets. Therefore, it is posited that non-compliance with AASB 136 (*Impairment of Assets*) would definitely induce great uncertainty and volatility in earnings quality for the Australia resources firms. Such uncertainty and volatility has a major impact on the cost of capital (Minton and Schrand, 1999; Francis, Nanda and Olsson, 2008).

Most previous studies of mandatory and/or voluntary disclosure compliance have subjectively applied limited content analysis on IFIR required disclosures and measurements/presentation, as a means of managing the scale of research (e.g., Wallace et al., 1994; Street and Bryant, 2000; Street and Gray, 2001; Glaum and Street, 2003; Ali et al., 2004). Cairns (2002) notes that such practise is cause for much concern, and as such it is a limit that severely restricts the value of conclusions. This study enhances the methodological strengths of including all disclosures required by AASBs 6 *Exploration for and Evaluation of Mineral Resources* and AASB 136 *Impairment of Assets* in comparison to previous research which selectively choose certain disclosure items from selective accounting standards,

The dependent variable in this thesis is the level of compliance with AASB 6 and AASB 136. In order to measure the level of mandatory disclosure compliance with these standards a Disclosure

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[38] Mineral Resource firms are mainly made up by Energy and Materials sector in accordance to the ASX industry classification, which based on Global Industry Classification Standard (GICS).

Compliance Index (DCI) is constructed. This approach is consistent with previous studies (Tower et al., 1999, Street and Bryant, 2000; Ali et al., 2004). Marston and Shrives (1991) also argue that a well-constructed compliance index is considered to be a reliable measurement of corporate compliance. The DCI checklist consists of all key items that are required to be disclosed under AASB 6 and AASB 136. The DCI checklist comprises 62 mandatory disclosure items and is set out in Table 4.2.

In constructing the compliance index there are three main methodological issues to consider. First, how should each item be weighted? Second, what scale should be used for each item? Third, what is the best way to deal with the non-applicable/non-disclosed dilemma?

The first issue is to decide whether an individual item of the compliance list is to be allocated different weights in accordance with its importance. Weighting disclosure items is one of the crucial issues in measuring the level of compliance. Some studies assign different weight to items (e.g., Belkaoui and Kahl, 1978; Firth, 1979; McNally, Lee and Hasseldine, 1982; Chow and Wong-Boren, 1987; Malone et al., 1993) whilst others apply equal weight to all items (e.g., Tower et al., 1999; Street and Bryant, 2000; Street and Gray, 2001; Glaum and Street, 2003).

Table 4.2: AASB 6 and AASB 136 Compliance Checklist

Mandatory Disclosures	Source
Disclose information that identifies the amount of the exploration for and evaluation of mineral resources	AASB 6 para 23
Disclose information that explains the amount of the exploration for and evaluation of mineral resources	AASB 6 para 23
Disclose accounting policy for exploration and evaluation expenditures	AASB 6 para 24 (a)
Acknowledge the recognition of exploration and evaluation assets	AASB 6 para 24 (a)
Disclose the amounts of assets, liabilities, income and expense and operating and investing cash flows arising from the exploration for and evaluation of mineral resources	AASB 6 para 24 (b)
Provide an explanation that recoverability of the carrying amount of the exploration and evaluation assets is dependent on successful development and commercial exploitation, or alternatively, sale of the respective areas of interest	AASB 6 para Aus24.1
Disclose if it is impracticable to apply a comparative information that relates to annual reporting periods beginning before 1 January 2005	AASB 6 para 27
Disclose if applying the Standard, being the Australian equivalent to IFRS 6	AASB 6 para Aus27.1
Disclose the amount of impairment losses recognised in profit and loss	AASB 136 para 126 (a)
Disclose the line item of the income statement in which those impairment losses are included	AASB 136 para 126 (a)
Disclose the amount of reversals of impairment losses recognised in profit or loss	AASB 136 para 126 (b)
Disclose the line item of the income statement in which those impairment losses are reversed	AASB 136 para 126 (b)
Disclose the amount of impairment losses on revalued assets recognised directly in equity	AASB 136 para 126 (c)

Table 4.2: AASB 6 and AASB 136 Compliance Checklist (continued)

Mandatory Disclosures	Source
Disclose the amount of reversals of impairment losses on revalued assets recognised directly in equity	AASB 136 para 126 (d)
Disclose the amount of impairment losses recognised in profit or loss for each reportable segment in accordance with AASB 114	AASB 136 para 129 (a)
Disclose the amount of impairment losses recognised directly in equity	AASB 136 para 129 (a)
Disclose the amount of reversals of impairment losses recognised in profit or loss	AASB 136 para 129 (b)
Disclose the amount of reversals of impairment losses recognised directly in equity	AASB 136 para 129 (b)
Disclose the events and circumstances that led to the recognition of the impairment loss for an individual asset (including goodwill, cash-generating unit)	AASB 136 para 130 (a)
Disclose the events and circumstances that led to the recognition of the reversal of impairment loss for an individual asset (including goodwill, cash-generating unit)	AASB 136 para 130 (a)
Disclose the amount of the impairment loss recognised for an individual asset (including goodwill, cash-generating unit)	AASB 136 para 130 (b)
Disclose the amount of the reversal of impairment loss recognised for an individual asset (including goodwill, cash-generating unit)	AASB 136 para 130 (b)
For an individual asset, disclose the nature of the asset	AASB 136 para 130 (c) (i)
For an individual asset, disclose the segment information in accordance with AASB 114 to which the asset belongs, based on the entity's primary reporting format	AASB 136 para 130 (c) (ii)
For each CGU, describe the CGU (such as whether it is a product line, a plant, a business operation, a geographical area, or a reportable segment as defined in AASB 114	AASB 136 para 130 (d) (i)

Table 4.2: AASB 6 and AASB 136 Compliance Checklist (continued)

Mandatory Disclosures	Source
For each CGU, disclose the amount of the impairment loss recognised by class of asset,	AASB 136 para 130 (d) (ii)
For each CGU, disclose the amount of the reversal of the impairment loss recognised by class of asset	AASB 136 para 130 (d) (ii)
For each CGU, disclose if the aggregation of assets for identifying the CGU has changed since previous estimate of the CGU's recoverable amount	AASB 136 para 130 (d) (iii)
For each CGU, describe the current and former way of aggregating assets if the aggregation of assets for identifying the CGU has changed since the previous estimate of the CGU's recoverable amount	AASB 136 para 130 (d) (iii)
For each CGU, disclose the reasons for the changing the way the CGU is identified	AASB 136 para 130 (d) (iii)
Disclose whether the recoverable amount of the asset (CGU) is its fair value less costs to sell or its value in use	AASB 136 para 130 (e)
If recoverable amount is fair value less costs to sell, disclose the basis used to determine fair value less costs to sell (such as whether fair value was determined by reference to an active market)	AASB 136 para 130 (f)
If recoverable amount is value in use, disclose the discount rate(s) used in the current estimate and previous estimate (if any) of value in use	AASB 136 para 130 (g)
Disclose the main classes of assets affected by impairment losses in aggregate for which no information is disclosed in accordance with para 130	AASB 136 para 131 (a)
Disclose the main classes of assets affected by reversal of impairment losses in aggregate for which no information is disclosed in accordance with para 130	AASB 136 para 131 (a)
Disclose the main events and circumstances that led to the recognition of these impairment losses in para 131 (a)	AASB 136 para 131 (b)
Disclose the main events and circumstances that led to the recognition of these reversal of impairment losses in para 131 (a)	AASB 136 para 131 (b)
Any portion of the goodwill acquired in a business combination that has not been allocated to a CGU (group of units), the amount of the unallocated goodwill shall be disclosed	AASB 136 para 133

Table 4.2: AASB 6 and AASB 136 Compliance Checklist (continued)

Mandatory Disclosures	Source
Disclose the reasons why that amount (para 133) remains unallocated	AASB 136 para 133
For each CGU (group of units) for which the carrying amount of goodwill or intangible assets with indefinite useful lives allocated to that unit (group of units) is significant in comparison with the entity's total carrying amount of goodwill or intangible assets with indefinite useful lives, shall disclose the carrying amount of goodwill allocated to the unit (group of units)	AASB 136 para 134 (a)
For each CGU (group of units) for which the carrying amount of goodwill or intangible assets with indefinite useful lives allocated to that unit (group of units) is significant in comparison with the entity's total carrying amount of goodwill or intangible assets with indefinite useful lives, shall disclose the carrying amount of intangible assets with indefinite useful lives allocated to the unit (group of units)	AASB 136 para 134 (b)
For each CGU (group of units) for which the carrying amount of goodwill or intangible assets with indefinite useful lives allocated to that unit (group of units) is significant in comparison with the entity's total carrying amount of goodwill or intangible assets with indefinite useful lives, shall disclose the basis on which the unit's (group of units') recoverable amount has been determined (value in use or fair value less costs to sell)	AASB 136 para 134 (c)
If the unit's (group of units') recoverable amount of para 134 (c) is based on value in use; disclose each key assumption on which management has based its cash flow projections for the period covered by the most recent budgets/forecasts	AASB 136 para 134 (d) (i)
If the unit's (group of units') recoverable amount of para 134 (c) is based on value in use; disclose management's approach to determining the value assigned to each key assumption (reflect past experience or why they differ from past experience or external sources)	AASB 136 para 134 (d) (ii)
If the unit's (group of units') recoverable amount of para 134 (c) is based on value in use; disclose the period over which management has projected cash flow based on financial budgets/forecasts, if the period > 5 years, explain why that longer period is justified	AASB 136 para 134 (d) (iii)
If the unit's (group of units') recoverable amount of para 134 (c) is based on value in use; disclose the growth rate used to extrapolate cash flow projection, and justification for using growth rate exceeds the long-term average growth rate for the products, industries, or country in which the entity operates	AASB 136 para 134 (d) (iv)
If the unit's (group of units') recoverable amount of para 134 (c) is based on value in use; disclose the discount rate(s) applied to the cash flow projections	AASB 136 para 134 (d) (v)

Table 4.2: AASB 6 and AASB 136 Compliance Checklist (continued)

Mandatory Disclosures	Source
If the unit's (group of units') recoverable amount of para 134 (c) is based on fair value less costs to sell; if the methodology used is based on an observable market price, disclose a description of each key assumption on the determination fair value less costs to sell is formed	AASB 136 para 134 (e) (i)
If the unit's (group of units') recoverable amount of para 134 (c) is based on fair value less costs to sell; if the methodology used is based on an observable market price, disclose a description of management's approach in determining the value assigned to each key assumption, whether based on past experience, if not, explain why they differ from past experience or external sources of information	AASB 136 para 134 (e) (ii)
If a change in a key assumption results in CGU carrying amount to exceed its recoverable amount; disclose the amount by which the CGU recoverable amount exceeds its carrying amount	AASB 136 para 134 (f) (i)
If a change in a key assumption results in CGU carrying amount to exceed its recoverable amount; disclose the value assigned to the key assumption	AASB 136 para 134 (f) (ii)
If a change in a key assumption results in CGU carrying amount to exceed its recoverable amount; disclose the amount by which the value assigned to the key assumption must change, in order for the CGU recoverable amount to be equal to its carrying amount	AASB 136 para 134 (f) (iii)
Disclose the fact if the some or all carrying amount of goodwill or intangible assets with indefinite useful lives is allocated across multiple CGU is not significant in comparison with the entity's total carrying amount	AASB 136 para 135
Disclose the aggregate carrying amount of goodwill or intangible assets with indefinite useful lives allocated to the CGU	AASB 136 para 135
Disclose the fact if the recoverable amounts of any of those CGUs are based on the same key assumptions and the aggregate carrying amount of goodwill or intangible assets with indefinite useful lives allocated to them is significant in comparison with the entity's total carrying amount of good will or intangible assets with indefinite useful lives, **together with the following:**	AASB 136 para 135
Disclose the aggregate carrying amount of goodwill allocated to those CGU (or group of CGUs)	AASB 136 para 135 (a)
Disclose the aggregate carrying amount of intangible assets with indefinite useful lives allocated to those CGU (CGUs)	AASB 136 para 135 (b)

Table 4.2: AASB 6 and AASB 136 Compliance Checklist (continued)

Disclose a description of the key assumption(s)	AASB 136 para 135 (c)
Disclose a description of management's approach to determining value assigned to the key assumption, whether those values reflect past experience or, if appropriate, are consistent with external sources of information, and if not, how and why they differ from past experience or external sources of information	AASB 136 para 135 (d)
If a reasonable possible change in the key assumption would cause the aggregate of the CGU (a group of CGUs) carrying amount to exceed the aggregate of their recoverable amount, disclose the following: • the amount by which the aggregate of the CGU (a group of CGUs) recoverable amounts exceeds the aggregate of their carrying amounts • the value assigned to the key assumption • the amount by which the value assigned to the key assumption must change, after incorporating any consequential effects of the change on the other variables used to measure recoverable amount in order for the aggregate of the CGU recoverable amounts to be equal to the aggregate of their carrying amount	AASB 136 para 135 (e) (i) AASB 136 para 135 (e) (ii) AASB 136 para 135 (e) (iii)

In this study, each required disclosure of AASBs 6 and 136 is equally weighted, for the following reasons:

- This study examines the extent of compliance with mandated disclosures. As the AASB 101 *Presentation of Financial Statements*, paragraph 14, states "an entity whose financial statements and notes comply with *IFRSs* shall make an explicit and unreserved statement of such compliance in the notes. The financial statements and notes shall not be described as complying with IFRSs unless they comply with *all* the requirements of IFRSs". With this view in mind, it is implicitly assumed by the AASB that each disclosure item is of equal valuable.

- Equal weighting circumvents the use of subjective judgement in appraising the importance of different disclosure items (Wallace and Naser, 1995; Owusu-Ansah, 2000).

- There is no general consensus on the relative importance of each disclosure item amid different user groups (Singhvi and Desai, 1971; Dhaliwal, 1980; Owusu-Ansah, 1998).

- Dhaliwal (1980) and Owusu-Ansah (1998) argued that "the relative importance of disclosure items is dynamic and not static as they depend on prevailing economic conditions" (as quoted in Owusu-Ansah, 2000, p. 294).

- Since this study is not tailored for, and does not focus on, a particular user group, but rather for and on all users of financial reports, an unweighted scheme is adopted to enable a neutral assessment of the disclosure level devoid of perceptual influences of any particular user group (Wallace and Naser, 1995; Camfferman and Cooke, 2002).

- Past research shows that equal weighting methods tend to produce analogous results as of different weighting methods, for example Choi (1973), Robins and Austin (1986), Chow

and Wong-Boren (1987), Zarzeski (1996) and Prencipe (2004).

The second methodological issue in constructing a disclosure index is to determine what scale to measure each item. This is, should the scale be dichotomous (i.e., one if present and zero if not) or broader (e.g., zero to five, with five being complete disclosure, three for partial disclosure and zero for no disclosure)? The approach chosen in this thesis for scoring is dichotomous, in which a disclosure item on the checklist is assigned a value of one if disclosed. On the other hand if a checklist item that is deemed to be applicable, but is not disclosed and no information pertaining to non-disclosure are adequately provided, then a value of zero is assigned. The use of a dichotomous scoring scale has been widely adopted by other studies, such as Cooke (1989b; 1991; 1992; 1998), Ahmed and Nicholls (1994), Inchausti (1997), Tower et al., (1999), Camfferman and Cooke (2002), Ali et al., (2004), Owusu-Ansah and Yeoh (2005).

The third issue regarding scoring is to determine if an undisclosed information item should be judged as non-applicable or non-compliance. There is a possibility that a firm might be penalised as non-compliance (score of zero) when a mandated disclosure item is *in fact* not applicable. Whilst the scoring approach introduces a judgemental element, steps are taken to mitigate the problem/uncertainty by reading the entire annual report thoroughly, to comprehend the nature and complexity of each firm's operation prior to determining undisclosed information item as non-applicable or non-compliance. This approach has been widely applied by prior studies (Cooke, 1989b; Ahmed and Nicholls, 1994; Glaum and Street, 2003; Ali et al., 2004; Owusu-Ansah and Yeoh, 2005). Ahmed and Nicholls (1994) argue that such a

procedure will greatly reduce the risk of penalising a firm for not disclosing an information item which is not applicable.

In summary, the DCI for each company is calculated as a ratio of deemed compliance over total applicable mandated disclosure items as defined in the following formula:

$$DCI = \frac{\sum_{i=1}^{mj} d_{ij}}{\sum_{=1}^{nj} d_{ij}}$$

where d_{ij} is mandatory information item i applicable to company j coded as 1 if disclosed or 0 if not; m_j is the number of mandatory disclosure items applicable to company j and are actually disclosed in its annual report; and n_{jt} is the total number of mandatory disclosure items that are applicable to, and are expected to be disclosed by company j in its annual report. This measurement applies a stricter interpretation, whereby, a company's non-disclosure violates an AASB rule and is treated as non-compliance.

4.4   Independent Variables

The key predictor variables that are of interest to this study are auditor independence and audit specialisation. Chapter 3 presents the main key variables definition, arguments that leading to development of the two main hypotheses. The following sub-sections (i.e., 4.4.1 and 4.4.2) discuss measurements that have been widely employed to proxy for auditor independence and audit specialisation respectively, and present measurements that are used for this study.

4.4.1 Auditor Independence

Previous studies acknowledge that it is the strength of the economic bond between the audit firm and a client that may impair auditor independence (DeAngelo, 1981a; Beck et al., 1988; Magee and Tseng, 1990; Salehi, 2009). However, there is lack of agreement in measuring the economic bond.

The U.S. Securities and Exchange Commission (SEC) asserts that an accounting firm that provides both audit and non-audit services to a client may increase the economic bond. This may impair investor confidence in auditor independence resulting in declining confidence in public capital markets (Kinney, Palmrose and Scholz, 2004). For example, in a speech at the New York University for Law and Business, the then-SEC Chairman Levitt, stated that, "the audit function is simply being used as a springboard to more lucrative consulting services" (Levitt, 2000 cited in Hay, Knechel, and Li (2006)). Regulators also express concern that some audit fees are too low because auditors may lowball audit fees to secure lucrative NAS such as consulting contracts (SEC, 2001). The provision of NAS[39] by incumbent auditors has long been considered by regulators in Australia and overseas as a threat to auditor independence (Craswell, 1999).

Table 4.3 *Measures of Auditor Independence* shows that almost all past research has employed *Ratio of Non-Audit Fees to Total Fees (Non-Audit + Audit Fees)* to proxy for auditor independence. This is particularly true of research in Australia. This measurement of auditor independence is also supported by the SEC, where in its

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[39] In line with Beattie and Fearnley (2002), this research defines non-audit services as services offered by audit firms to both public and private firms which may include, among others: systems and information technology (IT); training; services for SME such as payroll; risk management advice; taxation, including tax compliance and tax planning and advice; corporate recovery and insolvency; legal; forensic and litigation support; mergers and acquisitions; transaction support and follow up including due diligence and initial public offerings (IPO); recruitment and human resources; and portfolio monitoring.

final rule on auditor independence (SEC, 2000), maintains that "non-audit services create economic incentives that may inappropriately influence the audit" and when non-audit fees "become large relative to audit fees, auditor independence may be at risk".

This study employs the *Ratio of Non-Audit Fees to Total Fees (Non-Audit + Audit)*, henceforth *NonAudit*, as the main proxy for auditor independence. This is consistent with both SEC's stand that non-audit fees is of use to investors in evaluating auditor independence (SEC 2000, Section III.c.5), and with most previous research (e.g., Wines, 1994; Craswell, 1999; Gore et al., 2001, Sharma and Sidhu, 2001; Frankel et al., 2002; Reynolds et al., 2004, among others). The higher the ratio the more problematic auditor independence is considered.

Asbaugh et al., (2003, p.614) contend the non-audit ratio only "capture[s] the relative monetary value of the audit versus non-audit services provided by the audit firm to a client". They (Asbaugh et al., 2003, p. 614) further state that the non-audit ratio measure "does not necessarily capture the economic importance of the client to the audit firm when the total client fees are immaterial to the audit firm". In response to the concern raised by Asbaugh et al., (2003), recent research has introduced other measurements designed to capture the client financial importance to the auditor. For example, DeFond et al., (2002), Asbaugh et al., (2003) and Brandon et al., (2004) use the natural log of audit fees, non-audit fees, and total fees. Meanwhile, Frankel et al., (2002) and Reynolds et al., (2004) utilise the percentile rank by Auditor of a Client's Audit Fees, Non-Audit Fees, and Total Fees, to capture the explicit economic bond between the audit firm and its client.

Table 4.3: Measures of Auditor Independence

Study	Country	Measures of Auditor Independence
Wines (1994)	Australia	• Ratio of Non-Audit Fees to Total Fees
Firth (1997a)	U.K.	• Non-Audit Fees (in amount)
Craswell (1999)	Australia	• Ratio of Non-Audit Fees to Total Fees
Gore, Pope and Singh (2001)	U.K. & U.S.	• Ratio of Non-Audit Fees to Total Fees
Sharma and Sidhu (2001)	Australia	• Ratio of Non-Audit Fees to Total Fees
Antle, Narayanamoorthy and Zhou (2002)	U.K. & U.S.	• Natural Log of Non-Audit Fees • Natural Log of Audit Fees
Barkess, Simnett and Urquhart (2002)	Australia	• Ratio of a Client's Total Fees to the Audit Firm's Total Revenue
DeFond, Raghunandan and Subramanyam (2002)	U.S.	• Ratio of Non-Audit Fees to Total Fees • Natural Log of Audit Fees • Natural Log of Non-Audit Fees • Natural Log of Total Fees
Frankel, Johnson and Nelson (2002)	U.S.	• Ratio of Non-Audit Fees to Total Fees • Percentile Rank by Auditor of a Client's Non-Audit and Audit Fees • Percentile Rank by Auditor of a Client's total Fees
Asbaugh, LaFond and Mayhew (2003)	U.S.	• Ratio of Non-Audit Fees to Total Fees • Natural Log of Audit Fees • Natural Log of Non-Audit Fees • Natural Log of Total Fees
Chung and Kallapur (2003)	U.S.	• Ratio of a client's Total Fees to Audit Firm's Total Revenue • Ratio of a Client's Non-Audit Fees to Audit Firm's Total Revenue
Geiger and Rama (2003)	U.S.	• Natural Log of Audit Fees • Natural Log of Total Fees
Ragnunandan, Read and Whisenant (2003a)	U.S.	• Ratio of Non-Audit Fees to Total Fees • Natural Log of Total Fees
Brandon, Crabtree and Maher (2004)	U.S.	• Ratio of Non-Audit Fees to Total Fees • Natural Log of Audit Fees • Natural Log of Non-Audit Fees • Natural Log of Total Fees
Reynolds, Deis and Francis (2004)	U.S.	• Ratio of Non-Audit Fees to Total Fees • Natural Log of Total Fees • Percentile Rank by Auditor of a Client's Audit Fees • Percentile Rank by Auditor of a Client's Non-Audit Fees • Percentile Rank by Auditor of a Client's Total Fees
Ruddock, Taylor and Taylor (2005)	Australia	• Ratio of Non-Audit Fees to Total Fees

Another stream of research has looked to better capture the client's importance to the audit firm by examining the fee dependence at both the national audit firm level (*Firm-wide*) and the local office level. The *Firm-wide* perspective "considers an accounting firm's practice in aggregate, typically at the country-level of analysis; the firm is the focal point and no differentiation is presumed to exist across the individual practice offices of the firm" (Ferguson et al., 2003, p. 430). In contrast the office-level perspective "views each individual practice office in the then the BIG 5 network as a unique and relevant unit of analysis in its own right because audit contracting is conducted through local offices, audit engagements are administered by an audit team typically located in an office in the same city as the client's headquarters, and audit reports are issued on office-specific letterhead of BIG 5 engagement office administering the audit" (Ferguson et al., 2003, p. 430).

For robustness, proxies that have been widely introduced to capture client importance for auditor independence, such as using the total audit fees and examining the fees at both local and national level, will be used in sensitivity tests reported in Chapter 6 *Robustness Tests*.

4.4.2   Audit Specialisation

Audit specialisation[40] has generated significant interest among auditing researchers. In view of the fact that an auditor's specialist status is not directly observable, prior studies have used different proxies to capture such specialisation. A review of past studies presented in Table 4.4 indicates a lack of consensus on the most appropriate measurement of auditor specialisation.

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[40] This study uses the terms auditor industry specialisation, audit specialist, auditor industry expertise, industry expertise, audit competency and audit specialisation interchangeably.

The summary in Table 4.4 indicates different measures have been employed to capture audit specialisation across different time frames and countries. Whilst there is no general consensus, Table 4.4 reveals that there are two measures, auditor's industry market share (Market Share) and auditor's industry portfolio share (Portfolio Share), that have emerged to be the main proxies used to measure for industry expertise. Of the two the former approach dominates.

The industry market share approach regards an accounting firm as an audit expert within an industry when the firm "has differentiated itself from its competitors in terms of market share within a particular industry" (Neal and Riley, 2004, p.170). Neal and Riley (2004) claim that this within-industry (Market Share) approach assumes that an audit specialisation can be inferred from observing the relative market share of an audit firm servicing a particular industry. The firm with the largest market share is deemed to have developed the largest knowledge base in that industry and, therefore, reflecting "significant investments by audit firms in developing industry-specific audit technologies with the expected benefits being increased economies of scale and improved audit quality" (Neal and Riley, 2004, p.170). Consistent with Neal and Riley (2004), Balsam et al., (2003) maintain that audit specialisation is established through repetition in similar settings, and hence a large volume of audit within a particular industry deduces expertise.

Table 4.4: Measures of Auditor Specialisation

Study	Country	Measures	Cut-off	Base and Condition
Zeff and Fossum (1967)	U.S.	Industry Market Share	Top 1	• Number of Clients • Client Revenues • Client Assets • Client Income Difference between Top 1 & Top 2 must be at least of 10%
Palmrose (1986)	U.S.	Industry Market Share	Top 3	• Client Sales
Craswell and Taylor (1991)	Australia	Industry Market Share	10%	• Number of Clients • Audit Fees • Total Fees (Audit + Others) At least 30 Clients within an industry
Craswell, Francis and Taylor (1995)	Australia	Industry Market Share	10% 20%	• Either Number of Clients or Audit Fees At least 30 Clients within an industry
Hogan and Jeter (1999)	U.S.	Industry Market Share	Top 2 Top 3	• Client Assets
DeFond, Francis and Wong (2000)	Hong Kong	Industry Market Share	Top 1 Top 3	• Client Assets Top 1 limited to Big-6 only
Krishnan (2001)	U.S.	Industry Market Share	Top 3 10%	• Client Assets • Client Sales • Number of Clients
		Industry Portfolio Share	1/Nind	• Client Assets • Client Sales • Number of Clients
Ferguson and Stokes (2002)	Australia	Industry Market Share		• 10% Base: number of clients • 10% Base: Audit Fees • 10% Base: Both Number of Clients and Audit Fees • 20% Base: Both Number of Client and Audit Fees • 10% Base: Either Number of Client or Audit Fees • 15% Base: Either Number of Clients or Audit Fees • 20% Base: Either Number of Clients or Audit Fees

Table 4.4: Measures of Auditor Specialisation (continued)

Zhou and Elder (2002)	U.S.	Industry Market Share	15%	• Client Sales
Balsam, Krishnan and Yang (2003)	U.S.	Industry Market Share	Top 3 Top 1	• Client Sales • Client Sales (difference btw Top 1 & 2 must be at least of 10%)
		Other	Top 1	• Firm with the greatest number of clients in the industry
		Continuous Market Share	N/A N/A	• Client Sales • Number of Clients
Ferguson, Francis and Stokes (2003)	Australia	Industry Market Share	Top 1	• Audit Fees
			Top1	• Audit Fees, at least 5 observations per industry
Krishnan (2003b)	U.S.	Industry Market Share	15%	• Client Sales
		Industry Market Share	15%	• Client Assets
		Industry Portfolio Share	Top 3	• Client Sales
Mayhew and Wilkins (2003)	U.S.	Industry Market Share	20%	• Number of Clients • Client Assets
Carcello and Nagy (2004)	U.S.	Industry Market Share	Top 1 20% N/A	• Client Sales • Client Assets
		Continuous Market Share		
Casterella, Francis, Lewis and Walker (2004)	U.S.	Industry Market Share	20% 25% 30% 35%	• Client Sales
Dunn and Mayhew (2004)	U.S.	Industry Market Share	20%	• Client Sales
		Continuous Market Share	N/A	• Percentage of sales the client's audit firm audits in the client's industry
Neal and Riley (2004)	U.S.	Industry Market Share	20% 25%	• Client Assets
		Industry Portfolio Share	1/Nind	• Client Assets
		Weighted Market Share	*	• Client Assets * Cut off = Market Share Cut-off x Portfolio Share Cut-off
Francis, Reichelt and Wang (2005)	U.S.	Industry Market Share	Top 1	• Audit Fees • Client Sales

Neal and Rile (2004, p.170) posit that the portfolio share approach regards "the relative distribution of audit services and related fees across the various industries for each audit firm considered individually". Such view assumes that an industry expertise is designated when an audit firm generates the most revenue and presumably has invested significant resources into development of industry expertise. Therefore, under the portfolio approach, an audit firm may be designated as an industry expert even if the audit firm does not lead the market share in proportion to that particular industry.

Table 4.4 shows that almost all prior research on audit specialisation has relied on the market share approach to measure industry expertise. However, an additional complication in identifying industry expertise is the decision to use one of two methods (market share or portfolio share) to determine the measurement base and the cut-off point. These issues are further elaborated below.

Firstly, different bases have been utilised to measure market share. Apart from audit fees the number of clients, client sales and total assets are the most favoured proxies. In the absence of statutory requirement to disclose audit and non-audit fees, past studies have been forced to use surrogates such as client sales to substitute audit fees in order to measure market share. However, Moizer and Turley (1987) argue that using client's sales as a surrogate is likely to generate biased tests, hence generate spurious results. Some researchers (e.g., Craswell, Francis and Taylor, 1995; Krishnan, 2001; Ferguson and Stokes, 2002; Mayhew and Wilkins, 2003) use the number of clients as a proxy to capture industry expertise so as to avoid the bias toward large clients in an industry. Balsam et al., (2003) contend that small audit firms that have a number of small

clients and have developed an industry knowledge base may be captured by the measurement base of number of clients, and not by client sales base measure.

Secondly, once the measurement base is selected and results are generated, a cut-off point at which an auditor is to be designated as a specialist is required. Table 4.4 reveals that the cut-off point that has been widely and differently employed has ranged from Top 10%[41] to 35% and Top 1 to Top 3 audit firms within the industry/portfolio. There is a lack of consensus on the most appropriate cut off point for an industry expert designation.

Consistent with the argument of DeAngelo (1981b) and Dunn and Mayhew (2004) that audit quality correlates with audit firm size, this study assumes that audit firms with large market share, and hence audit fees, have strong incentives to deliver high quality audits. In line with the arguments discussed above and Craswell et al., (1995, p.300), this research maintains that "demand for industry specialisation drives audit firm investments in specialisation and leads to industry-based clienteles (which is the rationale for using market share data to infer specialisation)".

Thus, this study employs Industry Market Share (IMS) as the main measure for audit specialisation as expressed below:

$$IMS = \frac{\sum_{j=1}^{J_{ik}} AFees_{ijk}}{\sum_{i=1}^{I_k} \sum_{j=1}^{J_{ik}} AFees_{ijk}}$$

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[41] It was first introduced by Craswell and Taylor (1991) that auditors are deemed to be an industry specialist if they gain an arbitrary 10% market share within a particular industry.

where, *AFees* is audit fees, and the numerator is the sum of audit fees of all J_{ik} clients of audit firm i in industry k. The denominator is the audit fees of J_{ik} clients in industry k summed over all I_k audit firms in the sample with clients (J_{ik}) in industry k.

Australian statutory law requires companies to disclose audit and non-audit fees. The 10% cut-off rate of market share rule utilised by Craswell and Taylor (1991) is deemed to be arbitrary (Craswell et al., 1995), and this may result in a misclassification of some auditors as specialists (Craswell et al., 1995, p. 318). Thus this study applies a more commonly used definition in previous research (e.g., Mayhew and Willins, 2003; Dunn and Mayhew, 2004; Neal and Riley, 2004) and more restrictive/tighter measurement of audit specialisation by utilising a much larger cut-off point of 20% market shares. For robustness, other measurement (i.e., portfolio share), different measurement base, and other cut-off points on audit specialist classification are reported in Chapter 6 *Robustness Tests*.

4.5   Control Variables

In order to better investigate the affect of auditor independence and audit specialisation on the degree of mandatory disclosure, this study controls for other factors that may impact on the extent of compliance. A number of variables that have been documented by prior research (see Chapter 3), that may have an impact on the level of disclosure, is utilised to 'better explain' the behaviour of both independent and dependent variables. These variables are company size (FIRMSIZE), leverage (LEVERAGE), profitability (PROFIT), auditor status (BIG4), age (AGE), liquidity (LIQUID), board independence (BRDIND), CEO-duality (DUALITY), and ownership concentration (OWNCON).

Table 4.5 summarises the measurement of both independent and control variables used in this study. All these variables have been utilised in numerous past mainstream studies. These variables are applied in the main regression analysis, other models, and sensitivity analysis. Table 4.5 shows the definition of both independent and control variables.

Salomon and Dhaliwal (1980) assert that larger firms have largely relied on external financing from security markets than smaller firms. It has been well established that the cost of capital (cost of equity and cost of debt) is reduced with increased disclosure (Sengupta, 1998). As detailed in Chapter 3 most studies have found a positive association between company size and level of corporate disclosure. A variety of methods (such as market capitalisation, total sales, total assets) have been utilised in measuring size of company. For the purpose of this study, company size is measured by the natural log of book value of total assets. This measure has been utilised by a great deal of prior research on mandatory disclosure (e.g., Ahmed and Nicholls, 1994; Patton and Zelenka, 1997; Wallace and Naser, 1995; Owusu-Ansah and Yeoh, 2005).

Table 4.5: Definitions of Variables Used[42]

Variable	Denoted by	Description	Predicted sign
Independent Variables:			
Auditor Independence	NonAudit	Ratio of non-audit fees to total fees (non-audit + audit fees)	+
Audit Specialisation	IMS	Percentage of audit fees earned by an accounting firm in a particular industry relative to total audit fees earned by all accounting firms in that particular industry	+
Control Variables:			
Firm Attributes:			
Company Size	FirmSize	Natural log of book value of total assets	+
Leverage	Leverage	Ratio of book value of long term debt to book value of equity	+/-
Profitability	Profit	Ratio of earnings before tax to book value of equity	+
Type of auditor	Big4	Dummy variable, coded 1 if a firm is audited by a local audit firm with an international affiliation (Big4) and 0 otherwise	+
Age	Age	Number of years passed since its listing	+/-
Liquidity	Liquid	Ratio of current assets to current liabilities	+/-
Corporate Governance:			
Board Independence	BrdInd	Ratio of independent/outside directors to board size	+
CEO Duality	Duality	Dummy variable, coded 1 if board of directors is chaired by the firm CEO and 0 otherwise	-
Ownership Concentration	OwnCon	Proportion of shares owned by top 20 shareholders	+/-

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[42] The list of control variables presented in Table 4.5 does not represent and exhaustive list of factors that may influence the level of compliance. As with any positivist empirical study, omitted variables from the multivariate analysis may well explain variations in the dependent variable. Pragmatically, however, it is near on impossible to include every conceivable factor. The control variables noted in Table 4.5, are included as these are perceived, based on an extensive review of the literature, to have the strongest likelihood of presenting cross-sectional differences that could influence the association between the dependent and independent variables.

Ali et al., (2004) argue external finance (i.e., debt-market) increases a firm's financial risk and agency costs between shareholders and creditors. Dumontier and Raffournier (1998) claim that such external financing induces increased corporate disclosure by way of complying with mandatory disclosure, to improve the monitoring role of financial statements, which in turn, reduces agency costs and information asymmetry. Past studies measure such financial risks in terms of leverage. Yet, these past empirical findings on association between leverage and level of compliance are mixed. Consistent with prior studies (Wallace, Naser and Mora, 1994; Wallace and Naser, 1995; Hossain, Perera and Rahman, 1995; Ferguson, Lam and Lee; 2002), leverage is measured by ratio of book value of long term debt to book value of equity.

Utilising political process theory Inchausti (1997) argues that very profitable firms tend to disclose more information to justify the level of profits. Applying agency theory Wallace and Naser (1995) contend that management of very profitable firms seek to use information for manager advantage. Hence, managers of very profitable companies tend to disclose greater information in order to support the continuance of the manager's position and thus increase the compensation. Chapter 3 shows that prior research predominantly documents a positive relation between profitability and level of disclosure. Return on capital (earnings before tax / book value of equity) is employed in this study to measure *profitability*. This proxy has also been utilised in previous studies (Wallace and Naser, 1995; Makhija and Patton, 2004; Owusu-Ansah and Yeoh, 2005).

The size of the auditor firm has been included in many disclosure studies. Size is often used as a proxy for brand name. Building on

DeAngelo's (1981b) audit quality theory framework, past research such as Owusu-Ansah (1998) and Ali et al., (2004), argue large audit firms (normally proxies by Big4/5/6/8) are less likely to depend on a particular client. Larger audit firms, therefore have greater incentive to maintain independence from clients. However, past empirical findings reveal inconsistent results. This study contends that the mixed results may be due to using a simple/basic measure to proxy for audit quality as discussed in Section 4.4. In line with past research and in order to shed light on the relationship between the size of the audit firm and the level of disclosure, a dummy variable is utilised and coded 1 if a firm is audited by a local audit firm with an international affiliation (Big4) and zero otherwise.

Owusu-Ansah (1998) argues that the extent of compliance with mandatory disclosure may be influenced by a company's age (stage of development and growth). That is older (well-established) firms are more likely to disclosure a higher degree of information than that of younger firms. Owusu-Ansah (1998) justifies this proposition saying younger firms might be reluctant to disclose any information that may give rise to competitive disadvantage. Also, Owusu-Ansah (1998) argues it is considered more costly for younger firms to gather, process, and disseminate mandated information than older firms. The findings of past research (e.g., Owusu-Ansah, 1998; Glaum and Street, 2003; Owusu-Ansah and Yeoh, 2005) are not consistent. For the purpose of this study, a firm's age is measured by the number of years passed since its listing. This measure has been employed in prior research (Owusu-Ansah, 1998; Glaum and Street, 2003; Owusu-Ansah, 2005).

Wallace and Naser (1995) assert that investors, lenders and regulatory authorities are concerned with the going concern of a

firm. This implies that a firm that is able to meet short-term financial obligations without resorting to liquidate long-term assets may have the motivation to provide such information through disclosures (e.g., Belkaoui and Kahl, 1978). These empirical results documented in prior studies related to this issue are mixed. In line with past studies (Belkaoui and Kahl, 1978; Wallace and Naser, 1995; Naser et al., 2002) liquidity is measured by current ratio (proportion of current assets to current liabilities).

One of the key elements of corporate governance is the monitoring of management by the board of directors. Fama (1980) and Fama and Jensen (1983a) assert that the board of directors monitoring role reduces agency conflicts. John and Senbet (1998, p. 380) claim that "the degree of board independence is closely related to its composition". Beasley and Petroni (2001) conclude that the quality of monitoring improves as the percentage of independent/outside directors on the board is increased. This view is subsequently supported by Black (2001) who shows that independent directors are considered as one of the 'useful institution' that can assist stockholders in identifying disclosure problems. Empirical results of past research reveal an association between firms with a higher proportion of independent/outside directors and a greater extent of disclosure (Cheng and Courtenay, 2005; Cheung, Connelly, Limpaphayom, and Zhou, 2006). For this study board independence is measured by percentage of independent/outside directors to board size.

A board of directors is led by a chairperson. Petra (2005) claims that many firms have a CEO-duality in the board structure (i.e., the same individual jointly occupies the role of CEO and chairperson). It is alleged the CEO-duality designation puts the CEO in a very influential position in setting the board agenda, conduct of board

meeting, control of information flow, control of the process of hiring, retrenchment, and top management compensation (including the CEO) (Abdulla, 2004; Petra, 2005). Cheng and Courtenay (2005) argue that a board of directors chaired by the CEO generally indicates weaker monitoring capabilities. Also the board intensity to monitor the top management is greatly reduced as a result of lack of independence, and a conflict of interest (Millstein, 1992). In the context of disclosure, Forker (1992) and Gul and Leung (2004) document evidence CEO-duality is negatively related to the level of disclosure. For this study CEO-duality is coded 1 when the board of directors is chaired by the firm CEO and 0 otherwise.

Agency theory suggests that in a modern corporation the separation of ownership and management gives rise to agency conflicts (Jensen and Meckling, 1976). The potential of conflicts between the agent and principal is largely increased in a diffused ownership structure (Fama and Jensen, 1983a). Ownership concentration is proposed as an important variable in explaining variability of disclosure (Haniffa and Cooke, 2002). Zeckhauser and Pound (1990) argue that a diffused ownership structure insinuates a lack of monitoring capacity due to the low stake of individual shareholders. Empirical results of past studies concerning the association between ownership concentration and disclosure are mixed. Craswell and Taylor (1992), for example, document no association between ownership structure and voluntary corporate disclosure. In contrast, McKinnon and Dalimunthe (1993) and Haniffa and Cooke (2002) reveal a significant positive relationship. Interestingly, Hossain, Tan, and Adams (1994) note a negative association. Consistent with past studies (Craswell and Taylor, 1992; McKinnon and Dalimunthe, 1993; Baroko, Hancock, and

Izan, 2006) ownership concentration is measured by the proportion of shares owned by the top 20 shareholders.

4.6 Statistical Methods

In order to determine the influences of auditor independence and audit specialisation on mandatory disclosure compliance, correlation and multivariate ordinary least square (OLS) regression techniques are employed to examine the data collected.

In the case of the regression analysis, as the dependent variable (DCI) is expressed in a ratio with values confined between zero and one, standard OLS regression can be unreliable. Consequently, the underlying assumption of the standard OLS is an unconstrained (unbounded) dependent variable (Ahmed and Nicholls, 1994). Given a bounded dependent variable, the OLS regression does not ensure that the estimates of the dependent variable will lie between zero and one, and may give predictions of the DCI outside the valid range (zero to one) (Hanushek and Jackson, 1997; Greene, 2003).

In order to include the zero-one bound into the regression, a dependent variable transformation is necessary. This is achieved by taking the logarithm of the odds ratio (Hanushek and Jackson, 1997; Greene, 2003). The transformation creates a new endogenous variable. Therefore, if the extent of compliance with mandatory disclosure of a firm is captured by DCI, given by P, the logarithm of the odds ratio, Y, is given by:

$$Y = \log\left[\frac{P}{1 - P}\right]$$

Where Y is the transformed of DCI; and P is the computed disclosure index for each company (DCI). This transformation method[43] has also been utilised by past studies such as Ahmed and Nicholls (1994, Inchausti (1997), and Makhija and Patton (2004). The new transformed endogenous DCI variable (DCI) is then regressed on the discussed independent and control variables based on the following formula:

$$TDCI = \beta_0 + \beta_1 \ NonAudit + \beta_2 \ IMS + \beta_3 \ FirmSize + \beta_4 \ Leverage + \beta_5 \ Profit + \beta_6 \ Big4 + \beta_7 \ Age + \beta_8 \ Liquid + \beta_9 \ Board\text{-}Ind + \beta_{10} \ Duality + \beta_{11} \ Own\text{-}Con + \varepsilon$$

Where:

NonAudit	= ratio of non-audit fees to total fees
IMS	= proportion of audit fees earned by an accounting firm in an industry to total audit fees earned by all accounting firms in that particular industry
Leverage	= ratio of book value of long term debt to book value of equity
Profit	= ratio of earnings before tax to book value of equity
Big4	= a dummy variable that takes the value of 1 for firm audited by a local audit firm with an international affiliation (Big4) and 0 otherwise
Age	= number of years passed since firm listing
Liquid	= ratio of current assets to current liabilities
BrdInd	= ratio of independent/outside directors to board size
Duality	= a dummy variable that takes the value 1 for board of directors that is chaired by the firm CEO and 0 otherwise
OwnCon	= proportion of shares owned by top 20 shareholders.

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[43] Past compliance studies research such as Tower et al., (1999), Street and Bryant (2000), Street and Gray (2001), and Glaum and Street (2003) have used the raw compliance index as a dependent variable. For robustness, the raw DCI (prior transformation DCI) will be used for sensitivity analysis purposes.

4.7   Chapter Summary

Chapter 4 describes the sample selection, data collection process, statistical method, and measurements for the dependent, independent, and control variables. The entire population of Australian mineral resource sector firms listed on the ASX as at 30 June 2006 consists of 320 firms. Of these, the final sample consists of 208 companies after filtering out those with incomplete data, delisted/suspended, or not applicable to both AASB 6 and AASB 136 disclosures requirements.

The dependent variable is captured by the constructed Disclosure Compliance Index (DCI) with the mandatory disclosure requirements of AASBs 6 and 136. The DCI checklist comprises a comprehensive list of 62 mandatory disclosure items. The two independent variables, auditor independence and audit specialisation, are measured by NonAudit Ratio and Industry Market Share respectively. Nine control variables (company size, leverage, profitability, type of auditor, age, liquidity, board independence, CEO duality, and ownership concentration) are included in the statistical analysis.

In Chapter 5 the descriptive statistics for all variables are presented and the two key hypotheses are tested. Results of univariate and multivariate analysis are performed and discussed.

Chapter 5 RESULTS

5.1 Chapter Overview

Chapter 4 describes the procedures of data collection, sample selection, and data sources. In addition to discussing the analysis of the measures of dependent, independent and control variables, Chapter 4 also presents the research design, and defines the multivariate analysis model.

Chapter 5 focuses on the primary results of the tests of the two key hypotheses developed in Chapter 3. In Section 5.2 is a discussion of the descriptive statistics of the dependent (Disclosure Compliance Index), independent (auditor independence and audit specialisation) and control variables (company size, leverage, profitability, type of auditor, age, liquidity, board independence, CEO duality, and ownership concentration).

The results related to independent t-Tests of the independent and selected control variables are explored in Section 5.3. Next, bivariate relationships among independent variables are reported in Section 5.4 with multivariate tests for the pooled sample shown in Section 5.5. Tests reported in Section 5.5 utilise on Ordinary Least Squares (OLS) with White's adjustment to control the heteroscedastic residual. Finally, the chapter summary is reported in Section 5.6.

5.2 Descriptive Statistics

This section is structured as follows. Section 5.2.1 reports the descriptive statistics for the dependent variable DCI. It follows with analysis of the independent variables. Section 5.2.2 focuses on audit fees, non-audit fees, and total fees received by accounting

firms and the ratio of non-audit to total audit fees as the proxy for auditor independence. The focal point of Section 5.2.3 is the analysis of the percentage of audit fees earned by an accounting firm in mineral resources sector, relative to the total audit fees earned by all accounting firms in that particular sector. This measure represents the audit specialisation construct. Finally, descriptive statistics for all control variables are presented in Section 5.2.4.

5.2.1   Dependent Variable: Disclosure Compliance Index

The focus of this study is the level of mandatory disclosure compliance with AASB 6 *Exploration for and Evaluation of Mineral Resources* and AASB 136 *Impairment of Assets* of Australian mineral resources firms. To test the research hypotheses, data was collected from various secondary sources. Table 5.1 shows the descriptive statistics of the dependent variable (DCI) segregated into three sections; (i) DCI AASB 6 (DCI-6); (ii) DCI AASB 136 (DCI-136); and (iii) the aggregate DCI AASB 6 and AASB 136 (DCI).

The DCI AASB 6 (DCI-6) mean is 85% with a wide range of 0% to 100% of compliance. In comparison, for DCI AASB 136 (DCI-136) and DCI AASB 6 and 136 (DCI-6-136) the mean are 70% with a range between 11% and 100% and 76% with a range between 31% and 95% respectively. As shown in Table 5.1 the mean of DCI-6 is 15% higher than that of DCI-136. This might be due to AASB 6 having a lower number of items[44]. Moreover, the items may be easier to comply with relative to AASB 136 requirements as elaborated in Chapter 2. DCI-6 consists of only nine items in comparison to fifty three items for DCI-136.

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[44] See Table 4.2 for a complete list of compliance items of DCI-6 and DCI-136.

Table 5.1: Descriptive Statistics Disclosure Compliance Index

	Mean	Std.Dev.	Med	Min	Max
DCI (AASB 6) *N* = 289	85%	8%	86%	0%	100%
DCI (AASB 136) *N* = 224	70%	15%	70%	11%	100%
DCI (AASB 6 and 136) *N* = 208	76%	9%	77%	31%	95%

DCI (Disclosure Compliance Index) is the overall compliance index excluding not-applicable (N/A). The index ranges between 0 (total non-compliance) and 1 (total compliance). N = number of firms for each dependent variable variant.

This difference is mainly due to the fact that AASB 6 mainly requires disclosure of certain accounting policies. In contrast, AASB 136 requires disclosures that are arguably much more complicated in nature, such as the broader scope than previously defined of assets that are subjected to the impairment test (Ernst and Young, 2002; KMPG, 2003). For instance, deferred exploration and evaluation costs for areas in the development or production phases for mineral resource firms are now subject to the impairment test as defined in AASB 136. Furthermore, in many instances, there are some mandatory disclosures of AASB 136 that involve disclosing potentially sensitive information. Such disclosures may induce greater proprietary costs and, therefore, is deemed to be costly if it gives competitors the opportunity to gain an advantage (Hakansson, 1977; Wang, 2007). One of the mandatory disclosures of AASB 136 that is sensitive in nature is the requirement of the firm to reveal how management determines the values assigned to each key assumption for deriving fair value, and the costs in selling mineral assets. As such disclosures might create a competitive disadvantage for the discloser; this may lead to lower compliance with mandated disclosures.

The overall DCI AASB 6 and 136 (DCI-6-136) non-compliance rate among the full sample of 208 firms is 24%. As shown in Table 5.1, no company totally fails nor fully complies with the two standards. At the heart of this study, the compliance level of DCI is 76% (with a range of 31% to 95% of compliance). The average DCI-6-136 value (based on Australian mineral resources sector) is lower than voluntary disclosure studies by Tower[45] et al., (1999). They (Tower et al., 1999) document the compliance level of a broad sample of Australia focus to be 94%. Also, DCI-6-136 is lower than Germany (87%) (Glaum and Street, 2003). The compliance level in this study is also lower than some developing countries such as 'Thailand' (93%); 'Singapore' (90%); 'Malaysia' (90%); 'Hong Kong' (89%); 'Philippines' (88%). The DCI-6-136 average in this study is, however, slightly higher than that reported for a sample of Hong Kong firms (73%) (Wallace and Naser, 1995).

An important caveat to note regarding any direct comparisons of compliance levels from prior studies to this study is that differences in research methodology will lead to misconstrued conclusions. Methodology differences include differences on the number of standards examined, number of items measured in each standard, time frame of studies, potential country and industry biases, and varying sample sizes. The niche of this research is that it is entirely based on Australian listed mineral resource firms and focuses on two accounting standards exclusively pertaining to/and having a big impact on the mineral resource firms.

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[45] It is noted that Tower et al., (1999) examine different standards, with a broader scope of industries, and in much earlier time frame.

Table 5.2[46] provides a summary (by 10 percentile intervals) of the frequency distribution of DCI scores by each and combined standard. As indicated in the Table 5.2 Panel A, almost all sample firms (286 out of 289) have a compliance level above 50% in the case of DCI-6. This implies that most firms comply with the majority items of AASB 6. Of those, 96% (277 out of 289) have a compliance level of at least 80%, with 16 firms fully complying with the mandatory disclosures of AASB 6. Only six firms (2%) have a compliance level below 70%.

A similar analysis is given for DCI-136. The result documented in Table 5.2 Panel B reveals that 93% (209 of 224) of sample firms have a compliance level above 50%. It is observed that there are 21 firms (9%) that have a compliance level above 90%; of these six firms (3%) have complete compliance with AASB 136. On a more negative note, 15 firms (7%) score a level of compliance of 50% or below.

With respect to the aggregate DCI-6-136 (both AASB6 and AASB136), no firm achieves 100% compliance with the mandatory disclosure requirements. However, firms generally comply with most items of the checklist. That is, nearly 85% (176 out of 204) achieve a compliance level of at least 70% with 3% (six firms) above 90%. It is noted that there are only two firms (1%) with DCI-6-136 scores below 50%.

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[46] Table 4.1 summarises the number of companies in the final sample in relation to the population. The entire population of mineral resource firms listed on the ASX totalled 320 public firms as at 30 June 2006. Exclusions included four that were delisted/suspended from/by ASX, two changed financial year end from 30 June to 31 December, and nine firms have incomplete data are excluded.
The final sample consists of (i) 289 firms applicable to compliance with AASB 6 (ii) 224 firms applicable to compliance with AASB 136 (iii) 208 firms applicable to compliance with both AASB 6 and AASB 136.

Table 5.2: Frequency Distribution of DCI by AASB Standard

Level of Compliance (%)	PANEL A: AASB 6		PANEL B: AASB 136		PANEL C: AASB 6 and 136	
	DCI	%	DCI	%	DCI	%
00.00 – 09.99	1	0.35	0	0	0	0
10.00 – 19.99	0	0	4	1.79	0	0
20.00 – 29.99	0	0	1	0.45	0	0
30.00 – 39.99	0	0	4	1.79	1	0.48
40.00 – 49.99	2	0.69	6	2.68	1	0.48
50.00 – 59.99	2	0.69	21	9.38	11	5.29
60.00 – 69.99	1	0.35	63	28.13	19	9.14
70.00 – 79.99	6	2.08	69	30.80	83	39.30
80.00 – 89.99	261	90.31	35	15.63	87	41.83
90.00 – 99.99	0	0	15	6.70	6	2.89
100	16	5.54	6	2.68	0	0
Total	289	100	224	100	208	100

5.2.2   Independent Variable: Auditor Independence

The objective of this study is to investigate whether auditor independence and audit specialisation impact on the level of compliance with AASB 6 and 136 of mineral resources companies listed in Australia. In this sub-section, a review of descriptive statistics of auditor independence and audit specialisation is provided. A set of summary statistics of audit, non-audit, and total fees are presented in Table 5.3 which is further segregated into sub-samples based on Big4 versus Non-Big4 accounting firms.

Table 5.3 indicates that average total fees, audit fees and non-audit fees paid by Australian mineral resources firms during 2006 are AUD $154,980, $115,091 and $74,183 respectively. These averages are less than averages (AUD $260,566, $136,406, $124,161 respectively) reported by Ruddock and Taylor[47] (2005). Similarly, Rusmin[48] (2006) reports based on a sample of 325 Australian firms average of total fees, audit fees and non-audit fees earned by Australian accounting firms are AUD $261,722, $160,896 and $ 100,825 respectively. The differences in those fees may be that Ruddock and Taylor's (2005) study covers eight years of data and Rusmin's (2006) study includes selective firms of all sectors in comparison to this study that covers all firms in one sector and of one year of time frame.

In contrast to studies of firm listed on international capital markets (such as US and UK) audit and non-audit fees averages reported in this study are far lower (frequently between ten to eighteen tiers level).

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[47] Ruddock and Taylor's (2005) studies utilised on Australian data that spans over eight financial years of (1993 to 2000) across 10 GISC sectors.
[48] Rusmin's (2006) studies 405 (out of 1,563) Australian firms listed across sixteen ASX industry sectors for the financial year of 2004.

For example, Ashbaugh et al., (2003)[49] document the average audit and non-audit fees earned by US accounting firms are AUD $2,155,148 and AUD $928,883 respectively. Likewise, Ferguson et al., (2004) report the average for UK firms is AUD $1,189,582 and AUD $1,287,792 for audit and non-audit fees respectively.

Table 5.3 shows this study's spread of the average of the non-audit fees to total fees is 25.83%. This is relatively lower than the reported 48% by Ruddock and Taylor (2005), 37% by Rusmin (2006), 69% by Whisenant et al., (2003b), and 52% by Ferguson et al., (2004). The difference may be due to different sample sizes, different time frame, different numbers of years and different sectors.

Ratio of non-audit fees to total fees as a proxy for auditor independence is tabulated in Table 5.3. PWC has the largest ratio of non-audit to total audit fees (33.15%). In contrast, Deloitte has the lowest ratio (16.24%) among the Big-4 auditing firms. On average, the Big-4 firms have a higher share of non audit fees (thus implying a lack of auditor independence) of 26.69% compared to Non-Big4 auditing firms with an average of 20.49%.

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[49] Ashbaugh et al., (2003) and Ferguson et al., (2004) utilise US and UK data of financial year ends 31 December 2000 and 31 December 1998 respectively. The local currencies (i.e. USD & GBP) have been converted to AUD consistently using RBA exchange rate in accordance to the financial year end.

Table 5.3: Descriptive Statistics: Auditor Independence

Type of Fees		Deloitte	E&Y	KPMG	PWC	All Auditors	Total Big-4	Non-Big4
Audit Fees	Mean	79,710	147,444	504,462	186,567	115,091	259,786	29,932
	Med	80,236	45,500	43,882	62,250	28,055	51,000	20,000
	Min	17,404	15,700	19,000	20,840	5,700	15,700	5,700
	Max	213,000	1,731,036	14,829,813	1,125,635	14,829,813	14,829,813	727,406
	SD	50,464	314,920	2,430,197	323,656	862,276	1,406,943	54,582
	Total Audit Fees	1,434,777	5,897,755	18,665,105	3358,210	35,102,859	29,355,847	5,747,011
	% Total Fees	83.76%	67.10%	76.14%	66.85%	74.26%	73.31%	79.51%
	N	18	40	37	18	305	113	192
Non-Audit Fees	Mean	27,815	115,669	307,896	118,931	74,183	157,131	15,427
	Med	22,630	52,638	36,052	37,925	14,840	42,413	7,331
	Min	900	7,947	3,450	7,100	650	900	650
	Max	69,471	806,111	4,957,621	707,676	4,957,621	4,957,621	107,261
	SD	24,879	183,617	1,126,877	186,332	396,483	608,226	20,053
	Total Non-Audit Fees	278,149	2,891,728	5,850,024	1,665,035	12,165,952	10,684,936	1,481,016
	%Total Fees	16.24%	32.90%	23.86%	33.15%	25.74%	26.69%	20.49%
	N	10	25	19	14	164	68	96
Total Fees	Mean	95,163	219,737	662,571	279,069	154,980	354,343	37,646
	Med	85,130	69,464	60,257	94,898	33,000	76,150	23,533
	Min	17,404	15,700	19,000	27,940	5,700	15,700	5,700
	Max	245,800	2,298,036	19,787,434	1,695,099	19,787,434	19,787,434	727,406
	SD	62,836	454,419	3,239,352	473,043	1,151,411	1,878,540	58,542
	Total Fees	1,712,926	8,789,483	24,515,129	5,023,245	47,268,811	40,040,784	7,228,027
	N	18	40	37	18	305	113	192

Currency is denoted in Australian dollar; reported currencies other than Australian dollar are converted to Australian dollar using RBA (Reserve Bank Australia) exchange rate as at 30-June-2006 coinciding with the period of the study.

It is noted that on average KMPG earned the biggest share, among Big-4[50] audit firms, in respect to audit (AUD $504,462), non-audit (AUD $307,896) and total fees (AUD $662,571) from mineral resource sector firms listed on the Australian capital market. Audit, non-audit and total fees earned by KPMG are approximately four fold greater than the average of the mineral resources sector. Conversely, Deloitte acquired the least fees among the Big-4 firms in terms of audit and non-audit services rendered to the mineral resources sector. On average, Deloitte secured AUD $79,710, AUD $27,815, and AUD $95,163 of audit, non-audit, and total fees respectively.

Overall, total audit fees earned by Big-4 and Non-Big4 in the mineral resources sector are AUD 259,786 (84%) and AUD 29,932 (16%) respectively; total non-audit fees earned are AUD 157,131 (88%) and AUD 15,427 (12%) respectively; and total fees earned are AUD 354,343 (85%) and AUD 37,646 (15%) respectively.

5.2.3   Independent Variable: Audit Specialisation

Table 5.4 reveals the Australian accounting firms' industry market share of mineral resources sector. It shows that audit fees earned by Big-4 firms are unevenly distributed. KPMG has the highest industry market share of 53.17% followed by E&Y and PWC who generate 16.80% and 9.57% respectively.

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[50] Align with market consensus, Big-4 are made up by Deloitte & Touche, E&Y (Ernst & Young), KPMG (KPMG Peat Marwick), PWC (PriceWaterhouse Coopers). Non-Big-4 are the remainder of the accounting firms.

Table 5.4: Descriptive Statistics: Auditor Specialist

Audit Firms	N	Audit Fees	Non-Audit Fees	Total Fees	Audit Industry Market Share
Big-4	113	29,355,847	10,684,936	40,040,783	83.63
Deloitte	18	1,434,777	278,149	1,712,926	4.09%
E&Y	40	5,897,755	2,891,728	8,789,483	16.80%
KPMG	37	18,665,105	5,850,024	24,515,129	53.17%
PWC	18	3,358,210	1,665,035	5,023,245	9.57%
Non-Big-4	192	5,747,011	1,481,016	7,228,027	16.37%
Total	**305**	**35,102,858**	**12,165,952**	**47,268,811**	**100%**

Currency is denoted in Australian dollar; reported currencies other than Australian dollar are converted to Australian dollar using RBA (Reserve Bank Australia) exchange rate as at 30-June-2006 coinciding with the period of the study. Align with market consensus, Big-4 are made up by Deloitte & Touche, E&Y (Ernst & Young), KPMG (KPMG Peat Marwick), PWC (PriceWaterhouse Coopers). Non-Big-4 are the remainder of the accounting firms. Please refer to Appendix F for a list of Non-Big-4 firms.

In contrast to findings reported in this study, Rusmin (2006) finds PWC had the biggest industry market share of Australian mineral resources sector with a market share of 35.91%. Meanwhile KPMG had a market share of 24.36%. The different results may be due to differences in the sample size. The study of Rusmin (2006) only included 27% (85 out of 320 firms) with the mineral resources sector population as at end of 2003, whereas, this thesis utilises all firms of the whole population[51]. Consistent with the findings of Rusmin (2006), this study shows Deloitte had the smallest industry market share among the Big-4 firms 4.09%.

Table 5.4 documents that Big-4 auditing firms have by far the biggest industry market share (in regards to total audit fees earned in mineral resources sector) amounting to 83.63%. In contrast, the

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[51] After excluding four delisted/suspended firms, two firms changed financial year ends from 30 June to 31 December, and nine firms have incomplete data. The final sample consists of 305 firms.

Non-Big4 firms have a far lower share of 16.37%. The findings related to market share is interesting when compared to the number of firms audited. Specifically, Table 5.4 shows that the Big-4 firms audited 37% (113 out of 305) firms in the sector, whereas, the majority 63% (192 out of 305 firms) are audited by the Non-Big-4 firms. This implies that most of the big firms in mineral resources sector engaged the Big-4 audit firm services.

Other Australian studies, such as Ruddock and Taylor (2005) find that in the years from 1993 to 2000 Big-4 firms, on average, audit 61.13% of Australian listed firms. Ferguson and Stokes (2002) report that in the years of 1990 to 1998, about 65% of the sample firms are audited by the Big-4 auditing firms. The Australian mineral resources sector clearly has a lesser percentage in terms of engaging the services of Big-4 audit firms. However, those engaged Big-4 services were among the biggest in the mineral resources sector.

Of 45 auditing firms[52] that provide auditing services to the whole population in mineral resources sector, only one audit firm (i.e., KPMG) satisfies the criteria[53] to be categorised as a specialist auditor in the sector. There are 113 firms who engage audit services from Big-4 audit firm, and of those there are 37 firms (33%) that engage specialist auditor services.

5.2.4 Control Variables

Table 5.5 shows summary statistics of control variables relating to firm attributes (i.e., company size, leverage, profitability, type of

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[52] There are 41 auditing firms under Non-Big4. Of 41 firms, the three auditing firms that secure the highest industry market share are BDO, Grant Thornton, and PKF with the industry market share of merely 3.86%, 2.23%, and 2.10% respectively.
[53] Using industry market share as defined in Chapter 4, with the cut-off rate of 20%.

auditor, age, liquidity) and corporate governance attributes (board independence, CEO duality, ownership concentration).

As shown in Table 5.5, the descriptive statistics for company size (*FirmSize*) varies greatly ranging from a low of AUD $172,000 to a high of AUD $65,311 million. Average company size (measured by total assets) of Australian mineral resource sector firms is AUD $325 million. Table 5.5 documents the company size distribution is positively skewed. In order to alleviate skewness, company size is transformed by applying the natural logarithm of total assets. This technique is in line with past research that adopts a similar approach (e.g., Glaum and Street, 2003).

Table 5.5 reports that *leverage* (measured by ratio of book value of long term debt to book value of equity) ranges widely from 1% to 64% with a mean of 17%. This implies that at one extreme, firms with 1% leverage effectively have no liabilities. On average, firms almost have 17% of debt to equity (in book value).

As presented in Table 5.5, profitability (*Profit*) for the sample ranges from -152% to 22%. Average profitability of Australian mineral resource firms based on this study is -27%. This implies that for the financial year ended at 30 June 2006, Australian mineral resource firms, on average made a financial loss. This is evidenced by approximately 83% (253 out of 305 firms) of the sample firms reporting a loss. The high number of firms reporting a loss might be due to the introduction of AASB 136 *Asset Impairment* that requires entities to perform an impairment test in accordance with AASB 136 on recognised exploration and evaluation assets when facts and circumstances suggest that the carrying amount of an asset may exceed its recoverable amount.

As evidenced in Table 5.5, a small proportion (approximately 37% on 113 out of 305 firms) of Australian mineral resource firms engage audit services from *Big-4* accounting firms. The *Big-4* firms Deloitte, E&Y, KPMG, and PWC audit 18, 40, 37, 18 mineral resources firms respectively. The remaining 63% (192 out of 305 firms) of the sample employed NonBig-4 firms.

Company age (*Age*) is represented by years passed since the firm's listing. Distribution of the variable *Age* ranges from 1.25 to 27.43 years with an average of 10.83 years. On average, Australian mineral resources firms has been listed for at least 10 years as of the financial year ended at 30 June 2006. This implies that the mineral resources sector is a matured market.

Liquidity is measured as the current ratio derived from the proportion of current assets to current liabilities. Firms included in the sample appear to be highly liquid. This is evidenced by average, liquidity being 9.16 with a ranging from 0.49 to 33.29. Overall, Australian mineral resource firms appear to have the capacity to meet short term financial obligations.

Table 5.5: Descriptive Statistics: Control Variables

Control Variables	Mean	25 percentile	Median	75 percentile	Min	Max	Std. Dev.
Firm size (Total Assets $ '000)	325,571	5,684	11,394	33,651	172	65,311,449	3,776,722
FirmSize (logged)	16.50	15.55	16.25	17.33	14.62	19.40	1.33
Leverage	17.30%	3.78%	8.15%	22.36%	1.43%	63.71%	19.15%
Profit	-26.69%	-40.23%	-13.57%	-4.21%	-151.77%	22.49%	40.64%
Big4 (% of sample)	37.00						
Age	10.83	2.65	9.15	18.93	1.25	27.43	8.40
Liquidity	9.16	1.80	5.40	13.63	0.49	33.29	9.29
BrdInd %	61.44	50.00	66.67	75.00	0.00	100	18.12
Duality (% of sample)	18.00						
OwnCon %	57.77	43.71	57.99	69.79	20.72	99.85	17.27

FirmSize is measured by natural log of book value of total assets; Leverage is the proportion of book value of long term debt to book value of equity; Profit (Profitability) is the ratio of earnings before tax to book value of equity; Age is the number of years passed since its listing; Liquid (Liquidity) is the ratio of current assets to current liabilities; BrdIp (Board Independence) is the percentage of independent/outside directors to total directors; OwnCon (Ownership Concentration) is the proportion of shares owned by top 20 shareholders.

Board size is a crucial factor that influences the effectiveness of the decision making body (Yermack, 1996, 1998; Vafeas, 2000). This study documented evidence shows board size varies widely, ranging from 3 to 14. For the majority, however, 98% board sizes range from 3 to 7. The number of independent directors (*BrdInd*) on mineral resource firms range from 0 to 10. The vast majority (97%) have between 1 and 5 independent directors with 1% of firms having no independent directors. Board independence is measured by the percentage of independent directors to the total number of directors on board. From Table 5.5 it is evident that board independence varies across the spectrum (i.e., 0% to 100%). With an average of 61.44% it is clear, however, that most of the sample firms have a significant numbers of independent directors on the board.

A firm is classified as a CEO duality (*Duality*) when its chairman of the board of directors also serves as the firm's CEO. Presently, there is no legislation in place that explicitly forbids CEOs of Australian firms serving concurrently as the chairman of board of directors. As presented in Table 5.5, 18% of the sample firms have voluntarily segregated the two roles. Such segregation is made in a move to project a positive image in improving corporate governance practices.

Table 5.5 documents the ownership concentration (*OwnCon*) of mineral resources firms listed in Australia. The top twenty shareholder concentration ranges from 20.72% to 99.85% shares with an average of 57.77%. Only 2.5% of the sample firms are found to have an ownership concentration lower than 25%. In contrast 25% of the sample firms have 75% or higher ownership concentration.

5.3   Independent *t*-Test

Al-Basteki (2000) points out that the effectiveness of the audit function depends on the competency of the auditor. Healy and Palepu (2001) assert that differences in the auditor's qualifications and professional training have an impact on the credibility of audit reports. These arguments imply that it is more likely for a better trained auditor (i.e., a specialist) to detect and question non-compliance with IASs than that of a non-specialist. This is further supported by Krishnan (2003b) and Abbott and Parker (2000) who claim that as specialised auditors have the expertise, resources and incentives to separate the information component from noise, hence the higher the competency of auditors, the more likely the auditors are to deter and detect irregularities, financial misstatement and questionable accounting practices, whether by error or fraud, than are non-specialist auditors.

Likewise, the size of an auditor firm has been examined in almost all disclosure studies. It has often been used as a proxy for brand name. Building on DeAngelo's (1981b) audit quality theory framework, past research such as Owusu-Ansah (1998) and Ali et al., (2004), argue that large audit firms (normally proxies by Big4/5/6/8) are less likely to depend on a particular client. Therefore, larger audit firms are able to, and have greater incentive to, maintain independence from clients. However, empirical findings are inconsistent[54].

One firm characteristic considered to influence the level of compliance is the size of a firm. Salomon and Dhaliwal (1980) assert that larger firms largely rely on external finance from the securities market relative to smaller firms, and it has been well

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[54] In this study, one further step is taken by extending the brand name of auditing firm (usually measured by Big4) to audit specialisation proxied by industry market share.

established that cost of capital (cost of equity and cost of debt) reduces with increased disclosure (Sengupta, 1998).

Apart from the size of a firm, Inchausti (1997) also argues that profitability of a firm does influence the level of compliance. Inchausti (1997) asserts that very profitable firms tend to disclose more information in order to justify the level of profits. From the agency theory perspective, Wallace and Naser (1995) contend that management of very profitable firms seek to use information for their advantage; hence the managers of very profitable companies tend to disclose greater information in order to support the continuance of their position and thus increase their compensation.

Last but not least, Owusu-Ansah (1998) argues that the extent of compliance with mandatory disclosure may also be influenced by a company's age (stage of development and growth), whereby older (well-established) firms are more likely to disclose a higher degree of information than that of younger firms.

Based on these proposed arguments in this section and utilises on independent *t*-Test, this thesis examines whether the mean difference between groups are significant. These groups are categorised by audit specialisation, audit firm size, client firm size, client firm performance, and client firm establishment, in relation to the level of compliance with AASB 6 and AASB 136. The results are shown in Table 5.6[55].

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[55] For robustness, this thesis also performs the non-parametric Mann-Whitney test and the results are qualitatively similar to those presented in Table 5.6.

Table 5.6: Independent *t*-Tests

	N	Mean DCI	Mean difference	t--Statistic
Audit Specialisation				
Specialist	26	81.78%	6.24%	5.302*
Non-Specialist	182	75.54%		
Audit Firm Size				
Big4	77	79.99%	5.83%	4.526*
Non-Big4	131	74.16%		
Client Firm Size				
Large Firm	105	76.67%	0.71%	0.543
Small Firm	103	75.96%		
Client Firm Performance				
Making Profit	32	77.89%	1.87%	1.033
Making Loss	176	76.03%		
Client Firm Establishment				
Well Established	106	75.96%	-0.73%	-0.559
Less Established	102	76.69%		

* Significant at the 0.01 level (two-tailed)

Audit Specialisation: firm is denoted as *Specialist* should its incumbent auditor gain 20% of industry market share; otherwise denoted as *Non-Specialist*

Audit Firm Size: firm is denoted as *Big4* should its incumbent auditor be either: DT, EY, KPMG, or PWC; otherwise denoted as *Non-Big-4*

Client Firm Size: firm is denoted as *Large* should its total asset value be above the median value of total sample (AUD \$11,394,000); otherwise denoted as *Small* firm

Client Firm Performance: firm is denoted as *Making Profit* should the firm generate a positive profit before tax for the financial year ended at 30-june-2006; otherwise denoted as *Making Loss*

Client Firm Establishment: firm is denoted as *Well Established* should its number of years since listed be above the median number of years since listing of the sample (16.25 years); otherwise denoted as *Less Established*.

Table 5.6 shows the level of compliance with AASB 6 and AASB 136 is significantly higher (p<0.01 level) for Australian mineral resource firms audited by a specialist in comparison to those who engage the audit services of non-specialist. The result of *t*-Test analysis related to audit specialist supports the evidence documented by O'Keefe, King and Gaver (1994). They (O'Keefe et al., 1994) also find that firms audited by an industry specialist result in higher level of compliance, hence better quality.

In the same way, the results of the *t*-Test also reveal that the disclosure compliance index mean is significantly (p<0.01 level) higher for firms engaging the services of Big4 accounting firms than their peers who had Non-Big4 auditors. This is consistent with the findings of Patton and Zelenka (1997), Owusu-Ansah (1998), and Ali et al., (2004) who document evidence that firms audited by Big 4 tend to have a higher extent of compliance in mandatory disclosure (i.e., a positive relation).

The directional sign of the results presented in Table 5.6 are also in line with this thesis expectation of a positive relation between firm size, and firm profitability relating to the level of compliance with AASB 6 and AASB 136. Table 5.6 shows that larger firms and more profitable firms have higher levels of compliance; nonetheless, the results are statistically insignificant. Likewise, client firm establishment does not influence the level of compliance. In the following section, this study examines the correlation among variables that are of interest to this research.

5.4   Bivariate Correlation

Bivariate correlation provides information on whether there is a relationship between two variables, and importantly allows the assessment of the existence of potential multicollinearity. Table 5.7 explores such bivariate relationships among the variables. Results presented in Table 5.7 are consistent with results obtained from the earlier independent *t*-Tests. There is a significant positive correlation (p<0.01) between the disclosure compliance index of firms that engage an audit specialist and firms being audited by a Big4 auditing firm. Table 5.7 also shows a significant correlation (p<0.05) between DCI and Leverage.

Table 5.7: Pearson Bivariate Correlation Matrix

Variables	DCI	Aud_Idp	Specialist	FirmSize	Leverage	Profitability	Big4	Age	Liquidity	Brd_Idp	Duality	OwnCon
DCI	1.000	-0.072	0.221*	0.039	0.137**	-0.078	0.301*	0.087	-0.076	0.088	0.053	0.078
Aud_Idp		1.000	0.017	0.348*	0.146**	0.107	0.206*	0.125	-0.134	0.146**	-0.055	0.157**
Specialist			1.000	0.096	0.069	-0.010	0.493*	0.127	-0.156**	-0.001	-0.033	0.096
FirmSize				1.000	0.480*	0.519*	0.431*	0.217*	-0.280*	0.145**	-0.060	0.396*
Leverage					1.000	0.016	0.269*	0.176**	-0.516*	0.103	-0.020	0.157**
Profitability						1.000	0.148**	0.062	0.000	0.133	-0.021	0.189*
Big4							1.000	0.259*	-0.249*	0.066	-0.088	0.158**
Age								1.000	-0.158**	0.002	0.178**	0.162**
Liquidity									1.000	-0.041	-0.004	-0.062
Brd_Idp										1.000	-0.199*	0.089
Duality											1.000	-0.054
OwnCon												1.000

* Significant at the 0.01 level (two-tailed)
**Significant at the 0.05 level (two-tailed)
DCI is the level of compliance with AASB 6 and 136, calculated as a ratio of deemed compliance over total applicable mandated disclosure items; *Aud_Idp* is the ratio of non-audit fees to total audit fees; *Specialist* is a dummy variable, represents firms that are audited by a specialist auditor which measured by the top 20% of industry share; *FirmSize* is measured by the natural log of total assets; *Leverage* is the ratio of long-term debt to equity; *Profitability* is the ratio of the earnings before tax to equity; *Big4* is a dummy variable represent being audited by one of the Big4 accounting firms; *Age* is measured by the number of years since listing; *Liquidity* is current assets divided by current liabilities; *Brd_Idp* is the ratio of independent director to total board of directors; *Duality* is a dummy variable, coded 1 if the board of directors are chaired by its CEO; *OwnCon* is the proportion of shares owned by the top 20 shareholders.

One main objective of a correlation matrix is to determine if there is any multicollinearity that would give rise to potential estimation issues. With regards to the correlation matrix among the independent and control variables, the findings reveal that the strongest significant ($p<0.01$) correlation of 0.519 is between *FirmSize* and *Profitability*. Table 5.7 also shows some other significant ($p<0.01$) Pearson correlations above 0.4000 such as *Leverage* and *Liquidity* (-0.516), *Specialist* and *Big4* (0.493), *FirmSize* and *Leverage* (0.480), *FirmSize* and *Big4* (0.431). Given the correlation coefficients are all below the critical limit of 0.800, as a rule of thumb only when the correlation coefficient exceeds 0.800 is multicollinearity a potential statistical issue (Hair, Anderson, Tatham and Black, 1995; Cooper and Schindler, 2003; Greene, 2003; Gujarati, 2003). Therefore, results shown in Table 5.7 do not seem to indicate correlation will significantly impair the regression results.

For robustness, Variance Inflation Factors (VIF) is also calculated for all regressions performed in the following section (5.5 Multivariate Results) for all independent and control variables. The VIF values indicate whether a predictor has a strong linear relationship with other predictor(s). Results are consistent with Pearson correlations, and confirm no significant multicollinearity issues in the model estimations.

5.5   Multivariate Results[56]

This section presents the main results for testing the key hypotheses derived in Chapter 3. The objective of this section is to

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[56] All regression results in this thesis are all based on Durbin-Watson statistic and the assumption of independent errors is tenable. Conventional diagnostic tests were implemented to ensure that fitted model were appropriate. Visual inspection of the histograms, normal probability plots and scatter plots indicated that the residual were not obviously ill behaved.

discuss the results, whereas details of implication of the results will be presented in Chapter 7.

Table 5.8, Table 5.9, and Table 5.10 depict the relationship between auditor independence and auditor specialisation (independent variables) and the level of compliance with AASB 6, AASB 136, AASB 6 & 136 (dependent variable) separately. Each table has three models of estimation shown in different panels. *Panel A* and *Panel B* test the association of auditor independence (*NonAuditRatio*) and audit specialisation (*Specialist*) to the dependent variable in isolation. *Panel C* includes the effects of both auditor independence and audit specialisation.

As shown in Table 5.8, Table 5.9, and Table 5.10 the expected directional sign of auditor independence and audit specialist is negative[57] and positive respectively. As per arguments presented in Chapter 3, this study proposes that higher levels of auditor independence should result in higher level of compliance and specialist auditors should also give rise to higher level of compliance.

Table 5.8 presents regression DCI-6 results for the disclosure compliance index for AASB 6. Across the three panels shown only the *constant* and *Big4* (positive direction) are significant ($p<0.01$). The directional sign for the independent variables (auditor independence and audit specialist) are opposite to the expected direction. However, coefficients for auditor independence and audit specialist are not significant. The results show that the three

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[57] The expected directional sign is presented as negative in tables for auditor independence because it is proxied by non-audit ratio, which has an inverse relation between auditor independence and non-audit ratio; that means the higher the non-audit ratio the less independence of auditor (see Chapter 3 for a full discussion).

models in Table 5.8 are not significant overall based on the F-value.

Table 5.8: Regression Results: Full Sample for DCI - 6

	Prediction	PANEL A		PANEL B		PANEL C	
		Beta	t-Statistic	Beta	t-Statistic	Beta	t-Statistic
Constant		0.851	10.026+	0.848	9.807+	0.852	9.833+
Aud_Idp	-			0.003	0.124	0.02	0.093
Specialist	+	-0.015	-0.907			-0.015	-0.901
FirmSize	+	0.000	-0.034	0.000	0.001	0.000	-0.054
Leverage	+/-	0.005	0.154	0.007	0.209	0.005	0.159
Profitability	+	-0.13	-0.956	-0.013	-0.941	-0.013	-0.948
Big4	+	0.037	3.070*	0.032	2.980*	0.037	3.057*
Age	+/-	0.000	-0.540	0.000	-0.563	0.000	-0.544
Liquidity	+/-	0.000	0.414	0.000	0.472	0.000	0.418
Brd_Idp	+	0.006	0.215	0.006	0.219	0.005	0.212
Duality	-	0.012	0.988	0.013	1.004	0.012	0.990
OwnCon	+/-	-0.025	-0.858	-0.027	-0.933	-0.025	-0.859
Adjusted R^2		0.009		0.006		0.005	
F-Statistic		1.247		1.163		1.130	
Prob. (F)		>0.10		>0.10		>0.10	
No. of Firms		289		289		289	

This table presents the results of regression models that examine the relationship between the level of compliance with AASB 6 and independent variables for the full sample.
* Significant at the 0.01 level (one-tailed)
** Significant at the 0.05 level (one-tailed)
*** Significant at the 0.10 level (one-tailed)
+ Significant at the 0.01 level (two-tailed)
The dependent variable *DCI-6* is the level of compliance with AASB 6, calculated as a ratio of deemed compliance over total applicable mandated disclosure items; *Aud_Idp* is the ratio of non-audit fees to total audit fees; *Specialist* is a dummy variable, represents firms that are audited by a specialist auditor which is measured by the top 20% of industry share; *FirmSize* is measured by the natural log of total assets; *Leverage* is the ratio of long-term debt to equity; *Profitability* is the ratio of the earnings before tax to equity; *Big4* is a dummy variable represent being audited by one of the Big4 accounting firms; *Age* is measured by the number of years since listing; *Liquidity* is current assets divided by current liabilities; *Brd_Idp* is the ratio of independent directors to total board of directors; *Duality* is a dummy variable, coded 1 if the board of directors is chaired by its CEO; *OwnCon* is the proportion of shares owned by the top 20 shareholders.

Regression models reported in Table 5.9 and Table 5.10 are highly significant overall (*F*-statistic p<0.01). Table 5.9 reports the results in the context of AASB 136 in isolation while Table 5.10 shows the main model that tests the relation of auditor independence and audit specialisation with the level of compliance with both AASB 6 and AASB 136.

The directional sign of the coefficients on auditor independence in Table 5.9 and Table 5.10 are negative in line with the expectation. Results related to auditor independence are consistent with the argument that as the ratio of non-audit fees to total fees received from a client increases the auditor independence may be affected (i.e., less independence). This in turn reduces the auditor's willingness to challenge possible non-compliance of a client's financial statements, such as non-disclosure of mandatory information. The finding lends support to H_1 ("*There is a positive association between the level of auditor independence and the firm's level of compliance with mandatory disclosures of AASB 6 and AASB 136*"). This result adds further evidence non-audit fees are negatively associated with compliance levels.

Likewise, Table 5.9 and Table 5.10 show the positive directional sign of audit specialisation and indicates that the better the quality an auditor (i.e., a specialist) the higher level of compliance. In other words, financial statements audited by a specialist auditor will result in a higher level of compliance with accounting standards. This is because as an industry specialist auditor is likely to be more proactive in challenging corporate management. The result is in line with the independent *t*-Test results. Unlike *t*-Test, however, regressions involve inclusion of compounding factors. When these compounding factors are put into the equation, the coefficient on audit specialisation insignificantly signifies that the

results regarding the association between audit specialisation and level of compliance are inconclusive. Therefore the hypothesis H_2 ("*There is a positive association between auditor specialisation and the firm's level of compliance with mandatory disclosures of AASB 6 and AASB 136*") is not supported.

Table 5.9: Regression Results: Full Sample for DCI - 136

	Prediction	PANEL A		PANEL B		PANEL C	
		Beta	t-Statistic	Beta	t-Statistic	Beta	t-Statistic
Constant		0.710	3.736+	0.773	4.124+	0.697	3.648+
Aud_Idp	-	-0.096	-1.906**			-0.093	-1.822**
Specialist	+			0.031	0.921	0.025	0.745
FirmSize	+	-0.011	-0.923	-0.015	-1.299***	-0.010	-0.848
Leverage	+/-	0.076	1.128	0.090	1.330***	0.079	1.168
Profitability	+	-0.041	-1.343***	-0.036	-1.161	-0.041	-1.329***
Big4	+	0.111	4.872*	0.098	3.749*	0.102	3.891*
Age	+/-	0.000	-0.345	-0.001	-0.464	0.000	-0.353
Liquidity	+/-	0.001	0.441	0.001	0.631	0.001	0.514
Brd_Idp	+	0.119	2.030**	0.111	1.887**	0.119	2.035**
Duality	-	0.019	0.677	0.019	0.726	0.018	0.688
OwnCon	+/-	0.075	1.225	0.067	1.076	0.071	1.148
Adjusted R^2		0.112		0.101		0.110	
F-Statistic		3.818		3.495		3.514	
Prob. (F)		<0.01		<0.01		<0.01	
No. of Firms		224		224		224	

This table presents the results of regression models that examine the relationship between the level of compliance with AASB 136 and independent variables for the full sample.
* Significant at the 0.01 level (one-tailed)
** Significant at the 0.05 level (one-tailed)
*** Significant at the 0.10 level (one-tailed)
\+ Significant at the 0.01 level (two-tailed)
The dependent variable *DCI-136* is the level of compliance with AASB 136, calculated as a ratio of deemed compliance over total applicable mandated disclosure items; *Aud_Idp* is the ratio of non-audit fees to total audit fees; *Specialist* is a dummy variable, represents firms that are audited by a specialist auditor which is measured by the top 20% of industry share; *FirmSize* is measured by the natural log of total assets; *Leverage* is the ratio of long-term debt to equity; *Profitability* is the ratio of the earnings before tax to equity; *Big4* is a dummy variable represent being audited by one of the Big4 accounting firms; *Age* is measured by the number of years since listing; *Liquidity* is current assets divided by current liabilities; *Brd_Idp* is the ratio of independent directors to total board of directors; *Duality* is a dummy variable, coded 1 if the board of directors is chaired by its CEO; *OwnCon* is the proportion of shares owned by the top 20 shareholders.

Observing the findings from Table 5.9 and Table 5.10, there are two control variables, *Big4* (firms audited by DT, E&Y, KPMG or PWC) and *Board Independence* (ratio of number of independent director to the total board of directors), that are showing significant positive coefficients across all models of regression. Coefficients on *Big4* (p<0.01) and *Board Independence* (p<0.05) are all positive regressions showing in Table 5.9 and Table 5.10 which is in line with expectations. The results related to *Big4* add support to, and are consistent with, past studies, such as Owusu-Ansah (1998) and Ali et al., (2004), among others. This indicates that firms that are audited by Big4 accounting firms tend to have higher level of compliance. The results are consistent with the findings obtained from the independent *t*-Test.

Table 5.10: Regression Results: Full Sample DCI – 6/DCI - 136

	Prediction	PANEL A		PANEL B		PANEL C	
		Beta	t-Statistic	Beta	t-Statistic	Beta	t-Statistic
Constant		0.786	6.440+	0.832	6.969+	0.777	6.335+
Aud_Idp	-	-0.060	-1.874**			-0.058	-1.808**
Specialist	+			0.022	1.020	0.020	0.902
FirmSize	+	-0.008	-0.988	-0.011	-1.407***	-0.007	-0.903
Leverage	+/-	0.052	1.221	0.061	1.431***	0.055	1.274
Profitability	+	-0.022	-1.121	-0.017	-0.893	-0.021	-1.091
Big4	+	0.069	4.717*	0.059	3.539*	0.062	3.676*
Age	+/-	0.000	-0.081	0.000	-0.172	0.000	-0.087
Liquidity	+/-	0.000	0.385	0.000	0.563	0.000	0.467
Brd_Idp	+	0.062	1.673**	0.055	1.485***	0.062	1.682**
Duality	-	0.024	1.446***	0.024	1.469***	0.024	1.442***
OwnCon	+/-	0.046	1.156	0.041	1.038	0.042	1.074
Adjusted R^2		0.110		0.099		0.109	
F-Statistic		3.567		3.281		3.314	
Prob. (F)		<0.01		<0.01		<0.01	
No. of Firms		208		208		208	

This table presents the results of regression models that examine the relationship between the level of compliance with AASB 6 & AASB 136 and independent variables for the full sample.
* Significant at the 0.01 level (one-tailed)
** Significant at the 0.05 level (one-tailed)
*** Significant at the 0.10 level (one-tailed)
\+ Significant at the 0.01 level (two-tailed)
The dependent variable *DCI* is the level of compliance with AASB 6 and AASB 136, calculated as a ratio of deemed compliance over total applicable mandated disclosure items; *Aud_Idp* is the ratio of non-audit fees to total audit fees; *Specialist* is a dummy variable, represents firms that are audited by a specialist auditor which is measured by the top 20% of industry share; *FirmSize* is measured by the natural log of total assets; *Leverage* is the ratio of long-term debt to equity; *Profitability* is the ratio of the earnings before tax to equity; *Big4* is a dummy variable represent being audited by one of the Big4 accounting firms; *Age* is measured by the number of years since listing; *Liquidity* is current assets divided by current liabilities; *Brd_Idp* is the ratio of independent directors to total board of directors; *Duality* is a dummy variable, coded 1 if the board of directors is chaired by its CEO; *OwnCon* is the proportion of shares owned by the top 20 shareholders.

Similarly, Table 5.9 and Table 5.10 show coefficient on *Board Independence* is positively associated with the level of compliance with AASB 6 and 136. This is in line with expectation and implies that firms with relatively more independence directors have a higher level of compliance with the accounting standards. The findings are consistent with the empirical results of past research like Cheng and Courtenay (2005), and Cheung et al., (2006).

With respect to *Firm Size* and *Leverage*, both coefficients on these variables are moderately significant ($p<0.10$) in Panel B, but are insignificant in Panel A and Panel C, in both Table 5.9 and Table 5.10. The results are inconclusive which is in line with the independent *t*-Test results. Hence the multiple regression results fail to lend support to past findings. Interestingly, it is noted that coefficient on *Firm Size* is negative indicating that the level of compliance with AASB 6 and AASB 136 is relatively lower as the size of the firms get larger.

Another point to mention is how *Duality* (dummy variable coded 1 if board of directors are chaired by its CEO) relates to compliance. It is insignificant in Table 5.9 when regressed against AASB 136 in

isolation. However, when regressed in the main model against both AASB 6 and 136 as shown in Table 5.10, the result is moderately significant ($p<0.10$). The negative relation between the *Duality* and combined level of compliance with AASB 6 and AASB 136 shows that a firm's board of directors that is chaired by its CEO have lower levels of compliance with the accounting standards. This result is in line with the past research like Forker (1992) and Gul and Leung (2004).

The remaining control variables (i.e., age; liquidity; and ownership concentration) are not statistically significant across all panels of regressions as shown in Table 5.9 and Table 5.10. These items seem to have no influences on accounting compliance.

5.6   Summary

This thesis finds that on average there is a 76% level of compliance with the combined mandatory disclosure requirements of AASB 6 and AASB136 for Australian listed mineral resource firms. The majority 82% of sample firms (170 firms) are in the range of 70% to 99% extent of compliance with the combined standards. In general, sample firms have higher level of compliance with AASB 6 in comparison to AASB 136. There are 96% of sample firms reach a compliance level of at least 80% with AASB 6, in comparison to 25% of sample firms that have a similar compliance level with AASB 136.

Multiple regression results show a significant positive relationship between payment for non-audit services and the level of compliance with AASB 6 and AASB 136. The findings imply that auditors' compromise audit independence relative to the proportion of non-audit fees received from clients. Furthermore, the result also shows that auditor independence has a significant influence on

the level of compliance with the standards for large firms, and has a moderate impact on firms that have experienced poor performance. However, the association between the auditor independence and level of compliance are insignificant for small firms, and firms that experience good performance. In stark contrast, audit specialisation (proxies by audit industry market share) does not have significant influence on the magnitude of compliance with AASB 6 and AASB 136.

Overall, the findings contribute to the existing empirical evidence from Australian listed mineral resources firms that: (i) auditor independence seems to be influenced relative to the proportion of non-audit fees income from audit clients, and (ii) the specialisation of an auditor appears to have an insignificant influence on the level of compliance.

Chapter 6 performs and discusses a variety of sensitivity tests to ascertain the credential of results obtained in Chapter 5. Specifically, it examines the alternative measures of the main two-key independent variables (i.e., auditor independence and audit specialisation) as per the literature review in Chapter 3. Multivariate tests for sub-samples (such as client firm size, firm performance, type of auditors, board independence and duality of management) are also performed.

Chapter 6 ROBUSTNESS TESTS

6.1 Chapter Overview

The documented findings in the previous chapter lend support to the first hypothesis. The result reveals that auditors' compromise audit independence relative to the proportion of non-audit fees received from clients. The evidence, however, fails to support the second hypothesis which has the notion of audit specialisation (proxies by audit industry market share) results in higher level of compliance with AASB 6 *Exploration for and Evaluation of Mineral Resources* and AASB 136 *Impairment of Assets* mandatory disclosures.

The purpose of this chapter is to demonstrate the robustness of the results documented in Chapter 5. As Cooke (1998, p. 209) attests that "no one procedure is the best but that multiple approaches are helpful to ensure the results are robust across methods". Hence, it is important to consider whether the results are varied when other measures of independent and control variables are employed as this can manifest the strength of the findings. To assure the validity and robustness of inferences drawn previously, this chapter conducts a range of robustness tests for pooled (AASB 6 and AASB 136) data set.

The remainder of this chapter is organised as follows. Alternative measures and discussion for auditor independence is presented in Section 6.2. Likewise, robustness test for audit specialisation is provided in Section 6.3. Section 6.4 supplements the analysis using multivariate tests for sub-samples and control variables that have consistent significant results in the main results (see Table 5.10). This chapter concludes with a summary in Section 6.5.

6.2   Alternative Measures of Auditor Independence

Recent concerns on auditor independence has focused on the provision of non-audit services to firms (Larcker and Richardson, 2004; Ruddock et al., 2006). As noted in Table 4.3, the ratio of non-audit fees to total fees of the incumbent auditors have been extensively adopted as a proxy to draw inferences on auditor independence in the research literature (e.g., Asbaugh et al., 2003; Chung and Kallapur, 2003; Reynolds et al, 2004; Ruddock et al., 2005). Application of non-audit ratio as a proxy is consistent with the SEC's Final Rule which mandated firms to disclose audit and non-audit fees to financial statement users as a means to assess "whether the proportion of fees for audit and nonaudit services causes them to question the auditor's independence" (SEC 2000, section III.c.5).

However, the utilisation of non-audit fees to total fees is not free from criticism. One of the limitations that has been raised is the invariance of such a measure to the absolute scale of fees. Hence, it does not capture the relative financial importance of the client to the auditor (Frankel et al., 2002; Ashbaugh et al., 2003; Ferguson at al., 2004). Furthermore, it is impossible to establish whether cross-sectional variation in the ratio is driven by the level of non-audit as opposed to audit fees (Frankel et al., 2002; Ferguson et al., 2004). To overcome the limitation, the natural log of non-audit fees is employed to directly capture the level of economic bonding resulting from the engagement of non-audit services (Antle et al., 2002; Brandon et al., 2004; Ferguson et al., 2004).

Ferguson et al., (2004) further assert that both the non-audit fees ratio and natural log of non-audit fees may not capture the relative economic dependence of individual big clients on an audit firm

given all non-audit fees received by the audit firm. Therefore, it fails to construct the true economic bonding between the incumbent auditors and clients. For example, assume an audit firm that has two clients and both firms have the same ratio of non-audit fees to total fees of 80%. Based on the reported ratio of both firms, the incumbent auditor's independence appears to be affected. However, in absolute terms assume one firm reports total fees of $10,000, and the other firm $1,000,000. In this scenario, only the latter is economically important to the audit firm. This implies that the relative size of fees (ratio of non-audit fees to total fees) does not capture the economic dependence of the auditor on a client.

Many researchers have posited that total fees (sum of audit and non-audit fees) are the better measure of the economic dependence of the auditor on a client (Ashbough et al., 2003; Geiger and Rama, 2003). Percentile rank has also been utilised by many researchers (e.g., Frankel et al., 2002; Reynolds et al., 2004) as a means to capture such economic importance of individual clients to an audit firm given all non-audit fees paid to the audit firm.

To assess the robustness of the results reported in the preceding chapter, several alternative measures are employed in this thesis for auditor independence. First, the natural logarithm transformation of audit, non-audit and total fees are utilised to capture the relative economic bonding between clients and audit firms. This method has been widely used in the past empirical research, such as Antle et al., (2002); DeFond et al., (2002); Asbaugh et al., (2003); Geiger and Rama (2003); Ragnunandan et al., (2003); Brandon et al., (2004); and Ruddock and Taylor (2005). Second, percentile rank is used to capture the relative

economic dependence of audit firm to individual clients given all audit, non-audit, and total fees received by the audit firm. In doing so, it allows for a separate test of incentive effects of audit and non-audit fees to audit firms as adopted in the studies of Frankel et al., (2002), Reynolds et al., 2004, and Ferguson et al., (2004). Clients with the highest (lowest) rank are given 1 (0). The results of these additional sensitivity tests are presented in Table 6.1.

Table 6.1: Alternative Measures Auditor Independence

	Prediction	PANEL A		PANEL B		PANEL C		PANEL D		PANEL E		PANEL F	
		Log Audit Fees		Log NonAudit Fees		Log Total Fees		Rank Audit Fees		Rank NonAudit Fees		Rank Total Fees	
		Beta	t-Stats	Beta	t-Stats	Beta	t-Stats	Beta	t-Stats	Beta	t-Stats	Beta	t-Stats
Constant		0.885	7.314+	0.738	5.958+	0.865	7.337+	0.726	5.709+	0.755	5.979+	0.698	5.379+
Aud_Idp	-	-0.021	-2.107*	-0.003	-2.483**	-0.027	-2.826*	-0.051	-2.274**	-0.034	-1.790**	-0.058	-2.469**
Specialist	+	0.026	1.205	0.021	0.975	0.026	1.185	0.024	1.125	0.027	1.247	0.024	1.105
FirmSize	+	-0.01	-0.141	-0.004	-0.542	0.004	0.401	-0.003	-0.316	-0.006	-0.700	-0.001	-0.102
Leverage	+/-	0.075	1.743**	0.049	1.147	0.075	1.758**	0.064	1.510***	0.060	1.405***	0.060	1.414***
Profitability	+	-0.024	-1.235	-0.026	-1.335**	-0.028	-1.427***	-0.029	-1.444***	-0.022	-1.121	-0.030	-1.508***
Big4	+	0.068	3.958*	0.061	3.676*	0.071	4.193*	0.046	2.649*	0.056	3.321*	0.045	2.572*
Age	+/-	0.002	-0.089	0.005	-0.087	0.006	-0.009	0.001	0.097	0.001	-0.108	0.001	0.083
Liquidity	+/-	0.000	0.434	0.000	0.365	0.000	0.351	0.000	0.438	0.000	0.502	0.000	0.414
Brd_Idp	+	0.056	1.517***	0.067	1.819**	0.060	1.653**	0.055	1.492***	0.063	1.698**	0.057	1.564***
Duality	-	0.022	1.303***	0.021	1.291***	0.021	1.266***	0.022	1.363***	0.025	1.496***	0.022	1.335***
OwnCon	+/-	0.046	1.163	0.042	1.065	0.048	1.236	0.045	1.150	0.039	0.996	0.048	1.220
Adjusted R^2		0.115		0.122		0.130		0.118		0.109		0.122	
F-Statistic		3.438		3.621		3.814		3.516		3.307		3.613	
Prob. (F)		p<0.000		p<0.000		p<0.000		p<0.000		p<0.000		p<0.000	
No. Firms		208		208		208		208		208		208	

This table presents the results of regression models that examine the relationship between the level of compliance with AASB 6 & AASB 136 and independent variables for the full sample.

*   Significant at the 0.01 level (one-tailed)

** Significant at the 0.05 level (one-tailed)

*** Significant at the 0.10 level (one-tailed)

+   Significant at the 0.01 level (two-tailed)

++ Significant at the 0.05 level (two-tailed)

+ ++ Significant at the 0.06 level (two-tailed)

The dependent variable *DCI* is the level of compliance with AASB 6 and AASB 136, calculated as a ratio of deemed compliance over total applicable mandated disclosure items;

Aud_Idp (log audit fees) is the natural logarithm of audit fees;

Aud_Idp (log non-audit fees) is the natural logarithm of non-audit fees;

Aud_Idp (log total fees) is the natural logarithm of total fees;

Aud_Idp (rank audit fees) is the percentile rank of audit fees;

Aud_Idp (rank non-audit fees) is the percentile of non-audit fees;

Aud_Idp (rank total fees) is the percentile rank of total fees;

Specialist is a dummy variable, represents firms that are audited by a specialist auditor which measured by the top 20% of industry share;

FirmSize is measured by the natural log of total assets;

Leverage is the ratio of long-term debt to equity;

Profitability is the ratio of the earnings before tax to equity;

Big4 is a dummy variable represents being audited by one of the Big4 accounting firms;

Age is measured by the number of years since listing;

Liquidity is current assets divided by current liabilities;

Brd_Idp is the ratio of independent director to total board of directors;

Duality is a dummy variable, coded 1 if the board of directors is chaired by its CEO;

OwnCon is the proportion of shares owned by the top 20 shareholders.

Table 6.1 reveals that the F-Value of all models reflected in Panel A to F are statistically significant (p<0.001), consistently in line with the main results/model documented in Table 5.10. The directional sign on the coefficients of *Aud_Idp* (auditor independence) are negative for all panels in Table 6.1. This infers that the higher the economic bonding between clients and incumbent auditors, in terms of non-audit services employed, result in lower level of compliance with AASB 6 and AASB 136. This implies that economic bonding by the auditing firms and clients seems to influence the incumbent auditor's independence.

Table 6.1 shows that the alternative measures employed for the variable *Aud_Idp* (auditor independence) in Panel A with *LogAuditFees* (p<0.01), Panel B with *LogNonAuditFees* (p<0.05), Panel C with *LogTotalFees* (p<0.01), Panel D with *RankAuditFees* (p<0.05), Panel E with *RankNonAuditFees* (p<0.05), and Panel F with *RankTotalFees* (p<0.05) all are statistically significant and consistent with the main results. This shows that regardless of alternative measures utilised or the choice of the proxy for auditor independence, it appears to be insensitive to the results. Therefore, the conclusion reached in this thesis is that the results obtained are not sensitive to type measurements adopted. This infers that audit, non-audit or total fees received by incumbent auditors all led to the same incentive effects. These findings are not consistent with the results obtained by Frankel et al., (2002) who document audit and non-audit fees generate different motivation effects.

6.3   Alternative Measures of Audit Specialisation

Referring to Table 4.4, and related text, the two most common proxies utilised to capture audit specialisation in past literature are industry portfolio share and industry market share. The former approach dominates in the studies reviewed. Industry portfolio

share has been criticised that "the designation of specialist is likely to be largely driven by the size of the industry and this may not reflect specific efforts made by the audit firm to specialize in that industry" (Neal and Riley, 2004, p. 170).

In line with past studies this thesis employs industry market share to proxy for audit specialisation by using an arbitrary threshold to denote market share and industry specialists of an industry (Craswell et al., 1995; DeFond et al., 2000; Ferguson and Stokes, 2002; Zhou and Elder, 2002; Ferguson et al., 2003; Krishnan et al., 2003b; Neal and Riley, 2004; Francis et al., 2005). In order to rule out that designation of audit specialist is driven by the arbitrarily applied cut-off threshold of 20% in the main model, the robustness checks include other possible benchmark cut-off figures, such as 10% and 15%.

In addition to the mentioned cut-off rates, this thesis also considers the recent methodology employed by Ferguson et al., (2003), Carcello and Nagy (2004), and Francis et al., (2005), among others. That is, where an industry specialist is designated when its ranking is the Top one, two, and three based on market share. Last but not least, instead of using a dichotomous measure to denote an industry specialist, in line with the literature (Balsam et al., 2003; Carcello and Nagy, 2004; Dunn and Mayhew, 2004) this thesis also employs a continuous ranking of industry market share to proxy for audit specialisation. The results of the robustness tests are presented in Table 6.2.

Table 6.2: Alternative Measures Auditor Specialisation

	Prediction	PANEL A Market Share > 10%		PANEL B Market Share > 15%		PANEL C Top Rank Auditor		PANEL D Top Two Auditors		PANEL E Top Three Auditors		PANEL F Continuous MS	
		Beta	t-Stats	Beta	t-Stats	Beta	t-Stats	Beta	t-Stats	Beta	t-Stats	Beta	t-Stats
Constant		0.789	6.433+	0.785	6.424+	0.777	6.335+	0.785	6.424+	0.789	6.433+	0.777	6.338+
Aud_Idp	-	-0.059	-1.813**	-0.060	-1.885**	-0.058	-1.808**	-0.060	-1.885**	-0.059	-1.813**	-0.059	-1.844**
Specialist	+	-0.009	-0.334	0.017	0.789	0.020	0.902	0.017	0.789	-0.009	-0.334	0.050	0.924
FirmSize	+	-0.008	-1.011	-0.007	-0.962	-0.007	-0.903	-0.007	-0.962	-0.008	-1.011	-0.007	-0.903
Leverage	+/-	0.053	1.236	0.052	1.207	0.055	1.274	0.052	1.207	0.053	1.236	0.054	1.255
Profitability	+	-0.022	-1.115	-0.021	-1.079	-0.021	-1.091	-0.021	-1.079	-0.022	-1.115	-0.021	-1.086
Big4	+	0.077	2.752*	0.057	2.696*	0.062	3.676*	0.057	2.696*	0.077	2.752*	0.056	2.750*
Age	+/-	0.005	-0.076	0.003	-0.073	0.001	-0.087	0.005	-0.073	0.001	-0.076	0.001	-0.087
Liquidity	+/-	0.000	0.375	0.000	0.388	0.000	0.467	0.000	0.388	0.000	0.375	0.000	0.461
Brd_Idp	+	0.063	1.685**	0.061	1.636**	0.062	1.682**	0.061	1.636**	0.063	1.685**	0.062	1.666**
Duality	-	0.023	1.419***	0.024	1.454***	0.024	1.442***	0.024	1.454***	0.023	1.419***	0.024	1.450***
OwnCon	+/-	0.046	1.154	0.044	1.116	0.042	1.074	0.044	1.116	0.046	1.154	0.042	1.073
Adjusted R^2		0.106		0.109		0.109		0.109		0.106		0.110	
F-Statistic		3.238		3.293		3.314		3.293		3.238		3.318	
Prob. (F)		p<0.000		p<0.000		p<0.000		p<0.000		p<0.000		p<0.000	
No. Firms		208		208		208		208		208		208	

This table presents the results of regression models that examine the relationship between the level of compliance with AASB 6 & AASB 136 and independent variables for the full sample.

* Significant at the 0.01 level (one-tailed)

** Significant at the 0.05 level (one-tailed)

*** Significant at the 0.10 level (one-tailed)

\+ Significant at the 0.01 level (two-tailed)

\+\+ Significant at the 0.05 level (two-tailed)

\+ \+\+ Significant at the 0.10 level (two-tailed)

The dependent variable *DCI* is the level of compliance with AASB 6 and AASB 136, calculated as a ratio of deemed compliance over total applicable mandated disclosure items;

Aud_Idp is the ratio of non-audit fees to total audit fees;

Specialist (>10%) is a dummy variable, represents firms that are audited by a specialist auditor which measured by the top 10% of industry share;

Specialist (>15%) is a dummy variable, represents firms that are audited by a specialist auditor which measured by the top 15% of industry share;

Specialist (top rank auditor) is a dummy variable, represents firms that are audited by a specialist auditor which measured by the top 1 auditing firm based on market share;

Specialist (top two auditor) is a dummy variable, represents firms that are audited by a specialist auditor which measured by the top 2 auditing firm based on market share;

Specialist (top three auditor) is a dummy variable, represents firms that are audited by a specialist auditor which measured by the top 3 auditing firm based on market share;

Specialist (continuous MS) is a dummy variable, represents firms that are audited by a specialist auditor which measured by the continuous ranking of industry market share;

FirmSize is measured by the natural log of total assets;

Leverage is the ratio of long-term debt to equity;

Profitability is the ratio of the earnings before tax to equity;

Big4 is a dummy variable represents being audited by one of the Big4 accounting firms;

Age is measured by the number of years since listing;

Liquidity is current assets divided by current liabilities;

Brd_Idp is the ratio of independent director to total board of directors;

Duality is a dummy variable, coded 1 if the board of directors is chaired by its CEO;

OwnCon is the proportion of shares owned by the top 20 shareholders.

Table 6.2 reveals that the F-Value of all models reflected in Panel A to F are statistically significant (p<0.001) consistently in line with the main results/model documented in Table 5.10. Table 6.2 shows there is a negative sign on the coefficients on *Specialist* (audit specialisation) in Panel A (*MarketShare*>10%) and Panel E (*TopThreeAuditors*). In contrast, Table 6.2 shows that Panel B (*MarketShare*>15%), C (*TopRankAuditor*), D (*TopTwoAuditors*), and F (*ContinuousMarketShare*) document a positive association between the level of compliance and firms that engaged services of specialist auditors. This latter result implies that firms that engaged the services of specialist auditors had higher levels of compliance with the mandatory disclosures of AASB 6 and AASB 136. However, it is important to note that all alternative measures of the variable *Specialist* are statistically not significant. Thus the results remain consistent with the reported findings of the primary model presented in Table 5.10.

6.4   Multivariate Results for Partitioned Sub-Samples

Table 5.9 and Table 5.10 show coefficients on firms' performance are consistently in a negative directional sign which implies that the firms with increasing income will have lower levels of compliance. Likewise, other control variables such as *Big4*, *Board Independence*, and *Duality* consistently show significant results reported in Table 5.10 for the pooled sample. It is, therefore, of interest to this study to further test the sensitivity of these variables by sub-sampling into client firm size, client firm performance, Big4 auditors, board independence, and duality. All regressions for the sensitivity test by sub-samples are conducted based on the main model as reported in Table 5.10 in Chapter 5.

6.4.1   Client Firm Size

To investigate whether a client's firm size may have an influence on the association between the magnitude of compliance and auditor independence, and audit specialisation, this study partitions the pooled sample into small and large client's firm size. The cut-off point is based on the median of total assets (AUD $11,394,000). Firms with total assets below the median are grouped as *SmallFirms* and those above *LargeFirms*.

Table 6.3 shows the coefficient on *Aud_Idp* is negative for both Panel A (*SmallFirms*) and Panel B (*LargeFirms*). The findings are consistent with pooled samples' results. It is noted that only the coefficient on *Aud_Idp* in Table 6.3 Panel B (*Large Firms*) is statistically significant ($p<0.05$). In contrast, the coefficient on *Aud_Idp* is insignificant in Table 6.3 Panel A (*Small Firms*). This implies that a large client in terms of firm size influences the relationship between auditor independence and the level of compliance with the accounting standards. The findings indicate that auditors affect their independence due to client bargaining power when supplying non-audit services to large clients. It is, however, not the case with the small clients as documented in Table 6.3 Panel A.

Moreover, the coefficient on *Specialist* in both Panel A and B in Table 6.3 is positive and statistically insignificant. The results are in line with the main results of the pooled sample. This indicates that irrespective of firm size, engaging specialist auditor's services appears not to affect the magnitude of compliance with the accounting standards.

With respect to control variables, both Panel A and B in Table 6.3 reveal that *Big4* is consistent with the main pooled sample's result.

That is positively related with the level of compliance with the accounting standards. *Big4* is significant at p<0.10 and p<0.01 for Panel A *Small Firms* and Panel B *Large Firms* respectively. Results infer that a firm that is audited by one of the Big4 accounting firms will have a higher level of compliance with AASB 6 and AASB 136 regardless of the size (bargaining power) of the client firm. The results are consistent with the findings of the independent *t*-Test reported in Table 5.6. That is, Table 5.6 shows that firms audited by Big4 accounting firms have higher degree of compliance than peers engaging non-Big4 firms.

Table 6.3 Panel A shows that small firms with higher leverage (p<0.10) have higher levels of compliance. Interestingly, it is also noted that the significant negative association between the level of compliance and *Duality* (p<0.05) for small firms in Panel A in Table 6.3 indicate that the board of directors of small firms chaired by the CEO have higher levels of compliance. In contrast, Table 6.3 Panel B documents a significant positive coefficient on *Brd_Idp* (p<0.05)*.* This demonstrates the level of compliance is higher for large firms with more independent directors on the board.

Table 6.3: Partitioning by Client Firm Size

	Prediction	Client Firm Size			
		PANEL A		**PANEL B**	
		Small Firms		Large Firms	
		Beta	*t*-Statistic	Beta	*t*-Statistic
Constant		0.620	2.068++	0.874	4.105+
Aud_Idp	-	-0.031	-0.563	-0.083	-1.922**
Specialist	+	0.033	0.820	0.005	0.170
FirmSize	+	0.004	0.222	-0.014	-1.052
Leverage	+/-	0.125	1.623***	0.022	0.387
Profitability	+	-0.022	-0.966	0.005	0.107
Big4	+	0.046	1.520***	0.071	3.150*
Age	+/-	0.000	-0.382	0.000	-0.241
Liquidity	+/-	0.000	0.434	0.001	0.410
Brd_Idp	+	0.016	0.330	0.119	1.937**
Duality	-	0.048	2.204**	-0.002	-0.092
OwnCon	+/-	0.043	0.734	0.053	0.890
Adjusted R^2		0.127		0.177	
F-Statistic		2.347		1.820	
Prob. (F)		P<0.010		P<0.050	
No. Firms		103		105	

This table presents the results of regression models that examine the relationship between the level of compliance with AASB 6 & AASB 136 and independent variables for the full sample.

*   Significant at the 0.01 level (one-tailed)
** Significant at the 0.05 level (one-tailed)
*** Significant at the 0.10 level (one-tailed)
+   Significant at the 0.01 level (two-tailed)
++ Significant at the 0.05 level (two-tailed)
+++ Significant at the 0.10 level (two-tailed)

The dependent variable *DCI* is the level of compliance with AASB 6 and AASB 136, calculated as a ratio of deemed compliance over total applicable mandated disclosure items; *Aud_Idp* is the ratio of non-audit fees to total audit fees; *Specialist* is a dummy variable, represents firms that are audited by a specialist auditor which measured by the top 20% of industry share; *FirmSize* is measured by the natural log of total assets; *Leverage* is the ratio of long-term debt to equity; *Profitability* is the ratio of the earnings before tax to equity; *Big4* is a dummy variable represents being audited by one of the Big4 accounting firms; *Age* is measured by the number of years since listing; *Liquidity* is current assets divided by current liabilities; *Brd_Idp* is the ratio of independent director to total board of directors; *Duality* is a dummy variable, coded 1 if the board of directors is chaired by its CEO; *OwnCon* is the proportion of shares owned by the top 20 shareholders.

6.4.2   Client Firm Performance

This section examines whether a client's financial performance, being in a state of financial difficulty or prosperity, may influence the level of compliance with AASB 6 and AASB 136.

As shown in Table 6.4, the pooled sample is segregated into two sub-samples. The firms are grouped into *Poor Performing Firms* in Panel A should the firms report a loss during the financial year. Likewise, should the firms' report a profit, then these firms are sub-sampled into Panel B *Good Performing Firms*.

Table 6.4 reveals that the overall model fit is significant for Panel A *Poor Performing Firms* (*F* statistic of $p<0.01$) but not *Good Performing Firms* (see Panel B). With regards to the sign on the coefficients for *Aud_Idp* (auditor independence) and *Specialist* (audit specialisation), Table 6.4 shows both Panel A and Panel B's results are consistent with the main findings in Table 5.10. The significant negative coefficient on *Aud_Idp* ($p<0.10$) in Table 6.4 Panel A infers that the higher the ratio of non-audit fees to total fees of poor performing firms results in less compliance with the AASB 6 and AASB 136. However, such impairment to auditor independence is inconclusive for the good performing firms as exhibited in Panel B.

In relation to audit specialisation, Table 6.4 Panel A and Panel B results indicate neither good nor poor performing firms are influenced differently as a result of the association between audit specialisation (*Specialist*) and the extent of compliance. This suggests that specialist auditors do not have impact on, neither good nor poor performing firms, the levels of compliance with the mandatory disclosures of AASB 6 and AASB 136.

With reference to control variables, Table 6.4 Panel A shows variable *Big4* (*Poor Performing Firms*) has consistent results with the main results documented in Table 5.10. The statistically significant result ($p<0.01$) of *Big4* in Table 6.4 Panel A shows a positive coefficient implying that poor performing firms that engage Big4 services have higher levels of compliance than the peers that are audited by the Non-Big4. It is, however, inconclusive in the case of *Good Performing Firms* (statistically insignificant) as shown Table 6.4 Panel B.

Other control variables, such as *Brd_Idp* ($p<0.05$), *Duality* ($p<0.05$), *OwnCon* ($p<0.10$) all have positive coefficients and are statistically significant for the *Poor Performing Firms* (as shown in Table 6.4 Panel A). These variables, however, are not significant in Table 6.4 Panel B for the sub-sample of *Good Performing Firms*. This infers that for the *Poor Performing Firms* with more independent directors, non-CEO as a chairperson to board, and higher proportion of shares owned by the top twenty shareholders, have a higher level of compliance with AASB 6 and AASB 136. For the *Good Performing Firms* the aforementioned variables do not seem to influence compliance levels.

Table 6.4: Partitioning Client Firm Performance

	Prediction	Client Firm Performance			
		PANEL A		**PANEL B**	
		Poor Performing Firms		Good Performing Firms	
		Beta	*t*-Statistic	Beta	*t*-Statistic
Constant		0.796	5.889+	0.571	1.384+++
Aud_Idp	-	-0.051	-1.401***	-0.044	-0.504
Specialist	+	0.025	1.022	-0.010	-0.166
FirmSize	+	-0.010	-1.121	0.011	0.416
Leverage	+/-	0.024	0.510	0.105	0.734
Profitability	+	-0.027	-1.269	0.055	0.211
Big4	+	0.063	3.511*	0.061	1.078
Age	+/-	0.000	-0.461	0.001	0.256
Liquidity	+/-	0.000	-0.506	0.005	1.650***
Brd_Idp	+	0.088	2.193**	-0.112	-0.828
Duality	-	0.030	1.776**	-0.019	-0.236
OwnCon	+/-	0.070	1.608***	-0.028	-0.208
Adjusted R^2		0.140		0.166	
F-Statistic		3.595		0.600	
Prob. (F)		P<0.000		P<0.800	
No. Firms		176		32	

This table presents the results of regression models that examine the relationship between the level of compliance with AASB 6 & AASB 136 and independent variables for the full sample.

* Significant at the 0.01 level (one-tailed)
** Significant at the 0.05 level (one-tailed)
*** Significant at the 0.10 level (one-tailed)
+ Significant at the 0.01 level (two-tailed)
++ Significant at the 0.05 level (two-tailed)
+++ Significant at the 0.10 level (two-tailed)

The dependent variable *DCI* is the level of compliance with AASB 6 and AASB 136, calculated as a ratio of deemed compliance over total applicable mandated disclosure items; *Aud_Idp* is the ratio of non-audit fees to total audit fees; *Specialist* is a dummy variable, represents firms that are audited by a specialist auditor which measured by the top 20% of industry share; *FirmSize* is measured by the natural log of total assets; *Leverage* is the ratio of long-term debt to equity; *Profitability* is the ratio of the earnings before tax to equity; *Big4* is a dummy variable represents being audited by one of the Big4 accounting firms; *Age* is measured by the number of years since listing; *Liquidity* is current assets divided by current liabilities; *Brd_Idp* is the ratio of independent director to total board of directors; *Duality* is a dummy variable, coded 1 if the board of directors is chaired by its CEO; *OwnCon* is the proportion of shares owned by the top 20 shareholders.

6.4.3   Type of Auditor

This section examines the influence of firms audited by Big4 and Non-Big4 on the association between audit quality (auditor independence and audit specialisation) and the extent of compliance with AASB 6 and AASB 136. The pooled sample is segregated into firms that are audited by Big4 in Panel A and Non-Big4 in Panel B in Table 6.5.

Table 6.5 shows the coefficient on *Aud_Idp* in both Panel A and Panel B is negative, which is in line with the main pooled results and as predicted. Interestingly, the sub-sample of firms audited by Big4 (Panel A) shows an insignificant result for the coefficient on *Aud_Idp*. This implies Big4 auditing firms' independence is not influenced regardless of non-audit services provided to their clients and it, accordingly, does not affect the level of compliance with AASB 6 and AASB136. In contrast, for firms audited by Non-Big4 auditing firms (Panel B) it appears that when an economic bonding is formed between the Non-Big4 auditor and the clients by providing non-audit services, it has an impact on the level of compliance with AASB 6 and AASB 136. This infers impairment on Non-Big4 auditor independence when an economic bonding is developed by supplying non-audit services to their clients.

In respect to audit specialisation, the evidence documented in Table 6.5 Panel A shows that firms audited by Big4 auditing firms, and in particular those designated as an industry specialist, there are higher levels of compliance with AASB 6 and AASB 136.

Table 6.5 Panel A also reveals that control variables of sub-sample firms that are audited by Big4 auditing firms have a significant coefficient on *Leverage* (p<0.10), *Profitability* (p<0.10), *Liquidity* (p<0.10), and *Duality* (p<0.05). This suggests that firms audited

by Big4 auditing firms that are more liquid, higher in leverage, less profitability, and the chairman of the board is not led by its CEO, gives rise to higher level of compliance with AASB 6 and AASB 136. However, this is not the case for firms that are audited by Non-Big4 auditing firms as tabulated in Table 6.5 Panel B.

Table 6.5: Partitioning by Type of Auditor

| | Prediction | Type of Auditor | | | |
| | | PANEL A
Audited by Big4 | | PANEL B
Audited by NonBig4 | |
		Beta	t-Statistic	Beta	t-Statistic
Constant		0.699	3.807+	0.877	4.970+
Aud_Idp	-	-0.029	-0.683	-0.081	-1.731**
Specialist	+	0.026	1.391***		
FirmSize	+	0.001	0.044	-0.012	-1.088
Leverage	+/-	0.074	1.329***	0.029	0.441
Profitability	+	-0.040	-1.349***	-0.011	-0.429
Age	+/-	0.000	0.166	0.000	-0.139
Liquidity	+/-	0.002	1.306***	0.000	-0.368
Brd_Idp	+	0.062	1.178	0.051	1.009
Duality	-	0.047	1.876**	0.012	0.532
OwnCon	+/-	0.008	0.149	0.052	0.942
Adjusted R^2		0.062		-0.011	
F-Statistic		1.499		0.848	
Prob. (F)		P<0.160		P<0.574	
No. Firms		77		131	

Table presents results of regression models examining the relationship between the level of compliance with AASB 6 & AASB 136 and independent variables for the full sample.
* Significant at the 0.01 level (one-tailed)
** Significant at the 0.05 level (one-tailed)
*** Significant at the 0.10 level (one-tailed)
\+ Significant at the 0.01 level (two-tailed)
++ Significant at the 0.05 level (two-tailed)
+++ Significant at the 0.10 level (two-tailed)
Dependent variable *DCI* is the level of compliance with AASB 6 and AASB 136, calculated as ratio of deemed compliance over total applicable mandated disclosure items; *Aud_Idp* is the ratio of non-audit fees to total audit fees; *Specialist* is a dummy variable, represents firms that are audited by a specialist auditor which measured by the top 20% of industry share; *FirmSize* is measured by the natural log of total assets; *Leverage* is the ratio of long-term debt to equity; *Profitability* is the ratio of the earnings before tax to equity; *Big4* is a dummy variable represents being audited by one of the Big4 accounting firms; *Age* is measured by the number of years since listing; *Liquidity* is current assets divided by current liabilities; *Brd_Idp* is the ratio of independent director to total board of directors; *Duality* is a dummy variable, coded 1 if the board of directors is chaired by its CEO; *OwnCon* is the proportion of shares owned by the top 20 shareholders.

6.4.4 Level of Board Independence

This section examines whether numbers of independent directors on board would have an impact on the relationship between auditor independence and audit specialisation and level of compliance with AASB 6 and AASB 136. The pooled sample is divided into a sub-sample of firms that have more than 50%[58] of the board comprising independent directors (Panel B) and a sub-sample with less than 50% of board comprising independent directors (Panel A).

Table 6.6 Panel A shows an insignificant positive coefficient on *Aud_Idp*. This reveals that economic bonding between the firms that have less board independence and the incumbent auditing firms seem not to have an impact on the level of compliance with AASB 6 and AASB 136. In comparison, results show a significant negative coefficient on *Aud_Idp* for firms that have more independent directors on the board, (see Table 6.6 Panel B). This signals that the higher the economic dependence of the incumbent auditors on their clients tends to lead to lower magnitudes of compliance with the accounting standards. This infers an impairment of auditor independence may be due to supplying non-audit services.

On a different note, in Panel A and Panel B of Table 6.6 the coefficients on *Specialist* are positive and insignificant. It seems, therefore, that specialist auditors do not have an impact on the magnitude of compliance with AASB 6 and AASB 136 regardless of the level of independent directors on the board.

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[58] It is noted that a better grouping method is to segregate the board of directors into 100% independent when the ratio of independent directors to total directors on board is 1. However, due to data constraints, this study sub-samples the data into firms that have more or less number of independent directors.

In regards to control variables, Table 6.6 Panel A shows coefficients with negative on *FirmSize* (p<0.10), positive on *Big4* (p<0.05) and positive on *Duality* (p<0.10). It implies that firms that have less independent directors which are smaller in size, audited by Big4 auditing firms, and whose chairman of the board of directors is led by its CEO, produces a higher level of compliance with the accounting standards. Furthermore, Table 6.6 Panel B indicates that firms with more independent directors and with higher levels of *leverage* (p<0.05), and are audited by Big4 auditing firms (p<0.01) have higher levels of compliance with the mandatory disclosures in AASB 6 and AASB 136.

Table 6.6: Partitioning by Level of Board Independence

| | Prediction | Level of Board Independence | | | |
| | | PANEL B
Less Board Independence | | PANEL A
More Board Independence | |
		Beta	*t*-Statistic	Beta	*t*-Statistic
Constant		1.093	4.060+	0.745	5.447+
Aud_Idp	-	0.006	0.079	-0.092	-2.615*
Specialist	+	0.027	0.598	0.006	0.227
FirmSize	+	-0.027	-1.575***	-0.001	-0.165
Leverage	+/-	-0.062	-0.643	0.088	1.878**
Profitability	+	0.015	0.380	-0.019	-0.838
Big4	+	0.077	2.230**	0.058	3.060*
Age	+/-	0.002	0.940	-0.001	-0.910
Liquidity	+/-	-0.001	-0.419	0.000	0.400
Duality	-	0.049	1.503***	0.019	0.982
OwnCon	+/-	0.110	1.362***	0.042	0.934
Adjusted R^2		0.073		0.129	
F-Statistic		1.533		3.043	
Prob. (F)		P<0.150		P<0.003	
No. of Firms		69		139	

This table presents the results of regression models that examine the relationship between the level of compliance with AASB 6 & AASB 136 and independent variables for the full sample.
*   Significant at the 0.01 level (one-tailed)
** Significant at the 0.05 level (one-tailed)
*** Significant at the 0.10 level (one-tailed)
+   Significant at the 0.01 level (two-tailed)
++ Significant at the 0.05 level (two-tailed)
+++ Significant at the 0.10 level (two-tailed)
The dependent variable *DCI* is the level of compliance with AASB 6 and AASB 136, calculated as a ratio of deemed compliance over total applicable mandated disclosure items; *Aud_Idp* is the ratio of non-audit fees to total audit fees; *Specialist* is a dummy variable, represents firms that are audited by a specialist auditor which measured by the top 20% of industry share; *FirmSize* is measured by the natural log of total assets; *Leverage* is the ratio of long-term debt to equity; *Profitability* is the ratio of the earnings before tax to equity; *Big4* is a dummy variable represents being audited by one of the Big4 accounting firms; *Age* is measured by the number of years since listing; *Liquidity* is current assets divided by current liabilities; *Brd_Idp* is the ratio of independent director to total board of directors; *Duality* is a dummy variable, coded 1 if the board of directors is chaired by its CEO; *OwnCon* is the proportion of shares owned by the top 20 shareholders.

6.4.5   Duality of Management

This last section of the sub-sample test is to investigate if a chairman of board of directors led by the CEO impacts on the association between auditor independence and audit specialisation and magnitude of compliance with AASB 6 and AASB 136. The pooled-sample is sub-grouped by firms that have a CEO (Panel A) and a non-CEO (Panel B) as the chairman of the board of directors.

Table 6.7 indicates that regression models for the both Panel A and Panel B have significant F-value ($p<0.01$). Both Panel A ($p<0.05$) and Panel B ($p<0.10$) document the coefficient on *Aud_Idp* is significant and positive. The result shows that regardless of whether the firm's board of directors is chaired by the CEO (Panel A: *Duality*) or not (Panel B: *NonDuality*), the higher the level of economic bonding between auditor firms with the clients (proxies by non-audit ratio) generates lower levels of compliance with AASB 6 and AASB 136. This demonstrates that such economic bonding gives rise to the detriment of auditor independence.

In contrast, Panel A and Panel B in Table 6.7 show the coefficient on Specialist is insignificant. This implies disregarding to firms that are audited by an industry specialist or not, it seems not having an influence on the magnitudes of compliance with the AASB 6 and AASB 136.

Examining the control variables, Table 6.7 Panel A shows *Duality* firms that are smaller in size ($p<0.05$), less profitable ($p<0.05$), audited by Big4 ($p<0.01$), more liquid ($p<0.10$), and have a higher proportion of company shares owned by top 20 shareholders, have a higher level of compliance with the mandatory disclosures of AASB 6 and AASB 136. In contrast, for *NonDuality* firms' results shown in Table 6.7 Panel B, suggest those audited by Big4 auditing

firms (p<0.01) and have more independent directors on the board (p<0.05) have higher magnitudes of compliance with AASB 6 and AASB 136.

Table 6.7: Partitioning by Duality

	Prediction	Duality			
		PANEL A Duality Firms		PANEL B NonDuality Firms	
		Beta	t-Statistic	Beta	t-Statistic
Constant		1.027	4.242+	0.764	5.360+
Aud_Idp	-	-0.099	-1.863**	-0.055	-1.472***
Specialist	+	-0.060	-1.270	0.028	1.164
FirmSize	+	-0.027	-1.882**	-0.004	-0.469
Leverage	+/-	0.082	0.992	0.053	1.102
Profitability	+	-0.118	-2.692*	-0.006	-0.282
Big4	+	0.122	3.890*	0.049	2.580*
Age	+/-	0.002	1.429***	-0.001	-0.790
Liquidity	+/-	0.002	1.602***	0.000	-0.165
Brd_Idp	+	-0.037	-0.536	0.072	1.663**
OwnCon	+/-	0.174	2.478*	0.011	0.243
Adjusted R^2		0.514		0.070	
F-Statistic		5.013		2.258	
Prob. (F)		P<0.000		P<0.017	
No. of Firms		39		169	

This table presents the results of regression models that examine the relationship between the level of compliance with AASB 6 & AASB 136 and independent variables for the full sample.
*   Significant at the 0.01 level (one-tailed)
** Significant at the 0.05 level (one-tailed)
*** Significant at the 0.10 level (one-tailed)
+   Significant at the 0.01 level (two-tailed)
++ Significant at the 0.05 level (two-tailed)
+++ Significant at the 0.10 level (two-tailed)
The dependent variable *DCI* is the level of compliance with AASB 6 and AASB 136, calculated as a ratio of deemed compliance over total applicable mandated disclosure items; *Aud_Idp* is the ratio of non-audit fees to total audit fees; *Specialist* is a dummy variable, represents firms that are audited by a specialist auditor which measured by the top 20% of industry share; *FirmSize* is measured by the natural log of total assets; *Leverage* is the ratio of long-term debt to equity; *Profitability* is the ratio of the earnings before tax to equity; *Big4* is a dummy variable represents being audited by one of the Big4 accounting firms; *Age* is measured by the number of years since listing; *Liquidity* is current assets divided by current liabilities; *Brd_Idp* is the ratio of independent director to total board of directors; *Duality* is a dummy variable, coded 1 if the board of directors is chaired by its CEO; *OwnCon* is the proportion of shares owned by the top 20 shareholders.

6.5 Further Robustness/Sensitivity Tests Conducted

The primary purpose of this chapter has been to describe and detail the main robustness and sensitivity tests conducted to determine the validity of the main results reported in Chapter 5. The results detailed in this chapter should not be perceived as an exhaustive list of all robustness and sensitivity tests conducted. Rather, the results tests provided a snapshot of all robustness and sensitivity tests undertaken. Results presented in detail are deemed the most relevant, justifiable and complete amongst all robustness and sensitivity tests performed.

Whilst prior disclosure research infers a multitude of factors (including those associated with firm characteristics and corporate governance) can influence disclosure practices and patterns, it is impractical to consider all within the context of this study. Independent and control variables included in this study were selected based on deemed relevance, prior theoretical and empirical support, and availability of data. Nonetheless, additional robustness and sensitivity tests (above those detailed in Chapter 6) involving the inclusion of extra omitted variable were conducted. For example, studies in the past decade have increasingly used growth as a determinant (or control variable) associated with various financial accounting issues (e.g., earnings management, disclosure). Data necessary for calculating a proxy for growth was collected in addition to information for the study's main variables. Regression analysis detailed in Chapter 5 was performed again. The additional tests yield findings highly similar to the main results. Further examination also indicates a high correlation between growth and firm size as measured using total assets. The high correlation suggests growth may also be used as a proxy for size (a results supported by additional (untabulated) tests). As additional tests using growth do not yield any significant differences to the

main findings (hence, does not yield any further insights above that presented) and the correlation with firm size, discussion on results related to the inclusion of growth is not formally presented. This similarly applies to other omitted variables (e.g., risk, complexity, number of subsidiaries) that were included in regressions performed again.

Whilst a lack of any differences is one explanation for not tabulating and discussing tests performed using various omitted variables, another reason is the lack of data. For instance, prior research implies corporate governance features (other than those examined in this study) may influence disclosure practices. This includes audit committees. At the time this study is undertaken, only the largest (i.e., Top 300 by market capitalization) were required to have a formal audit committee. Consequently, a sizeable proportion of firms included in this analysis did not have a formal audit committee (or were only in the preliminary stages of establishing an audit committee). This presented a major hurdle in collecting sufficient and consistent data to perform any valid empirical analysis on the potential cross-sectional influences of audit committee features such as size, diligence, expertise and independence. As tests could only be performed using significantly reduced samples, analysis performed to consider the influence of audit committee features (and other corporate governance features (such as remuneration or nomination committee)) are not formally presented due to difficulties in drawing any meaningful comparisons with main results.

Finally, in some prior disclosure research utilising an index, analysis has been presented using a subset(s) of the full index (see, for example, corporate social reporting or intellectual capital disclosure research). For the purposes of this study, the results

presented (both for the main, and robustness and sensitivity analysis) has been based solely on the full index (i.e., the DCI) spanning AASB – 6 and AASB – 136. Attempts were made in this study to decompose the DCI into relevant subsets for purposes of performing additional analysis. However, after a serious review of full DCI and the associated standards, it was decided decomposition could not be clearly performed and supported. Several reasons justify this decision. First, there is no theoretical rationale to clearly and combine elements of the disclosure requirements of the two standards covered in this study into clear and independent subsets. Second, unlike prior research in such areas as corporate social responsibility and intellectual capital, there is no prior empirical research providing guidance or a clear track record of subsets pertinent to this study. Third, there is a lack of justification to infer specific disclosure requirements in the AASB – 6 and AASB – 136 are more or less important than another. Hence, dividing the disclosures in subsets in an arbitrary manner may exclude requirements perceived by users and/or preparers to be of higher significance than those included in the subset leading to potentially misleading findings. Finally, given the disclosure pattern of each firm across the various disclosure items, it is felt that decomposition into subsets using an arbitrary approach would likely produce results difficult to interpret and compare relative to the main findings.[59]

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[59] Though it is stated that analysis of a decomposed DCI is not formally presented for various reasons, exploratory analysis was performed using subsets of the main measurement index. Whilst the subsequent analysis did provide findings worthy of consideration, the lack of theoretical and empirical background underpinning decomposition of items into the subset made interpretation of the results meaningless and any implications highly questionable. As the presentation of such findings is likely to provide confusing results with an untenable basis for interpretation relative to the main results, it is decided to exclude these from the thesis so as not to distract from the study's primary focus and objectives.

6.6   Chapter Summary

To test the validity of the findings of the primary model documented in Table 5.10, this study tests several alternative proxies for the independent variables, namely auditor independence and audit specialisation. The main alternative proxies for audit independence are log audit fees, log non-audit fees, and log total fees. In addition, the percentile rank of audit fees and non-audit fees, and total fees are employed as alternate proxies for auditor independence. The results of tests using alternative measures confirm the results of the primary model. The results show that the findings are robust and insensitive to definitions employed. This supports the argument that the economic bonding between clients and auditors as a result of non-audit services provided, gives rise to lower level of compliance with AASB 6 and AASB 136. Hence, the results further imply that such economic dependence does influence auditor independence.

Similarly, six alternatives measures are utilised to proxy for audit specialisation. These include employing different arbitrary threshold cut-off rates of industry market share. Furthermore, a ranking system of top one, two, three are adopted. Finally, a continuous ranking is utilised as an alternative proxy for audit specialisation. Results of tests using the alternative proxies also confirm the main findings presented in Table 5.10. The additional robustness tests again fail to lend support to the argument that firms audited by an industry specialist have a higher level of compliance with AASB 6 and AASB 136.

Further robustness tests are performed by partitioning the pooled sample into few sub-samples based on firm size, client firm performance, Big4 auditors, board independence and duality. Results show the auditor type influence independence when

supplying non-audit services to large clients (in term of size), poor performing firms, firms with more independent directors on board, and firms regardless of whether board of directors is led by the CEO. This implies the economic bonding between auditor and client has an influence on the levels of compliance with mandatory disclosures in AASB 6 and AASB 136. In contrast, results show coefficients on *Specialist* (audit specialisation) in different partitioned sub-samples are insignificant.

Overall, the findings in the above sensitivity tests confirm the key findings of Chapter 5. The findings documented from the main model are robust and the results are not driven by different measures.

In the final chapter, results, implications, and limitations are discussed. Future research possibilities and how this study could be extended are set out in Chapter 7.

Chapter 7 CONCLUSION

7.1 Summary of the Study

Agency theory suggests that it is in the interest of management to engage an external audit to express an independent opinion on the company financial statement, as well as to provide monitoring and verification of the management's actions (Firth, 1997a). In doing so, it reduces agency costs. The lack of a credible external "audit will likely increase the cost of capital, restrict access to capital, and impose severe restrictions on management's actions" (Firth, 1997a, p. 7). This statement implies that auditing adds value to the quality of financial statements and derives value from its role in reducing agency costs and information asymmetries between corporate management and owners. It is achieved by providing external verification of the reliability of the firm's financial statements (Leftwich, 1980; Ferguson et al., 2003; Almer, Gramling and Kaplan, 2008) and the effectiveness of the external monitoring by the audit firm, which in turn, depends on its audit quality (DeAngelo, 1981a, 1981b).

As articulated in Chapter 1, the main objective of this thesis is two-fold: (1) to investigate the magnitude of compliance with AASB 6 *Exploration for and Evaluation of Mineral Resources* and AASB 136 *Impairment of Assets*; and (2) to examine the influence of audit quality on this level of compliance. Audit quality, as discussed throughout this thesis, is a function of auditor independence and technical competence (audit specialisation) (Maines, 2001; Houghton and Jubb, 2002). Utilising the tenets of agency theory, the following two key hypotheses are tested:

H_1:   *There is a positive association between the level of auditor independence and the firm's level of compliance with mandatory disclosures of AASB 6 and AASB 136.*

H_2:   *There is a positive association between auditor specialisation and the firm's level of compliance with mandatory disclosures of AASB 6 and AASB 136.*

Using virtually the whole population of 305 Australian mineral resource firms listed on the ASX the level of compliance is assessed against a 62-item disclosure compliance index. Firth (2002) contends that independence in fact (actual independence) is generally unobservable; therefore, independence in appearance assumes prime importance (Beattie and Fearnley, 2002). Furthermore, appearance is perceived as representative of actual independence (Olazabal and Almer, 2001; Joshi et al., 2007). Maines (2001) claims that auditors' competence is linked to task-specific knowledge of the auditors' expertise. Past research has mostly used auditors' industry specialisation (such as: Craswell et al., 1995, Solomon et al., 1999; Zhou and Elder, 2002; Balsam et al., 2003; Krishnan, 2003a) as a proxy for auditors' technical competence. Hence, this thesis defines auditor independence as *independence in appearance* and audit specialisation as *auditor industry specialisation* (see Chapter 3 for a detailed discussion).

This chapter summary is organised as follow. Section 7.2 discusses the findings and the implications are presented in Section 7.3. Future research possibilities are set out in Section 7.4. Last but not least, concluding remarks are presented in Section 7.5.

7.2   Discussion and Analysis of Results

This section summarises the results documented in testing of the two key hypotheses stated in the preceding section and discusses its implication. This thesis examines the relationship between two auditor quality characteristics, namely auditor independence and audit specialisation, and the magnitude of compliance with the mandatory disclosures AASB 6 *Exploration for and Evaluation of Mineral Resources* and 136 *Impairment of Assets*.

7.2.1   Magnitude of Compliance

A Disclosure Compliance Index (DCI) is constructed to measure for corporate compliance with mandatory disclosures in AASB 6 and AASB 136. The DCI checklist consists of 62 information items that are required to be disclosed by AASBs 6 and 136. In this study, each item of the required disclosure of AASBs 6 and 136 is equally weighted (see Chapter 4 for more detail and defence of the construction of the dependent variable).

As shown in Table 5.2, on average there is 76% compliance rate with AASB 6 and AASB 136 by Australian mineral resources listed firms. Stated differently, there is a non-compliance rate of 24%. This could be seen as surprisingly high, given that all 62 items are mandatory. Furthermore, no company fully complies with all compulsory disclosures of AASB 6 and AASB 136.

The frequency of mandatory compliance varies across items. The most complied items are in AASB 6. The top five items that are nearly 100% complied with are: (1) disclosure of information that identifies and explains the amounts recognised in the financial report arising from the exploration for and evaluation of mineral resources; (2) disclosure of firm accounting policies for exploration and evaluation expenditures; (3) the recognition of exploration and

evaluation assets; (4) the amounts arising from the exploration for and evaluation of mineral resources; and (5) disclosure of the recoverability of the carrying amount of the exploration and evaluation assets is dependent on (i) successful development and commercial exploitation or (ii) sale of the respective areas of interest. The possible explanation for those items to have such high compliance may be due to being easily identified and based on non-controversial reliable historical cost.

In contrast, the item with the highest level of non-compliance related to AASB 136 is item 20 of the DCI (see Table 4.2 for a complete list of the items). Item 20 requires firms to disclose the amount of reversals of impairment losses recognised in the profit or loss, and directly in equity during the period.

A possible explanation for the most compliance items of AASB 6 is that the required disclosures are simpler in comparison to AASB 136 which requires firms to provide more proprietary information and more complicated disclosures. For example, (i) disclosure on the basis used to determine fair value less costs to sell (such as whether fair value was determined by reference to an active market), and (2) if the recoverable amount is based on value in use, firms are required to disclose the discount rates used in the current estimate and previous estimate of value in use. Such information requires justification and is controversial on benchmarks adopted.

7.2.2 Compliance and Auditor Independence

The statistical results of the association between auditor independence and the extent of compliance with mandatory disclosures are consistent and statistically significant in both the core model (see Table 5.10) and robustness tests (see Table 6.1).

The findings of the core model show a significant (p<0.05) association between the magnitude of compliance with mandatory disclosures and *NonAuditRatio* (non-audit fees to total fees). The negative coefficient on *NonAuditRatio* (Auditor Independence) reveals that the higher the non-audit ratio (i.e., the higher non-audit fees to total revenue) the lower the level of compliance achieved by clients/companies. This suggests that in the Australian mineral resources sector context, non-audit services rendered to clients seems to cause detriment to auditor independence. In turn, this influences the levels of compliance with the mandatory disclosures in AASB 6 and AASB 136. The significant negative association is even stronger when auditor independence is alternatively proxies by *LogAuditFees* and *LogTotalFees* (p<0.01). The findings have been consistent in a series of robustness test (see Table 6.1) for auditor independence (*LogNonAuditFees*, *RankAuditFees*, *RankNonAuditFees*, and *RankTotalFees*), the documented evidence shows a statistically significant negative association (p < 0.05). Furthermore, when the regression is run in isolation of the relationship between level of compliance with mandatory disclosures and auditor independence (see Table 5.10, Panel A), the coefficient on *NonAuditRatio* has consistently shown a significant negative relationship (p < 0.05) between the level of compliance and auditor independence.

Consistent with this dissertation's *H₁* hypothesis the findings provide strong and consistent evidence. The overall evidence documented in the main tests and subsequent robustness tests consistently show that the presence of non-audit services rendered by an incumbent auditor to its clients in the form of paying large non-audit fees, seems to hamper the auditor independence. Therefore auditors play a significant role in conducting an effective audit which, thereby, increases the level of compliance with

mandated disclosures of AASB 6 and AASB 136. Given the above findings, H_1 is fully supported.

The perception of auditor independence being affected with the increasing of non-audit fees is in line with past studies reported in the U.S. evidence by Frankel et al., (2002), U.K. findings of Ferguson et al., (2004) and Denmark studies by Quick and Warming-Rasmussen (2005)[60].

The feasible explanation for the significant relationship between the level of compliance with mandatory disclosures (AASB and AASB 136) and auditor independence may be because of the competitive environment of the audit market (Chaney, Jeter, and Shaw, 2003). Given increasing competitiveness in the market for audit services, it is more likely for the auditors to jeopardise their independence in order to retain particularly large or profitable audit clients (Chaney et al., 2003). Consequently, it potentially causes detriment to the audit quality by allowing non-disclosure of mandatory requirements by audit clients.

Another plausible reason for auditors to compromise their independence is that incumbent auditors are operating in a low litigation environment such as Australia (Lee et al., 2003), thereby, the incumbent auditors are willing to accommodate to clients' non-compliance with the mandatory disclosures as to retain and maintain their client base. The weaker enforcement environment in Australia compared to other developed countries such as the U.S.

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[60] One point to note is that even though this thesis results are aligned with past studies, Frankel el al. (2002) among others, one point to note is the characteristics of non-audit fees in the Australian capital market is fundamentally different from those in the U.S. capital market (i.e., data employed in Frankel et al., (2002)). For instance, the provision of non-audit fees is 26% of Australian audit firm's total fee and only 46% of the sample firms that engage non-audit services from their incumbent auditors. In contrast to the U.S. counterparts that have 95% of the sample firms that engage non-audit services from their incumbent auditors.

(Francis et al., 2005) appears to contribute a conductive environment for aggressive non-disclosures of mandatory requirements of AASB 6 and AASB 136.

7.2.3   Compliance and Audit Specialisation

The statistical results of the association between audit specialisation and the extent of compliance with mandatory disclosures are consistent and insignificant in both the core model (see Table 5.10) and robustness tests[61] (see Table 6.2). This implies that in the context of Australian mineral resources sector, firms that engage a specialist auditor do not necessarily achieve a result of a higher quality of financial statements which in this case is higher magnitudes of compliance with mandatory disclosures of AASB 6 and AASB 136.

The absence of a statistically significant relationship between audit specialisation and the level of compliance suggests that there is insufficient evidence to support the proposed hypothesis that firms which engage specialist auditor services result in a higher level of compliance. Thereby, H_2 is not supported.

This finding is in line with evidence reported in Chen et al., (2005) who fail to support the notion that industry specialist auditors fetch higher audit quality. There are many possible explanations why industry specialisation is not an important element in audit quality in the Australian context. One possible reason is that the Australian audit market is comparatively smaller than the U.S. The relatively small proportion 12% (37 out of 305 firms) of Australian mineral resources firms audited by industry specialist auditors is in stark contrast to other country audit environments. For instance, 86% in

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[61] With the exception of robustness test when Audit Specialisation is proxied by *MarketShare>1%* and *TopThreeAuditors* that results in a negative association. Consistent with the main test analysis, the association has a statistically insignificant coefficient.

Singapore (Rusmin, 2006) and approximately 85% in the U.S. (Mayhew and Wilkins, 2003; Francis et al., 2005).

Another possible reason for the non-significant finding is the size composition of Australian mineral resource firms with a high percentage of smaller firms, (see Table 5.4, average of AUD $325,274) with a few extremely large firms (AUS $65,311,449,000). Smaller firms may require more personalised relationships; hence prefer to be audited by relatively small accounting firms which have a small client base (Mayhew and Wilkins, 2003). Furthermore, industry specialist auditors command higher audit fees than non-specialist auditors (Ferguson et al., 2003; Francis et al., 2005). Large firms are more economically important to the incumbent auditors, thereby, they may well have greater influence/bargaining power over the auditing firms. Consequently, auditors have an increased capacity to detect non-compliance with mandatory disclosures reported by small firms than those of large ones. This notion has been put forward by Carcello and Nagy (2004) who find a negative relationship between clients' financial fraud and industry specialist auditors, but such association is much weaker for larger clients.

Last but not least, another plausible possible reason is that industry specialisation is not well recognised as an important element of audit quality relevant to Australian mineral resource firms. The reasoning is that the enforcement and litigation of auditors is less likely to take place in Australia in contrast to other developed countries such as the U.S. (Lee et al., 2003; Francis et al., 2005). Hence, the demand for an industry specialist auditor for quality differentiated auditing is lower in the Australian capital market with more unwillingness to pay the higher audit fees

commanded by the specialists (Ferguson and Stokes, 2002; Francis et al., 2005).

7.3 Implications of the Study

Findings of this study have important implications for accounting bodies, regulators, investors, enforcement bodies, and other interested parties. This thesis focuses on mandatory disclosures and calculates only a 76% compliance rate. Taken at face value, the 24% non-compliance rate suggests the inadequacy of the mechanism in monitoring compliance by enforcement bodies. One plausible reason for such inadequacy could be due to a lack of professional training and insufficient/non-competitive wages to attract highly qualified accountants. Furthermore, there may be a lack of commitment from government at a policy level to enforcement. Another possible explanation to the 24% non-compliance rate is that this study utilises first year data after the AASB fully adopted the IFRS. Thus, there may be some time lag effects before companies and/or accounting firms become better acquaintance with the standards and result in a better compliance[62]. However, accounting rules in Australia were mandatory long before this time period.

Insights drawn from this study may be of assistance to Australian regulators and other policymakers as they consider the costs and benefits associated in imposing any regulations on mandatory disclosures. Regarding the 24% non-compliance rate, this thesis suggests that regulators could pursue one or more of the following four courses of actions.

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[62] In order to determine the impact on level of compliance should AASB move to complete adoption of the IFRS, a longitudinal study is required to take into consideration of the learning curve and time lag that is needed by companies and auditing firms to become fully conversance with the new IFRS.

First, regulators could conduct further research on the importance of each individual item that has non-compliance. Based on such findings, regulators could evaluate each disclosure requirement carefully from a cost/benefit analysis point of review and possibly reduce the current number of mandatory items that have mostly not been complied with by most firms and to make those items as optional/voluntary. If the non-disclosures of those items seem to be not an issue to investors and other key stakeholders, such imposed disclosures might be jettisoned as an inappropriate additional burden/cost to firms.

Second, the regulators could 'do nothing'. That is, regulators may determine it is beyond their reach to enforce compliance with the disclosure requirements of AASB – 6 and AASB – 136. Regulators, therefore, may allow enforcement to work on a quasic *lassez-faire* manner with regulators only being responsible for adjusting the meaning, interpretation and items required to be disclosed. This implies free markets are the best policy for enforcement and determination of required disclosure levels. Such an approach, however, would be contrary to the tenets and values espoused by regulation theory. In principle, regulation theory charges that regulators are a social good with a moral requirement to provide a level playing field for all interested actors within the capital market. If a regulator fails to act when conditions within the market appear to be imbalance (such as when there are low levels of compliance) then this could disadvantage certain interested actors. Failure to act in such conditions would contradict a regulator's moral obligation. So whilst the option to 'do nothing' is available to regulators, regulation theory that provides some underpinnings for this thesis is unlikely to be a valid option.

Third, to ensure greater compliance, regulators could enforce the investigation and penalisation of any non-compliance with the mandatory disclosures via tougher regulations. Under this scenario, stronger, vibrant and more actively pursued enforcement is necessary to maximise compliance.

Finally, as shown in the findings of this thesis, regulators could instead directly intervene in the enforcing of compliance with mandatory disclosures. That is, regulators could indirectly improve the level of compliance by means of auditor independence. The results from this thesis show the level of compliance is significantly associated with the extent of compliance. Hence, regulators could more closely regulate the non-audit services component to boost the magnitude of compliance.

The dissertation's results show an insignificant association between audit specialisation and the extent of compliance. It could thus be suggested that no additional encouragement be made for greater engagement of specialist auditors in the mineral resources sector. As such engagement may only increase audit fees, hence operating costs, to the mineral resources firms with no positive impact on the magnitude of compliance with the mandatory disclosures with AASB 6 and AASB 136. Conversely, the findings also show there is no apparent need for regulation of auditor specialization issues in the Australian context.

7.4   Limitations of the Study

This thesis provides useful insights into the behaviour of mineral resource firms with regards to the association between mandatory compliance with AASB 6 and AASB 136 and audit quality. However, like all other empirical research this study is not without its caveats. The following limitations should be noted.

First, the sample frame of this research is restricted to firms in the mineral resources sector that is listed on the ASX. Findings, therefore, should not be aggressively interpreted to be reflective of all practices and influences that would be observed with other Australian industries, and mineral resource firms operating in other domestic/international settings. Second, given the analysis only focuses on two AASB standards, caution should be applied if extrapolating results to other accounting standards. Third, another noted limitation is that this study's findings are based on data from firms with fiscal year-ends between the periods of 1 July 2005 to 30 June 2006. Hence, there is a possibility that conclusions drawn from this thesis may only be a partial temporal picture. The chosen study period is a post study of CLERP 9 enactment. Therefore, results cannot retrospectively apply to past findings. Fourth, the implications drawn from this research only address the objectivity and impartiality of auditor independence *in appearance*. Therefore, issues dealing with auditor independence *in fact* are beyond the scope of this study. Fifth, in testing the hypotheses this thesis attempted to include variables that are justified theoretically and empirically. In addition, a series of robustness tests are made to incorporate the most available and appropriate proxies. However, several tested models result in low explanatory power. This lack of explanatory power implies that other significant variables may have been omitted from the statistical analysis and may still be of influence.

Despite these limitations, this thesis makes several important contributions. While previous disclosure research primarily focuses on voluntary compliance with IAS/IFRS and its association with firm level characteristics, this study seems be the first study that provides insights on external institutional factor (i.e., auditor

independence and audit specialisation) that may influence the extent of compliance with mandatory disclosures, in particular in the mineral resources sector. Furthermore, most prior research applies only limited content analysis on required disclosures Cairn (2002) argues that such practices restrict severely on the value of the implications drawn. This study documents the methodological strengths by including all disclosures by AASB 6 and AASB 136. Last but not least, this is the first comprehensive analysis of the extent of compliance with AASB 6 and AASB 136 since the enactment of CLERP 9 from 1 July 2004 and convergence with IAS from 1 January 2005.

7.5 Future Research

The thesis findings may warrant extension to other settings. For instance, the Big-4 and middle tier (e.g., Grant Thornton, BDO) accounting firms have decentralised their organisations and now are more likely to operate through a network of semi-autonomous local practice offices (Narayanan, 1995). These local offices contract with clients, administer audit engagements, and issue audit reports signed on letterhead of the local office of the accounting firm (Francis, 1999; Reynolds and Francis, 2001). This implies that each individual accounting firm is unique and drives its income at the firm level (hereafter office level). This thesis employs a country-level perspective in measuring auditor independence (proxies by NAS) which considers an accounting firm's practice in aggregate (hereafter national level). Therefore, research on the impact on gaining or losing a client may be more significant at the office level in comparison to the national level (DeFond and Francis, 2005). Future research could extend this study by breaking down NAS earned by accounting firms at the office level.

In the aspect of audit specialisation, this thesis adopts industry market share at a national level due to the limitation on the number of firms within the mineral resources firms. Francis et al., (2005) and Ferguson et al., (2006) argue that the quality industry specialist auditors are driven by office level clients. Hence, future research could extend this study by investigating audit specialisation's influences on the extent of compliance with mandatory disclosures at the office level.

Future research could also address some of the limitations of this study. For instance: (1) to extend the study to cross-sectional industries; (2) to increase the time frame of study to multi-years; (3) to cover more standards; so as to be able to better generalise the findings. Finally, future research could explore other proxies for auditor independence *in fact*, such as using the attributes of real accounting data.

7.6 Concluding Remarks

This thesis provides further and more recent evidence on mandatory disclosure. It adds to a growing body of research on mandatory disclosure, auditor independence and audit specialisation. The findings reveal that the level of mandatory compliance with AASB 6 and AASB 136, on average, is at the rate of 76%. Firms that engage non-audit services from their incumbent auditors appear to have their independence affected whereas specialist auditors appear not to influence the extent of the compliance.

This study focuses on post-Enron data where corporate governance and the regulatory environment have gone through considerable reforms. This time frame is considered to be a challenging period for both auditor and the auditing profession in Australia. This

research is conducted based on a relatively new epoch when corporate governance and regulation were significantly refined; it also utilises on the first year data post-adoption of the IFRS by AASB. It provides valuable input for the regulators in evaluating the present governance, policies, and new adoption of IFRS with respect to auditor independence and audit specialisation.

Finally, given that there is no known prior study on the association between the compliance with mandatory disclosures and external institutional factor (auditor independence and audit specialization) in Australia, this thesis provides a good starting point for future research.

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Appendix A: Key Terms and Concepts

It is important to have a basic understanding of key terms and fundamental concepts that are adopted in this study. This will confine the boundaries of this research and will in turn assist the readers in their interpretation of the research.

Area of interest: "an individual geological area which is considered to constitute a favourable environment for the presence of a mineral deposit or an oil or natural gas field, or has been proved to contain such a deposit or field" (AASB 6, 2004, p. 20).

Carrying amount: "the amount at which an asset is recognised after deducting any accumulated depreciation (amortisation) and accumulated impairment losses thereon" (AASB 136, 2004, p. 15).

Cash-Generating Unit (CGU): "the smallest identifiable group of assets that generates cash inflows that are largely independent of the cash inflows from other assets or groups of assets" (AASB 136, 2004, p. 15).

Economically recoverable reserves: "the estimated quantity of product in an area of interest that can be expected to be profitably extracted, processed and sold under current and foreseeable economic conditions" (AASB 6, 2004, p. 20).

Exploration for and evaluation expenditures: "expenditures incurred by an entity in connection with the exploration for and evaluation of mineral resources before the technical feasibility and commercial viability of extracting a mineral resource are demonstrable" (AASB 6, 2004, p. 20).

Exploration for and evaluation of mineral resources: "the search for mineral resources, including minerals, oil, natural gas and similar non-regenerative resources after the entity has obtained legal rights to explore in a specific area, as well as the determination of the technical feasibility and commercial viability of extracting the mineral resources" (AASB 6, 2004, p. 20).

Fair value less costs to sell: "the amount obtainable from the sale of an asset or cash-generating unit in an arm's length transaction between knowledgeable, willing parties, less the costs of disposal" (AASB 136, 2004, p. 15).

Impairment loss: "the amount by which the carrying amount of an asset or a cash-generating unit exceeds its recoverable amount" (AASB 136, 2004, p. 15).

Recoverable amount of an asset or a CGU: "the higher of its fair value less costs to sell and its value in use" (AASB 136, 2004, p. 15).

Useful life is either: "the period of time over which an asset is expected to be used by the entity" or "the number of production or similar units expected to be obtained from the asset by the entity" (AASB 136, 2004, p. 15).

Value in use: "the present value of the future cash flows expected to be derived from an asset or cash-generating unit" (AASB 136, 2004, p. 16).

Appendix B: Partial Extraction from Corporations Act 2001

Section 300
Annual directors' report—specific information

(1) The directors' report for a financial year

must include details of: (ca) the name of each

person who:

- (i) is an officer of the company, registered scheme or disclosing entity at any time during the year; and
- (ii) was a partner in an audit firm, or a director of an audit company, that is an auditor of the company, disclosing entity or registered scheme for the year; and
- (iii) was such a partner or director at a time when the audit firm or the audit company undertook an audit of the company, disclosing entity or registered scheme; and

Special rules for listed companies

(11) The report for a listed company must also include the following details for each director:

(a) their relevant interests in shares of the company or a related body corporate;

(b) their relevant interests in debentures of, or interests in a registered scheme made available by, the company or a related body corporate;

(c) their rights or options over shares in, debentures of or interests in a registered scheme made available by, the company or a related body corporate;

(d) contracts:

- (i) to which the director is a party or under which the director is entitled to a benefit; and
- (ii) that confer a right to cal] for or deliver shares in, or debentures of or interests in a " registered scheme made available by the company or a related body corporate;

(e) all directorships of other listed companies held by the director at any time in the 3 years immediately before the end of the financial year and the period for which each directorship has been held.

Note: Directors must also disclose interests of these kinds to a relevant market operator under section 205G as they are acquired.

(11A)   If a registered company auditor plays a significant role in the audit of a listed company for the financial year in reliance on a declaration made under section 342A, the report for the company must also include details of the declaration.

Listed companies—non-audit services and auditor independence

(11B)   The report for a listed company must also include the following in relation to each auditor:

(a) details of the amounts paid or payable to the auditor for non-audit services provided, during the year, by the auditor (or by another person or firm on the auditor's behalf);

(b) a statement whether the directors are satisfied that the provision of non-audit services, during the year, by the auditor (or by another person or firm on the auditor's behalf) is compatible with the general standard of independence for auditors imposed by this Act;

(c) a statement of the directors' reasons for being satisfied that the provision of those non- audit services, during the year, by the auditor (or by another person or firm on the auditor's behalf) did not compromise the auditor independence requirements of this Act

These details and statements must be included in the directors' report under the heading "Non-audit services". If consolidated financial statements are required, the details and statements must relate to amounts paid or payable to the auditor by, and non-audit services provided to, any entity (including the company, registered scheme or disclosing entity) that is part of the consolidated entity.

(11C) For the purposes of paragraph (I 1B)(a), the details of amounts paid or payable to an auditor for non-audit services provided, during the year, by the auditor (or by another person or firm on the auditor's behalf) are:

(a) the name of the auditor; and

(b) the dollar amount that:

(i) the listed company; or

(ii)   if consolidated financial statements are required—any entity that is part of the consolidated entity; paid, or is liable to pay, for each of those non-audit services.

(11D) The statements under paragraphs (11B)(b) and (c) must be made in accordance with:

(a) advice provided by the listed company's audit committee if

the company has an audit committee; or

(b) a resolution of the directors of the listed company if paragraph (a) does not apply.

(11E) For the purposes of subsection **(11D),** a statement is taken to be made in accordance with advice provided by the company's audit committee only if:

(a) the statement is consistent with that advice and does not contain any material omission of material included in that advice; and

(b) the advice is endorsed by a resolution passed by the members of the audit committee; and

(c) the advice is written advice signed by a member of the audit committee on behalf of the audit committee and given to the directors.

Section 307C

Auditor's independence declaration

Contravention by individual auditor

(1) If an individual auditor conducts:

(a) an audit of the financial report for a financial year; or

(b) an audit or review of the financial report for a half-year;

the individual auditor must give the directors of the company, registered scheme or disclosing entity:

(c) a written declaration that, to the best of the individual auditor's knowledge and belief, there have been:

(i) no contraventions of the auditor independence requirements of this Act in relation to the audit or review; and

(ii) no contraventions of any applicable code of professional conduct in relation to the audit or review; or

(d) a written declaration that, to the best of the individual auditor's knowledge and belief, the only contraventions of:

(i) the auditor independence requirements of this Act in relation to the audit or review; or

(ii) any applicable code of professional conduct in relation to the audit review; are those contraventions details of which are set out in the declaration

(2) An offence based on subsection (I) is an offence of strict liability.
Note: For *strict liability* see section 6.1 of the *Criminal Code.*

Contravention by lead auditor

(3) If an audit firm or audit company conducts:

    (a) an audit of the financial report for a financial year; or

    (b) an audit or review of the financial report for a half-year;

the lead auditor for the audit must give the directors of the company, registered scheme or disclosing entity:

    (c) a written declaration that, to the best of the lead auditor's knowledge and belief, there have been:

        (i) no contraventions of the auditor independence requirements of this Act in relation to the audit or review; and

        (ii) no contraventions of any applicable code of professional conduct in relation to the audit or review; or

    (d) a written declaration that, **to the** best of the lead auditor's knowledge and belief, the only contraventions of:

        (i) the auditor independence requirements of this Act in relation to the audit or review; or

        (ii) any applicable code of professional conduct in relation to the audit or review;

are those contraventions details of which are set out in the declaration.

Section 308

Auditor's report on annual financial report

(1) An auditor who audits the financial report for a financial year must report to members on
whether the auditor is of the opinion that the financial report is in accordance with this Act, including:

    (a) section 296 (compliance with accounting standards); and

    (b) section 297 (true and fair view).

Section 324CA

General requirement for auditor independence—auditors

Contravention by individual auditor or audit company

(1) An individual auditor or audit company contravenes this subsection if:

    (a) the individual auditor or audit company engages in audit activity in relation **to** an audited body at a particular time; and

(b) a conflict of interest situation exists in relation to the audited body at that time; and

(c) at that time:

    (i) in the case of an individual auditor—the individual auditor is aware that the conflict of interest situation exists; or

    (ii) in the case of an audit company—the audit company is aware that the conflict of interest situation exists; and

(d) the individual auditor or audit company does not, as soon as possible after the individual auditor or the audit company becomes aware that the conflict of interest situation exists, take all reasonable steps to ensure that the conflict of interest situation ceases to exist.

Note: For *conflict of interest situation*, see section 324CD

Individual auditor or audit company to notify ASIC

(1A) An individual auditor or audit company contravenes this subsection if:

(a) the individual auditor or audit company is the auditor of an audited body; and

(b) a conflict of interest situation exists in relation to the audited body while the individual auditor or audit company is the auditor of the audited body; and

(c) on a particular day (the *start day):*

    (i) in the case of an individual auditor—the individual auditor becomes aware that the conflict of interest situation exists; or

    (ii) in the case of an audit company—the audit company becomes aware that the conflict of interest situation exists; and

(d) at the end of the period of 7 days from the start day:

    (i) the conflict of interest situation remains in existence; and

    (ii) the individual auditor or audit company has not informed ASIC in writing that the conflict of interest situation exists.

Note: For *conflict of interest situation,* see section 324CD.

(2) An individual auditor or audit company contravenes this subsection *if:*

(a) the individual auditor or audit company engages in audit activity in relation to an audited body at a particular time; and

(b) a conflict of interest situation exists in relation to the audited body at the time; and

(c) at that time:

    (i) in the case of an individual auditor—the individual auditor is not aware that the conflict of interest situation exists; or

    (ii) in the case of an audit company—the audit company is not aware that the conflict of interest situation exists; and

(d) the individual auditor or the audit company would have been aware of the existence of the conflict of interest situation at that time if the individual auditor or audit company had had in place a quality control system reasonably capable of making the individual auditor or audit company aware of the existence of such a conflict of interest situation.

Note: For *conflict of interest situation,* see section 324CD.

Section 324CB

General requirement for auditor

independence—member of audit firm

Contravention by member of audit firm

(1) A person (the *defendant)* contravenes this subsection **if**

(a) an audit firm engages in audit activity in relation to an audited body at a particular time; and

(b) a conflict of interest situation exists in relation to the audited body at that time; and

(c) the defendant is a member of the audit **firm** at that time; and

(d) the defendant is or becomes aware of the circumstances referred to in paragraphs (a) and (b); and

(e) the defendant does not, as soon as possible after the defendant becomes aware of those circumstances, take reasonable steps to ensure that the conflict of interest situation ceases to exist.

Note: For *conflict of interest situation,* see section 324CD.

Member of audit firm to notify ASIC

(1A) A person (the *defendant)* contravenes this subsection if

(a) an audit firm is the auditor of an audited body; and

(b) a conflict of interest situation exists in relation to the audited body while the audit firm is the auditor of the audited body; and

(c) the defendant is a member of the audit firm at a time when the conflict of interest situation exists; and

(d) on a particular day (the *start day),* the defendant becomes aware of the circumstances referred to in paragraphs (a)

and (b); and

(e) at the end of the period of 7 days from the start day:

(i) the conflict of interest situation remains in existence; and

(ii) ASIC has not been informed in writing by the defendant, by another member of the audit firm or by someone else on behalf of the audit firm that the conflict of interest situation exists.

Note: For *conflict of interest situation,* see section 324CD.

Conflict of interest situation of which members are not aware

(4) A person contravenes this subsection if:

(a) an audit firm engages in audit activity in relation to an audited body at a particular time; and

(b) a conflict of interest situation exists in relation to the audited body at the time; and

(c) the person is a member of the audit firm at that time; and

(d) at that time none of the members of the audit firm is aware that the conflict of interest situation exists; and

(e) a member of the audit firm would have been aware of the existence of the conflict of interest situation if the audit firm had in place a quality control system reasonably capable of making the audit firm aware of the existence of such a conflict of interest situation.

Note: For *conflict of interest situation,* see section 324CD.

Section 324CC

General requirement for auditor independence—

director of audit company *Contravention by director*

of audit company

(1) A person (the *defendant)* contravenes this subsection if:

(a) an audit company engages in audit activity in relation to an audited body at a particular time; and

(b) a conflict of interest situation exists in relation to the audited body at that time; and

(c) the defendant is a director of the audit company at that time; and

(d) the defendant is or becomes aware of the circumstances referred to in paragraphs (a) and (b); and

(e) the defendant does not, as soon as possible after the defendant becomes aware of those circumstances, take reasonable steps to ensure that the conflict of interest situation ceases to exist.

Note: For *conflict of interest situation,* see section 324CD.

Director of audit company to notify ASIC

(1A) A person (the *defendant)* contravenes this subsection if:

(a) an audit company is the auditor of an audited body; and

(b) a conflict of interest situation exists in relation to the audited body while the audit company is the auditor of the audited body; and

(c) the defendant is a director of the audit company at a time when the conflict of interest situation exists; and

(d) on a particular day (the *start day*), the defendant becomes aware of the circumstances referred to in paragraphs (a) and (b); and

(e) at the end of the period of 7 days from the start day:

(i) the conflict of interest situation remains in existence; and

(ii) ASIC has not been informed in writing by the defendant, by another director of the audit company or by the audit company that the conflict of interest situation exists.

Note: For *conflict of interest situation,* see section 324CD.

(1B) A person is not excused from informing ASIC under subsection (1A) that a conflict of interest situation exists on the ground that the information might tend to incriminate the person or expose the person to a penalty.

(1C) However, if the person is a natural person:

(a) the information; and

(b) the giving of the information;

are not admissible in evidence against the person in a criminal proceeding, or any other proceeding for the recovery of a penalty, other than proceedings for an offence based on the information given being false or misleading.

(1D) If ASIC is given a notice under paragraph (1A)(e), ASIC must, as soon as practicable after the notice is received, give a copy of the notice to the audited body.

Conflict of interest situation of which another director of audit company aware

(2) A person contravenes this subsection if:

(a) an audit company engages in audit activity in relation to an audited body at a particular time; and

(b) a conflict of interest situation exists in relation to the audited body at the time; and

(c) the person is a director of the audit company at that time; and

(d) at that time, another director of the audit company is aware that the conflict of interest situation exists; and

(e) the audit company does not, as soon as possible after the director referred to in paragraph (d) becomes

aware that the conflict of interest situation exists, take all reasonable steps to ensure that the conflict of interest situation ceases to exist.

Note: For *conflict of interest situation,* see section 324CD.

(3) For the purposes of an offence based on subsection (2), strict liability applies to the physical elements of the offence specified in paragraphs (2)(a), (b), (d) and (e).

Note 1: For *strict liability,* see section 6.1 of the *Criminal Code.*

Note 2: Subsection (6) provides a defence.

Conflict of interest situation of which directors of audit company not aware

(4) A person contravenes this subsection it

(a) an audit company engages in audit activity in relation to an audited body at a particular time; and

(b) a conflict of interest situation exists in relation to the audited body at the time; and

(c) the person is a director of the audit company at that time; and

(d) at that time none of the directors of the audit company is aware that the conflict of interest situation exists; and

(e) a director of the audit company would have been aware of the existence of the conflict of interest situation if the audit company had in place a quality control system reasonably capable of making the audit company aware of the existence of such a conflict of interest situation.

Note: For *conflict of interest situation,* see section 324CD.

Section 324 CD
Conflict of interest situation

(1) For the purposes of sections 324CA, 324CB and 324CC, a *conflict of interest situation* exists in relation to an audited body at a particular time if, because of circumstances that exist at that time:

(a) the auditor, or a professional member of the audit team, is not capable of exercising objective and impartial judgment in relation to the conduct of the audit of the audited body; or

(b) a reasonable person, with full knowledge of all relevant facts and circumstances, would conclude that the auditor, or a professional member of the audit team, is not capable of exercising objective and impartial judgment in relation to the conduct of the audit of the audited body.

(2) Without limiting subsection (1), have regard to circumstances arising from any relationship that exists, has existed, or is likely to exist, between:

(a) the individual auditor; or

(b) the audit firm or any current or former member of the firm; or

(c) the audit company, any current or former director of the audit company or any person currently or formerly involved in the management of the audit company;

Section 324 CE

Auditor independence—specific requirements for individual auditor

Specific independence requirements for individual auditor

(1) An individual auditor contravenes this subsection **if:**

  (a) the individual auditor engages in audit activity at a particular time; and

  (b) a relevant item of the table in subsection 324CH(1) applies at that time to a person or entity covered by subsection (5) of this section; and

  (c) the individual auditor is or becomes aware of the circumstances referred to in paragraph (b); and

  (d) the individual auditor does not, as soon as possible after the individual auditor becomes aware of those circumstances, take all reasonable steps to ensure that the individual auditor does not continue to engage in audit activity in those circumstances.

Individual auditor to not 05) ARC

(IA) An individual auditor contravenes this subsection if:

  (a) the individual auditor is the auditor of an audited body; and

  (b) a relevant item of the table in subsection 324CH(1) applies to a person or entity covered by subsection (5) of this section while the individual auditor is the auditor of the audited body; and

  (c) on a particular day (the *start day),* the individual auditor becomes aware of the circumstances referred to in paragraph (b); and

  (d) at the end of the period of 7 days from the start day:

    (i) those circumstances remain in existence; and

    (ii) the individual auditor has not informed ASIC in writing of those circumstances

Section 324CF

Auditor independence—specific requirements for audit firm

Contraventions by members of audit firm

(1) A person (the *defendant)* contravenes this subsection if:

  (a) an audit firm engages in audit activity at a particular time; and

  (b) a relevant item of the table in subsection 324CH(1) applies at that time to a person or entity covered by subsection (5) of this section; and

  (c) the defendant is a member of the audit firm at that time; and

  (d) the defendant is or becomes aware of the circumstances

referred to in paragraphs (a) and (b); and

(e) the defendant does not, as soon as possible after the defendant becomes aware of those circumstances, take all reasonable steps to ensure that the audit firm does not continue to engage in audit activity in those circumstances

Member of audit firm to notify ASIC

(1A) A person (the *defendant)* contravenes this subsection if:

(a) an audit firm is the auditor of an audited body; and

(b) a relevant item of the table in subsection 324CH(1) applies to a person or entity covered by subsection (5) of this section while the audit firm is the auditor of the audited body; and

(c) the defendant is a member of the audit firm at a time when the circumstances referred to in paragraph (b) exist; and

(d) on a particular day (the *start day),* the defendant becomes aware of the circumstances referred to in paragraphs (a) and (b); and

(e) at the end of the period of 7 days from the start day:

(i) the circumstances referred to in paragraph (b) remain in existence; and

(ii) ASIC has not been informed in writing of those circumstances by the defendant, by another member of the audit firm or by someone else on behalf of the audit firm

Section 324CG
Auditor independence—specific requirements for audit company

Specific independence requirements for audit company

(1) An audit company contravenes this subsection if:

(a) the audit company engages in audit activity at a particular time; and

(b) a relevant item of the table in subsection 324CH(1) applies at that time to a person or entity covered by subsection (9) of this section; and

(c) the audit company is or becomes aware of the circumstances referred to in paragraph (b); and

(d) the audit company does not, as soon as possible after the audit company becomes aware of those circumstances, take all reasonable steps to ensure that the audit company does not continue to engage in audit activity in those circumstances.

Audit company to notify ASIC

(IA) An audit company contravenes this subsection if:

(a) the audit company is the auditor of an audited body; and

(b) a relevant item of the table in subsection 324CH(1) applies to

a person or entity covered by subsection (9) of this section while the audit company is the auditor of the audited body ; and

   (c) on a particular day (the *start day),* the audit company becomes aware of the circumstances referred to in paragraph (b); and

   (d) at the end of the period of 7 days from the start day:

      (i) those circumstances remain in existence; and

      (ii) the audit company has not informed ASIC in writing of those circumstances.

Note: If the audited body is a public company or a registered scheme and the notice under this subsection is not followed up by a notice under subsection 327B(2C) (public company) or 331AAA(2C) (registered scheme) within the period of 21 days from the day the notice under this subsection is given, the audit appointment will be terminated at the end of that period.

(1B) If the audit company gives ASIC a notice under paragraph (1A)(d), ASIC must, as soon as practicable after the notice has been received, give a copy of the notice to the audited body

Strict liability contravention of specific independence requirements by audit company

(2) An audit company contravenes this subsection if:

   (a) the audit company engages in audit activity at a particular time; and

   (b) a relevant item of the table in subsection 324CH(1) applies at that time to a person or entity covered by subsection (9) of this section.

(3) For the purposes of an offence based on subsection (2), strict liability applies to the physical elements of the offence specified in paragraph (2)(b).

Note: For *strict liability,* see section 6.1 of the *Criminal Code*

Section 324CH

Relevant relationships

(1) The following table lists the relationships between:

   (a) a person or a firm; and

   (b) the audited body for an audit;

Section 324CI

Special rule for retiring partners of audit firms and retiring directors of authorised audit companies

A person contravenes this section if:

(a) the person ceases to be:

    (i) a member of an audit firm; or

    (ii) a director of an audit company;

   at a particular time (the *departure time);* and

(b) at any time before the departure time, the audit firm or audit company has engaged in an audit of an audited body; and

(c) the person was a professional member of the audit team for the audit; and

(d) within the period of 2 years starting at the departure time, the person becomes, or continues to be, an officer of the audited body; and

(e) the audited body is not a small proprietary company for the most recently ended financial year.

If the audited body is a listed entity (other than a registered scheme), apply paragraph (d) as if references in that paragraph to the audited body included references to a related body corporate of the audited body.

Section 324CJ

Special rule for retiring professional member of audit company

A person contravenes this section if:

(a) the person who is not a director of an audit company ceases to be a professional employee of the audit company at a particular time (the *departure time);* and

(b) at any time before the departure time, the audit company has engaged in an audit of an audited body; and

(c) the person was a lead auditor or review auditor for the audit; and

(d) within the period of 2 years starting at the departure time, the person becomes, or continues to be, an officer of the audited body; and

(e) the audited body is not a small proprietary company for the most recently ended financial year .

If the audited body is a listed entity (other than a registered scheme), apply paragraph (d) as if references in that paragraph to the audited body included references to a related body corporate of the audited body

Section 324CK

Multiple former audit firm partners or audit company directors

A person contravenes this section if
- (a) an audit firm, or audit company, is an auditor of an audited body for a financial year; and
- (b) the person has at any time been a member of the audit firm or a director of the audit company; and
- (c) the person becomes an officer of the audited body; and
- (d) at the time when paragraph (c) is satisfied another person who is or who also has at any time been a member of the audit firm, or a director of the audit company, at a time when the audit firm, or audit company, undertook an audit of the audited body is also an officer of the audited body; and
- (e) the audited body is not a small proprietary company for the most recently ended financial year.

  If the audited body is a listed entity (other than a registered scheme), apply paragraphs (c) and (d) as if references in those paragraphs to the audited body included references to a related body corporate of the audited body.

Section 324DA

Limited term for eligibility to play significant role in audit of a listed company or listed registered scheme

(1) If an individual plays a significant role in the audit of a listed company or listed registered scheme for 5 successive financial years (the *extended audit involvement period),* the individual is not eligible to play a significant role in the audit of the company or the scheme for a later financial year (the *subsequent financial year)* unless:
- (a) the individual has not played a significant role in the audit of the company or the scheme for at least 2 successive financial years (the *intervening financial years);* and
- (b) the intervening **financial** years:
  - (i) commence after the end of the extended audit involvement period; and
  - (ii) end before the beginning of the subsequent financial year.

Note: *Play a significant role* in an audit is defined in section 9

(2) An individual is not eligible to play a significant role in the audit of a listed company or listed registered scheme for a **financial** year if, were the individual to do so, the individual would play a significant

role in the audit of the company or scheme for more than 5 out of 7 successive financial years.

(3) For the purposes of subsection (2), disregard an individual's playing of a significant role in the audit of a company or scheme for a financial year if:

    (a) ASIC makes a declaration under paragraph 342A(1)(a) in relation to the individual; and

    (b) because of the declaration, subsection (1) of this section does not operate to make the individual not eligible to play a significant role in the audit of the company or scheme for that financial year.

Section 324DB
Individual's rotation obligation

An individual contravenes this section if the individual:

  (a) plays a significant role in the audit of a listed company or listed registered scheme for a financial year; and

  (b) is not eligible to play that role

Section 324DC
Audit firm's rotation obligation

Contraventions by members of audit firm

(1) A person (the *defendant)* contravenes this subsection if:

    (a) an audit firm consents to act as a listed company's or listed registered scheme's auditor for a financial year; and

    (b) an individual acts, on behalf of the firm, as a lead or review auditor in relation to the audit of the company's or scheme's financial report for that financial year; and

    (c) the individual is not eligible to play a significant role in the audit of the company or scheme for that financial year; and

    (d) the defendant is a member of the firm; and

    (e) the defendant is not the individual and is or becomes aware that the individual is not eligible to play that role; and

    (f) the defendant fails to take the necessary steps, as soon as possible after the defendant becomes aware that the individual is not eligible to play that role, either:

      (i) to ensure that the audit firm resigns as auditor of the company or scheme; or

      (ii) to ensure that the individual ceases to act, on behalf of

the audit firm, as a lead or review auditor in relation to the audit of the company or scheme for that financial year.

(2) A person (the *defendant)* contravenes this subsection if

   (a) an audit firm consents to act as a listed company's or listed registered scheme's auditor for a financial year; and

   (b) an individual acts, on behalf of the firm, as a Lead or review auditor in relation to the audit of the company's or scheme's financial report for that financial year; and

   (c) the individual is not eligible to play a significant role in the audit of the company or scheme for that financial year; and

   (d) the defendant is a member of the firm

Section 324DD

Audit company's rotation obligation

Contravention by audit company

(1) An audit company contravenes this subsection if:

   (a) the audit company consents to act as a listed company's or listed registered scheme's auditor for a financial year; and

   (b) an individual acts, on behalf of the audit company, as a lead or review auditor in relation to the audit of the company's or scheme's financial report for that financial year; and

   (c) the individual is not eligible to play a significant role in the audit of the company or scheme for that financial year; and

   (d) a director of the audit company (other than the individual) is aware that the individual is not eligible to play that role; and

   (e) the audit company fails to take the necessary steps, as soon as possible after the director becomes aware that the individual is not eligible to play that role, either:

     (1) to resign as auditor of the company or scheme; or

     (ii) to ensure that the individual ceases to act, on behalf of the audit company, as a lead or review auditor in relation to the audit of the company or scheme for that financial year.

Contraventions by directors of audit company

(2) A person (the *defendant)* contravenes this subsection if:

   (a) an audit company consents to act as a listed company's or

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listed registered scheme's auditor for a financial year; and

(b) an individual acts, on behalf of the audit company, as a lead or review auditor in relation to the audit of the company's or scheme's financial report for that financial year; and

(c) the individual is not eligible to play a significant role in the audit of the company or scheme for that financial year; and

(d) the defendant is a director of the audit company; and

(e) the defendant is not the individual and is or becomes aware that the individual is not eligible to play that role; and

(f) the defendant fails to take the necessary steps, as soon as possible after the defendant becomes aware that the individual is not eligible to play that role, either:

    (i) to ensure that the audit company resigns as auditor of the company or scheme; or

    (ii) to ensure that the individual ceases to act, on behalf of the audit company, as a lead or review auditor in relation to the audit of the company or scheme for that financial year.

(3) A person (the *defendant)* contravenes this subsection if

(a) an audit company consents to act as a listed company's or listed registered scheme's auditor for a financial year; and

(b) an individual acts, on behalf of the audit company, as a lead or review auditor in relation to the audit of the company's or scheme's financial report for that financial year; and

(c) the individual is not eligible to play a significant role in the audit of the company or scheme for that financial year; and

(d) the defendant is a director of the audit company.

Source: Adopted from Rusmin (2006) and Scaleplus (2004)

Appendix C: CLERP 9 – Audit Reform[63]

II. Directors' report disclosures:
- Disclosure of officers who are former auditors (applies to directors' report for the current financial year)
- Non-audit services (applies to an auditor of a financial report for a financial year if the financial year begins on or after 1 July 2004)
- Auditor's independence declaration (applies to an auditor of a financial report for a financial year if the financial year begins on or after 1 July 2004)

The director's report for disclosing entities must include:
- Former auditors: the name of each officer of the disclosing entity during financial year who:
  - Was formerly a partner or director of an audit firm or audit company that is currently the disclosing entity's auditor; and
  - Was a partner or director a t a time when the audit firm or audit company conducted an audit of the disclosing entity (section 300(1)(ca)). This information is required for current financial years, as there is no transitional provision

- Non-audit services: for listed companies, disclosure of non-audit services in a section of the directors' report headed 'Non-audit Services'. Both the board and the audit committee have a role to play in preparing the non-audit disclosure. The Non-Audit Services section of the directors' report must include:
  - Details of the amount paid or payable to the auditor for non-audit services provided by, or on behalf of, the auditor during the year (including the names of the auditor and the dollar amount that the listed company paid, or must pay, for each of the non-audit services (section 300(11B)(a) and (11C);
  - A statement whether the directors are satisfied that the provision of non-audit services by the auditor during the year is compatible with the general standard of independence of auditors imposed by the Corporations Act (section 300(11B)(b)); and
  - A statement of the directors' reasons for being satisfied that the auditor's independence was not compromised (section 300(11B)(c))

  The boards section 300(11B) states that non-audit services must be consistent with the advice of the audit committee and must not contain any material omission of material included in that advice. In addition, the audit committee's advice must:
  - Be endorsed by a resolution passed by the members of the audit committee; and
  - Be written advice and signed by a member of the audit committee on behalf of the audit committee and given to the directors (section 300(11E))

- Auditor's independence declaration: for all disclosing entities, a copy of the auditor's independence declaration under new section 307C.
  If auditor conducts an audit for a financial year, or half-year, the auditor must give the directors of the company, registered scheme or disclosing entity a written declaration in the form of one of the following:

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[63] Source: Adopted from Blake Dawson Waldron (2004) and Rusmin (2006).

- To the best of the auditor's knowledge and belief, there have been no contraventions of:
    - The auditor independence requirements of the Corporations Act in relation to the audit; and
    - Any applicable code of professional conduct in relation to the audit review; or
- To the best of the individual auditor's knowledge and belief, the only contraventions of the two points above are those contraventions which have been set out in the declaration (section 307C)

III. General requirements for auditor independence:
- Applies to an audit of a financial report for a financial year, or an audit or review of the financial report for a half-year in a financial year, if the financial year begins on or after 1 July 2004
- Applies to all relationships that exist between an auditor and an audited body on or after 1 July 2004 (including a relationship that exists because of circumstances that come into existence before 1 July 2004)

Some of the provisions promoting general auditor independence:
- ➢ Individual auditor or auditing company aware of a conflict of interest situation. It is a contravention of section 324CA if an individual auditor or audit company engages in audit activity of an audited body and at that time:
    - A conflict of interest situation exists in relation to the audited body;
    - The auditor or audit company is aware of the conflict of interest situation; and
    - The auditor or audit company does not take reasonable steps to ensure that the conflict of interest situation ceases to exist as soon as possible after they become aware of the situation (section 324CA(1))
- ➢ Requirement to notify ASIC if conflict of interest situation continues. If an individual auditor or audit company becomes aware of a conflict of interest situation still exists, ASIC must be notified (section 324CA(1A))
- ➢ Individual auditor or auditing company not aware of a conflict of interest situation.
  An individual auditor or auditing company will contravene section 324 CA (2) if a conflict of interest situation exists and the individual auditor or the auditing company is not aware of that situation, but would have been aware if they had in place a quality control system reasonably capable of making the auditor aware of the conflict of interest situation.
  Section 324 CA (4) provides a defence if the individual auditor or auditing company has reasonable grounds to believe that a quality control system used by the auditor provided reasonable assurance that the individual auditor, or auditing company (or their employees) complied with the auditor independence requirements.
  Likewise to section 324CA describe above, section 324CB and 324CC impose similar obligations on members of an auditing firm and directors of auditing companies to avoid conflict of interest situations and to notify ASIC where a conflict of interest situation continues to exist.
  Note: For conflict of interest situation, see section 324 CD.

IV. Specific requirements for auditor independence:

Applies to all relationships that exist between an auditor and an audited body on or after 1 July 2004 (including a relationship that exists because of circumstances that come into existence before 1 July 2004.

- Individual auditor or audit company aware of section 324 CH(1) relationship. Individual auditor (under section 324CE), audit firms (under section 324CF), audit company (under section 324CG) contravene the specific independence requirements if:
  - The auditor is engaged in audit activity, (while reference is made only to an auditor in this context auditor refers to individual auditors, and auditing firms)
  - At that time, a section 324 CH (1) relationship exists (describe below);
  - The auditor becomes aware of the section 324CH(1) relationship; and
  - The auditor does not take all reasonable steps to ensure that the individual auditor to act in the audit

- Requirement to notify ASIC if a section 324CH(1) relationship continues.
  Under section 324CE, 324CF, or 324CG, auditors must also notify ASIC if they become aware of a section 324CH(1) relationship and after 7 days that relationship continues to exist. A notice is also required under section 327B(2A) or section 331AAA(2A) within 21 days from the date the section 324CE, 324CF, or 324CG notice is given. A failure to do so will result in a termination of the auditor appointment.

- Individual auditor or audit company not aware of a section 324CH(1) relationship.
  It is also a contravention if the auditor is engaged in an audit and a section 324CH(1) relationship exists, regardless of the auditor's knowledge. It is a defence to this strict liability provision if the auditor had in place a quality control system that provided reasonable assurance that the auditor and its employees complied with the specific auditor independence requirements.

  Relevance relationships under section 324CH(1) vary slightly between individual auditors, auditing firms. However, some of the more common relationship are:
  - officer or audit-critical employee – the individual auditor, or a professional member of the audit team, being related to the audited body by being an officer or audit-critical employee of the audited body;
  - former officer of audit-critical employee – the individual auditor, or professional member of the audit team, being related to the audited body by being an officer or audit-critical employee of the audited body within the last 12 months before the financial year being audited;
  - former professional employee of the auditor who fail the independence test - a former professional employee of the auditor related to the audited body by being an officer or audit-critical employee who can influence the policies of the auditor, participates in business or professional activities of the auditor's practice, or receives a commission from the auditor for generating business; and
  - non-audit services provider who exceeds the maximum hour test – if a non-audit service provider has provided more than 10 hours of

non-audit services during the period being audited, or the 12 months immediately before the audited period, and that non-audit service provider has certain investments in the audited body

If these or other relationships in section 324CH(1) are present, the specific audit independence requirements will e contravened unless the auditor takes all reasonable steps to ensure that the auditor ceases to act on the audit.

V. Restrictions on auditors being employed by audit clients
- Section 324CI and 324CJ apply only if the relevant departure time for the purposes of the sections occur on or after 1 July 2004
- Section 324CK applies to a person only if the person is on 1 July 2004, or becomes after 1 July 2004 a member of the audit firm concerned, and becomes an officer of the audited body concerned on or after 1 July 2004.

In addition to the general and specific auditor independence requirements described above, there are specific restrictions on former auditors taking up positions with former audit client.
- 2 year cooling off period
  - a member of an audit firm, or director of an audit company who was a professional member of an audit team, cannot become an officer (director, company secretary or senior manager) of an audit client until 2 years from the date of ceasing to be with the audit firm or audit company (section 324 CI)
  - section 324CJ applies similar rules for lead or review auditors
- Multiple former audit firm partners or audit company directors
  There is now a limit on the number of former audit firm partners or audit company directors who can become an officer of an audit client. A person will contravene section 324CK if:
  - An audit firm or audit company is an auditor of an audited body for a financial year;
  - The person has at any time been a member of the audit firm or a director of the audit company;
  - The person becomes an officer of the audited body; and
  - At the time when the person becomes an officer of the audited body, another person who is or who has at any time been a member of the audit firm or a director of the audit company, at a time when the audit firm or audit company undertook an audit of the audited body is also an officer of the audited body

VI. Auditor rotation for listed companies
Applies to an audit of the financial report for a financial year or an audit or review of the financial year report for a half-year in a financial year, if the financial year begins on or after 1 July 2006
- Rotation after significant role in an audit in 5 out of 7 years
  Section 324DA requires rotation of a person who plays a significant role in an audit in 2 situations:
  - If an individual has played a significant role in the audit for 5 successive financial years, the individual must not play a significant role in the audit for at least 2 successive financial year (section 324DA(1)); and
  - If an individual has played role in the audit for 5 out of 7 successive financial years, the individual must not play a significant role in the audit (section 324DA(2))
  A person plays a significant role in the audit generally, if the person is a lead or review auditor for the audit (section 9).

Appendix D: Studies Voluntary & Aggregate

Table D1, and D2 summarise past studies, and group them into Voluntary Disclosures Studies and Aggregate Disclosures Studies[64] respectively.

All the studies shown in Table D.1 and Table D.2 cover only one year per firm with the exception of Ahmed (1996), Inchausti (1997) and Owusu-Ansah and Yeoh (2005) who investigates the extent of disclosures in two, three and four years respectively. None of the studies is industry-specific, with the exception of Craswell and Taylor (1992) and Malone, Fries and Jones (1993) who examine the oil and gas industry. The number of firms of each study has varied from 20 in Bahrain (Al-Bastaki, 1977) to 577 in India, Pakistan and Bangladesh (Ali, Ahmed and Henry, 2004).

Relationship between corporate attributes and disclosures in corporate annual reports has been investigated since 1961 (Ahmed and Courtis, 1999). The firm attributes that have been examined as possible determinants of level of disclosure have ranged from two (Stanga, 1976) to thirteen (Naser, Al-Khatib and Karbhari, 2002). Firm size, proxied by assets, sales and market capitalisation, is the most favoured in the all studies; followed by leverage, profitability and size of audit firm. Most of these studies adopt disclosure index as dependent variable. The disclosure items that form the disclosure index have varied from a minimum of 11 (Tai et al., 1990) to a maximum of 530 (Craig and Diga, 1998). Some studies assign different weight to the items (e.g., Belkaoui and Kahl, 1978; Firth, 1979; McNally, Lee and Hasseldine, 1982; Chow and Wong-Boren, 1987; and Malone et al., 1993), while

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[64] Aggregate disclosure consists of both mandatory and voluntary disclosure (see Cooke (1992)).

some others apply equal weight to all items[65]. Based on literature reviewed, past accounting compliance studies predominantly examine level of compliance with accounting standards in two major streams: (i) level of compliance of measurement, presentation and disclosure; and (ii) determinants of level of compliance.

The (then) President of the IFAC criticised auditors for attesting that corporate financial statements comply with IASs while the accounting policies and footnotes show otherwise (Cairns, 1997). The revision of IAS 1 requires firms who claim to comply with IASs to fully comply with all IASs without exception.

Street, Grey and Bryant (1999) conduct an empirical research of the accounting policies and disclosures of firms who claiming to comply with IASs in 1996. The key research objective of the study is to investigate at what extent the firms really comply with IASs in practice. Their tests for compliance focus on both measurement and disclosure issues for the IASs 2, 8, 9, 16, 18, 19, 21, 22, and 23[66] revised during the Comparability Project. They sampled 221 companies from 12 countries, of which claiming to comply with IASs. The list of companies is obtained from the IASC. Only firms, with 1995 sales of at least US $1 billion, of non-regulated and non-financial industry, and represented in either *WorldScope* or the Financial Times database, are included in the sample. The final sample consists of 49 companies[67].

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[65] Refer to Chapter 4 for methodology discussion.
[66] The IASs examined are IASs 2 (Inventories), 8 (Net Profit/Loss for the Period), 9 (Research and Development Costs), 16 (Property, Plant and Equipment), 18 (Revenue), 19 (Retirement Benefit Costs), 21 (The Effects of Changes in Foreign Exchange Rates), 22 (Business Combination), 23 (Borrowing Costs)
[67] The sample is geographically widespread. The sample consists of firms from Canada (2), Finland (3), France (10), Germany (3), Hong Kong (1), Italy (3), Japan (3), Malaysia (1), Norway (1), South Africa (2), Sweden (8), and Switzerland (12).

Table D.1: Summary of Studies on Voluntary Disclosure

Study	Country	Size	Leverage	Liquidity	Profitability	Auditor	Internationality	Industry	Ownership Diffusion	Age
Firth (1979)	UK	*TS *BVE				British Big Eight / Other				
McNally, Eng & Hasseldine (1982)	New Zealand	*TA			NP/TA	*Big Eight / Other		11 Groups		
Chow & Wong-Boren (1987)	Mexico	*MVE+BVD *Log MVE+BVD	BVD / (BVD+MVE)							
Cooke (1989)	Sweden	*TS *TA *NSH					*Domestic / Overseas Listing	*4 Groups		
Cooke (1991)	Japan	*TA *TS *NSH					*Unlisted / Domestic / Overseas Listing	*4 Groups		
Craswell & Taylor (1992)	Australia	Log TA	BVD / MVE			*Big Eight / Otherwise			Proportion shares owned by top 20 shareholders	
Hossain, Tan & Adams (1994)	Malaysia	*Log MVE	LTD / BVE			Big Six / Other	*Domestic / Overseas Listing		*Proportion shares owned by the top 10 shareholders	
Meek, Roberts & Gray (1995)	US, UK, France, Germany, and the Netherlands	*TS	*LTD / BVE		Profit After Tax & Interest / TS		*Foreign Sales / TS *Domestic / Overseas Listing	*4 Groups		

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Table D.1: Summary of Studies on Voluntary Disclosure (continued)

Study	Country	Size	Leverage	Liquidity	Profitability	Auditor	Internationality	Industry	Ownership Diffusion	Age
Hossain, Perera & Rahman (1995)	New Zealand	*Log TA	*LTD / BVE			Big Six / Other	*Domestic / Overseas Listing *Export / TS	2 Groups		
Raffournier (1995)	Switzerland	*Log TA *Log TS	BVD / TA		NP / NW	Big Six / Other	*Export / TS	2 Groups	Proportion shares not owned by known shareholders	
Chau & Gray (2002)	Hong Kong & Singapore	*Log NS	LTD / BVE		PTEE / NS	Big Five / Other	Foreign sales by subsidiaries / TS	4 Groups	*Proportion shares owned by outsiders	
Ferguson, Lam & Lee (2002)	Hong Kong	*Log TA	*LTD/BVE				Domestic / Overseas Listing	2 Groups		
Haniffa & Cooke (2002)	Malaysia	Log TA	BVD / TA		*NP / BVE	Big Six / Other	Domestic / Overseas Listing Foreign Activities/Otherwise	*4 Groups	*Proportion shares owned by foreigners Proportion shares owned by institutional investors	No of years passed since listing
Makhija & Patton (2004)	Czech Republic	Log TA			TEBT / BVE	*Big Six / Other		2 Groups	Proportion shares owned by government Proportion shares owned by foreigners *Proportion shares owned by the fund with the largest shares	

*=Significant. TA=Total assets. TS=Total sales. MVE=Market value of equity. BE=Book value of equity. TL=Total liabilities. NS=Net sales. NW=Net worth. TR=Total revenue. CA=Current assets. CL=Current liabilities. TEBT=Total earnings before tax. BVD=Book value of total debt. LTD=Long term debt. TTA=Total tangible assets. NP=Net profit. NSH=Number of shareholders. NEM=Number of employees. NS=Net sales. PTEE=Profit after tax, exceptional items, and extraordinary items. NOP=Net operating profit. *Adapted from Al-Shammari (2005).*

Table D.2: Summary of Studies on Aggregate Disclosure

Study	Country	Size	Leverage	Liquidity	Profitability	Auditor	Internationality	Industry	Ownership Diffusion	Age
Cerf (1961)	US	*TA *NSH			*NP / NW					
Singhvi (1968)	India	*TA			*TEBT / NW *TEBT / NS	Large / Small				
Singhvi & Desai (1971)	US	TA			NP / NW NP / NS	Large / Small			NSH	
Buzby (1975)	US	*TA								
Belkaoui & Kahl (1978)	Canada	*TA *NS		*CA / CL	*NP / TA			*14 Groups		
Malone, Fries & Jones (1993)	US	TA	*BVD / BVE		NP / BVE NP/NS	Big Eight / Other	Foreign operation / Other	2 Groups	*NSH	
Solas (1994)	Jordan	TA NSH			TEBT / NS TEBT / BVE					
Zarzeski (1996)	France, Germany, Hong Kong, Japan, Norway, UK & US	*Log TA	*BVD / TA				*Foreign Sales / TS			
Ahmed (1996)	Bangladesh	Log TA Log TS	Log BVD			Large / Small	*Multinational subsidiary / Otherwise			
Al-Bastaki (1997)	Bahrain	*TA	TL / TA		NP / BVE					
Inchausti (1997)	Spain	*TA *Log TA Log TS	TL / TA TL / BVE		NP / BVE NOP / BVE	*Big Six / Other	*Domestic / Overseas Listing	3 Groups		

Table D.2: Summary of Studies on Aggregate Disclosure

Study	Country	Size	Leverage	Liquidity	Profitability	Auditor	Internationality	Industry	Ownership Diffusion	Age
Al-Bastaki (1997)	Bahrain	*TA	TL / TA		NP / BVE					
Inchausti (1997)	Spain	*TA *Log TA Log TS	TL / TA TL / BVE		NP / BVE NOP / BVE	*Big Six / Other	*Domestic / Overseas Listing	3 Groups		
Naser (1998)	Jordan	*TA *MVE TS	*LTD / BVE	CA / CL	TEBT / NS *TEBT / BVE	Large / Small		*2 Groups	Proportion shares owned by government	
Craig and Diga (1998)	Singapore, Malaysia, Indonesia, Philippines & Thailand	*Log TR	*BVD / BVE				Foreign subsidiary / Otherwise *Locally owned / foreign owned or controlled			
Naser, Al-Khatib & Karbhari (2002)	Jordan	*TS *MVE TA NEM	*BVD / BVE	*CA / CL	TEBT / NS TEBT / BVE	*Local / International		2 Groups	Proportion shares owned by government Proportion shares owned by foreigners NSH	
Al-Shayeb (2003)	United Arab Emirates	*Log TA Log NS			NP / BVE		Multinational subsidiary / Otherwise	*3 Groups		No of years passed since foundation

*=Significant. TA=Total assets. TS=Total sales. MVE=Market value of equity. BE=Book value of equity. TL=Total liabilities. NS=Net sales. NW=Net worth. TR=Total revenue. CA=Current assets. CL=Current liabilities. TEBT=Total earnings before tax. BVD=Book value of total debt. LTD=Long term debt. TTA=Total tangible assets. NP=Net profit. NSH=Number of shareholders. NEM=Number of employees. NS=Net sales. PTEE=Profit after tax, exceptional items, and extraordinary items. NOP=Net operating profit. *Adapted from Al-Shammari (2005)*

They document evidence of significant non-compliance with IASs 2 (Inventory), 8 (Net profit or Loss for the Period), 9 (Research and Development Costs), 16 (Property, Plant and Equipment), 18 (Revenue), and 19 (Retirement Benefit Costs). In particular the non-compliance includes: use of inventory valuation that not endorsed by the IAS; violation of the strict definition of extraordinary items; failure to capitalise certain development costs; failure to disclose information pertaining to revaluation on property, plant and equipment and charging goodwill to reserves or amortising goodwill over a period in excess of the 20 year limit. Their findings reveal that only 41% (20 out of 49 companies) state compliance with all IASs. However, regardless indications on accounting policy footnote and/or audit opinion that company comply with all/most IASs, their evidence shows that there is a significant extent of non-compliance with the individual IAS on measurement and disclosure, especially with the disclosure requirements. They conclude that the extent of compliance by firms claiming to comply with IASs is very mixed and somewhat selective. Their study neither seeks to explain compliance/non-compliance nor investigates whether there is any association between the non-compliance with its firms' characteristics.

Tower, Hancock and Taplin (1999) empirically examine the degree of compliance with IASs (voluntary disclosure and measurement) of six Asia Pacific countries (Australia, Singapore, Malaysia, Thailand, Philippines and Hong Kong). The sample consists of 10 listed firms from each of the six countries in 1997. There are 512 compliance items drawn from twenty six standards (IASs 1, 2, 5, 7-11, 13, 14, 16-25, 27, 28, 30-33) applicable to 1997 fiscal year ends, which range from 2 items (IAS 1) to 74 items (IAS 5)[68]. Two compliance indices are constructed. Ratio 1 compliance assumes that non-

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[68] The average number of compliance items of 22.77 per standard.

disclosure of an item is a non-applicable item. A stricter Ratio 2 regards non-disclosure as violation to standard, hence is in effect non-compliance. They also look into the association of firm's characteristics (country, firm size, leverage, profitability, industry and days taken to issue annual report) with the level of compliance. Their results show that Ratio 1 has a mean of 90.68% of level of compliance, with the minimum of 81% and the maximum of 100%. On different note, the stricter Ratio 2 shows, that on average, a significant decrease level of compliance to 42.2%, and the level of compliance range is 20% to 73%. Both Ratio 1 and 2 indicate that Australia has the highest level of compliance (94% and 54% respectively) and Philippines has the lowest (88% and 28% respectively). The findings have greatly conflicted with that of Street, Grey and Bryant (1999), who find significant of non-compliance. The multivariate statistics show that *country* is the only firm's attribute that is highly significant in relation to the level of compliance; while days taken to issue annual report is moderately significant. Other attributes are not significant.

Motivated by the studies of Cairns (1999), Street et al., (1999) and Street and Bryant (2000) who support IFAC's view that non-compliance is problematic, a research monograph[69] by Street and Gray (2001) examine extent of compliance and most importantly to document key determinants of non-compliance of a worldwide sample companies referring to the use of IAS. A final sample of 279[70] companies' 1998/99 financial reports and footnotes are

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[69] The research monograph was sponsored by the Association of Chartered Certified Accountants (ACCA).

[70] An initial sample of 831 companies obtained from the IASC's (1999) list of 'Companies Referring to their Use of IAS'. Companies in the sectors of finance, oil and gas, not for profit organisations, merged companies and annual reports that are not in English, are eliminated. The sample of annual reports obtained are as follows: 63(China), 62 (Switzerland), 47 (Germany), 19 (France), 9 (each from Hong Kong and Zimbabwe), 7 (each from Austria, Denmark and South Africa), 6 (each from Canada and Hungary), 5

examined in respect of compliance with IAS-required disclosures and measurement/presentation practices. Building on the findings of United Nation's Conference on Trade and Development (UNCTAD) (1998), Cairns (1999), Street et al., (1999) and Street and Bryant (2000), a checklist of 14 IASs (2, 4, 8, 12, 14, 16, 17, 19, 21, 22, 22, 23, 29, 32 and 33) for IAS's required disclosures and measurement/presentation are constructed. There are four compliance indices are developed; two for disclosures and two for measurement/presentation[71]. The first disclosure index provides equal weighting to each IAS reviewed and is obtained by dividing the total number of disclosures by the number of applicable disclosure for each IAS under review. The compliance index for each company (i.e., dependent variable) is calculated by averaging the disclosure indices for each of the IASs applicable to the company. The second disclosure compliance index is calculated as follows. The total number of disclosures is divided by the number of applicable disclosures for each company for all the IASs under review, which give rise to equal weighting to each disclosure item. Their results show that overall disclosure compliance index DC1 and DC2 have 72% and 74% level of compliance with IAS-required disclosures. When the sample is grouped into non-regional listings, USA filings, USA listings, no listings (i.e., government owned or privately held or domestic only listings) and local regional listings, the former three groups exhibit the highest level of compliance with (87% DC1 and 85% DC2), (78% DC1 and 80% DC2) and (83% DC1 and 85% DC2) respectively; whereas the lowest group is exhibited by non-listed firms (57% DC1 and 59% DC2). Street and Grey (2001) also reveal that the highest level of compliance

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(Finland), 4 (Sweden), 3 (each from Italy, Luxembourg and Poland), 2 (each from Barbados, Czech Republic and Netherlands) and 1 (each from Australia, Bahrain, Botswana, Croatia, Grand Cayman Island, Guyana, Japan, Jordan, Malta, Mexico, Papua New Guinea, Russia and Turkey).

[71] Since this thesis focuses on disclosures, therefore measurement/presentation compliance is not discussed. Henceforth, the terms "compliance" and "compliance with IAS-required disclosures" are used interchangeably.

with IAS-required disclosures is firms domiciled in China (80% DC1 and 82% DC2) in contrast to the lowest is of France (60% DC1 and 62% DC2). They provide evidence that the highest level of compliance is exhibited by firms indicating that IAS is the exclusive basis of the financial reports (76% DC1 and 78% DC2) and the lowest one is found for firms indicating the reports are in compliance with both National GAAP and IAS (60% DC1 and 63% DC2). The findings indicate that the highest levels of compliance are found when: firms are audited by Big 5+2 (includes BDO and Grant Thornton) accounting firms (74% DC1 and 76% DC2), the audit opinion states the reports are prepared according to IAS (75% DC1 and 77% DC2) and the audit opinion states the audit was conducted in accordance with ISA and/or US GAAP (75% DC1 and 77% DC2).

In assessing the determinants of the non-compliance, Street and Grey (2001) document a significant positive relationship between the compliance with IAS-required disclosures (DC1) and:

- an US listing/filing and/or non-regional listing;
- being in commerce and transportation industry;
- referring exclusively to the use of IAS (with no exceptions noted or reference to other accounting standards);
- being audited by a Big 5+2 accounting firm;
- being domiciled in China;
- being domiciled in Switzerland.

In particular, firms in the industry of commerce and transportation supply more IAS-required disclosures (80%) than that of other industries (70%). Firms audited by Big 5+2 accounting firms provide more IAS-required disclosures (74%) than do the firms audited by other types of accounting firms (57%). The findings suggest that size of the domestic capital market has significantly

negatively related to the level of compliance with IAS-required disclosures; which is inconsistent with expectations and in contradiction with previous findings. They argue that none of the sample firms are domiciled in the US or the UK which are the world's largest capital markets and are well-known for their extensive disclosure requirements, and only one firm from Japan the third largest stock market in the world.

Likewise, the level of compliance with IAS-required disclosures as measured in DC2 is found to be significantly positively associated with:

- being audited by a Big 5+2 accounting firm;
- referring exclusively to the use of IAS (with no exceptions noted or reference to other accounting standards);
- having an US listing/filing and/or non-regional listing.

Particularly, firms audited by Big 5+2 accounting firms release more IAS-required disclosures (76%) than that of other types of accounting firms (59%). The results also unveil a significant negative relationship between compliance with IAS-required disclosures and being domiciled in Germany, France or other Western Europe.

Thus far, most studies on compliance are cross sectional. Craswell and Taylor (1992) investigate factors that motivate Australian managers of oil and gas companies to voluntary disclose reserves. Noting the analysis of Verrecchia (1983), Craswell and Taylor (1992) identify two potential confounding factors that are likely to be influential, namely the proprietary costs of disclosure and higher agency costs of non-disclosure. In order to control for the confounding effect on voluntary disclosure decision, they conduct the studies focusing on a specific industry (i.e., oil and gas). In

determining factors that associated with manager' decision in voluntary disclosure of the oil and gas reserves, they propose the following variables: degree of leverage, cash flow risk, separation of ownership and control, firm size and auditor quality. The sample of this study is drawn from the Sydney Stock Exchange with the three-digit industry codes 031 *Oil and Gas Producers* and 033 *Oil and Gas Explorers*. The final sample consists of 98 listed companies at the end of 1984. The results unveil that there is a significant positive relationship between auditor quality and level of reserves disclosures. The authors proclaim that firms have tendency to engage then the Big 8 auditors to signal high quality of disclosure, which is consistent with evidence of reducing agency costs. They further assert that high quality auditors bring pressure on client to disclosure comprehensively of the oil and gas reserves.

In a related study, Malone et al., (1993) undertake an empirical investigation of the extent and determinants of corporate financial disclosure in the oil and gas industry (Enterprise Standard Industrial Classification [ESIC] Code 1311 *Crude Petroleum and Natural Gas*. The 10-K form and financial reports of the final sample of 125 oil and gas firms are examined. Degree of voluntary disclosure is determined by using weighted index of disclosure items. A survey questionnaire made up by 129 disclosure items from the 10-K form and annual reports are sent to 722 oil and gas financial analysts listed on membership directory of the Financial Analysts Foundation[72]. The analysts are asked to weight each item in its importance in the investment decision. A stepwise regression is adopted to test the relationship between the ten variables (listing status, firm size, audit firm size, leverage, rate of return on net worth, industry diversification, earnings margin, proportion of outside directors, multinational and number of shareholders) and

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[72] Only 115 usable responses are received.

the extent of disclosure. Of the ten factors, listing status, leverage and number of shareholders are found statistically positively significant. Malone et al., (1993) conclude by acknowledging the existence of systematic differences between firms that disclose different level of information. They (Malone et al., 1993) claim that "regulators, on requiring uniformity of disclosure, may, in some instances, be putting some firms at a relative economic disadvantage. This would be the case if firms have reached an optimal point in the market for financial information" (p. 267).

As can be seen in Table D.1 and Table D.2, most research conducted in relation to compliance studies are corporate voluntary disclosure. Wallace and Naser (1995) investigate the extent and firm-specific determinants of comprehensiveness of mandatory disclosures in the financial statements of firms listed on the stock exchange of Hong Kong. The final sample of this study is drawn from 80 corporate financial statements for 1991. There are eleven firm attributes examined. The first one is the registered office of the firm (the official domicile of a firm). The rest are categorised into three non-mutually exclusive groups, as per Land and Lundholm (1993) and Wallace, Naser and Mora (1994), namely structure-related, performance-related and market-related[73]. The structure-related firm attributes includes debt-equity ratio, firm size (using two proxies by market capitalisation and proportion of equity shares held by outsiders, excluding nominees and family groups in Hong Kong. Consistent with Wallace et al., (1994), the performance-related firm characteristics consist of profit margin, earnings return and liquidity. Finally, the market-related firm

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[73] Structural variables "measure firm characteristics that are widely known and likely to remain relatively stable over time" (Land and Lundhom, 1993, p. 248). Performance variables "are time-period specific, representing information to which management may have preferential access and which is likely to be subject to disclosure within the period" Land and Lundholm, 1993, p. 248). Market variables "are either time-period specific and/or relatively stable over time" (Wallace et al., 1994, p. 47).

attributes incorporate market capitalisation of firm's equity, scope of business operations and auditor size.

The ranked OLS and unranked OLS regression are employed to investigate the incremental explanatory power of the variables. The studies find that the level of comprehensiveness of compliance with mandatory disclosures has ranged from 55.32% to 87.23%, with an average of 72.54%. The findings show that the level of comprehensiveness of compliance with the mandatory disclosure is significantly positively related to asset size and the scope of business operations but negatively associated with profits and size of auditor. The result documented of a negative relationship between the level of compliance and the size of auditor contradict with evidence found by prior research on Bangladesh (Ahmed and Nicholls, 1994), New Zealand (McNally et al., 1982), and the US (Singhvi and Desai, 1971) but supports the findings of Tai et al., 1990) and the UK (Firth, 1979). Wallace and Naser (1995) argue that low profit margins tend to achieve higher degree of compliance as Hong Kong firms regard lower profit margin as bad news; hence provide more details as to attract investors. They further postulate that higher profit firms may assume that investors are satisfied with the firm's performance, therefore additional information is not required.

In a similar study, Glaum and Street (2003) assess the extent of compliance with mandatory disclosures by companies listed on Germany's New Market (Neuer Markt). Emulating the example of NASDAQ, the New Market is set up in 1997 as a division of Frankfurt Stock Exchange to entice young and innovative growth companies. Firm listed on the New Market are required to prepare their financial statements in accordance with either IAS or US GAAP. The sample used in this study is drawn from each 100 firms

that apply IAS and US GAAP in the year-2000 financial reports (excluding Financial Services and Media & Entertainment industry). Firm size has ranged from €15 million to €17.7 billion. On average, US GAAP firms are larger than IAS's. Of the 200 sample firms, 116 are audited by Big 5 accounting firms[74]. Utilised on the methodology of Cooke (1989, 1991, 1992), Street and Bryant (2000) and Street and Gray (2001), two checklists are constructed based on Ernst & Young's (2000) *IAS/US GAAP Comparison*. The final checklist for IAS and US GAAP consist of 153 and 144 items respectively. The findings show the extent of compliance with mandatory disclosures of IAS varies from 41.6% to 100%, with an average of 83.7%; and of US GAAP ranges from 52.4% to 98.8%, with an average of 86.6%. This implies that compliance level is lower for firms that apply IAS on preparing their financial statements. In line with prior research of Street and Bryant (2000) and Street and Gray (2001), the results reveal that IAS firms are particularly problematic in regard to certain disclosure relation to pension, leasing, financial instruments, business combination and capitalisation of interest costs. Glaum and Street (2003) also document the evidence that the level of compliance with IAS and US GAAP mandatory disclosures has a significant positive association with firm being audited by Big 5 accounting firms and to cross-listing on US exchanges.

Reviewing the past literature indicates that there is no specific study on compliance with mandatory disclosure in mineral resources sector. To explain variation in companies' compliance level, several studies have addressed the association between compliance with IASs disclosures and firm's characteristics. These characteristics include, magnitude of a firms foreign operations,

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[74] Andersen taps the biggest share of 19%, followed by KPMG (12%), Ernst & Young (12%), PwC (11.5%) and Deloitte & Touche (3.5%).

financing policy, multiple listings, US listing/filing, type of auditor, industry, country domiciled, size, type of economy, leverage, profitability, ownership concentration and culture. Predominantly, these studies find that level of disclosure is significantly related with size and listing status. However, findings regarding the association between level of disclosure and other corporate variables yield mixed results.

This suggests the findings on compliance with IASs are mixed. A limitation of previous compliance studies that could explain the mixed results is they have subjectively selected certain items covering a limited set of IASs when developing a checklist for the compliance analysis. To develop more comprehensive findings a checklist dealing with all the disclosure, measurement and presentation practices in each IAS should be constructed (Cairns, 2002). A common finding across all the studies, however, is a lack of complete compliance.

Auditor quality/size has been included in the studies under review as one of the determinants of the extent of compliance. The findings are mixed. This will be further investigated in this research. This thesis will segregate auditor quality into audit independence and audit specialisation, and look into their association with mandatory disclosure as required by AASBs 6 and 136. Chapter 3 discusses on past literature on audit quality and hypotheses developments.

Appendix E: Australian Sample Companies

ABM Resources NL
Acclaim Exploration NL
Adamus Resources Limited
Adelaide Resources Limited
Admiralty Resources NL
Agincourt Resources Limited
Aim Resources Limited
Alcaston Mining NL
Allied Gold Limited
Alto Energy International Limited
Anglo Australian Resources NL
Arafura Resources NL
Argonaut Resources NL
Ashburton Minerals Limited
Astro Diamond Mines NL
Astron Limited
Atlas Iron Limited
Audax Resources Limited
Aurora Minerals Limited
Aurox Resources Limited
Ausquest Limited
Australia Oriental Minerals NL
Australian Zircon NL
Avoca Resources Limited
AXG Mining Limited
Aztec Resources Limited
Bannerman Resources Limited
Bass Metals Ltd
Bendigo Mining Limited
Berkeley Resources Limited
BHP Billiton Limited
Breakaway Resources Limited
Cape Lambert Iron Ore Limited
Carnegie Corporation Ltd
Cazaly Resources Limited
CBH Resources Limited
Central Asia Gold Limited
Chrome Corporation Limited
Climax Mining Limited
Comet Resources Limited
Conquest Mining Limited
Consolidated Minerals Limited
Continental Goldfields Limited
Copper Strike Ltd
Copperco Limited
Cougar Metals NL
Crescent Gold Limited
Crusader Holdings NL
CuDeco Limited

Cullen Resources Limited
D'Aguilar Gold Limited
De Grey Mining Limited
Diamond Rose NL
Discovery Nickel Limited
Dominion Mining Limited
Dragon Mining NL
Drake Resources Limited
Dwyka Diamonds Limited
East Coast Minerals NL
Elkedra Diamonds NL
Ellendale Resources NL
Emperor Mines Limited
Equigold NL
Eurogold Limited
Exco Resources NL
Extract Resources Ltd
Ferraus Limited
Fox Resources Limited
Frontier Resources Limited
Gindalbie Metals Ltd
Giralia Resources NL
Gleneagle Gold Limited
Glengarry Resources Limited
GME Resources Limited
Gold Aura Limited
Golden Cross Resources Limited
Golden Deeps Limited
Golden State Resources Limited
Golden West Resources Limited
Goldsearch Limited
Grange Resources Limited
Gravity Diamonds Limited
Graynic Metals Limited
Great Australian Resources Limited
Great Gold Mines NL
Greater Pacific Gold Limited
Gunson Resources Limited
Haddington Resources Limited
Hampton Hill Mining NL
Helix Resources Limited
Herald Resources Limited
Heron Resources Limited
Imperial Corporation Limited
Indo Mines Limited
Intermin Resources Limited
Intrepid Mines Limited
Jabiru Metals Limited
Jackson Gold Limited

Australian Sample Companies (*continued*)

Jervois Mining Limited	Peninsula Minerals Limited
Jindalee Resources Limited	Perilya Limited
Jubilee Mines NL	Perseus Mining Limited
Jupiter Energy Limited	Perseverance Corporation Limited
Jupiter Mines Limited	Petra Diamonds Limited
Kalgoorlie-Boulder Resources Limited	Pioneer Nickel Limited
King Island Scheelilte Limited	Platinum Australia Limited
Kingsgate Consolidated Limited	Platsearch NL
Lake Resources NL	Polaris Metals NL
Latin Gold Limited	Ramelius Resources Limited
Leyshon Resources Limited	Rand Mining NL
Liberty Gold NL	Range Resources Limited
Macarthur Coal Limited	Range River Gold Limited
Macmin Silver Ltd	Red 5 Limited
Magnesium International Limited	Red Metal Limited
Malachite Resources NL	Redbank Mines Limited
Marathon Resources Limited	Redport Limited
Matrix Metals Limited	Reed Resources Ltd
Mawson West Limited	Reefton Mining NL
Medusa Mining Ltd	Regal Resources Limited
Metallica Minerals Limited	Regis Resources NL
Metals Australia Ltd	Republic Gold Limited
Michelago Limited	Resolute Mining Limited
Midas Resources Limited	Resource Mining Corporation Limited
Mincor Resources NL	Rimfire Pacific Mining NL
Mindax Limited	Rusina Mining NL
Minotaur Exploration Limited	Sabre Resources Limited
Mithril Resources Limited	Sally Malay Mining Limited
Moly Mines Limited	Saracen Mineral Holdings Limited
Monarch Gold Mining Company Limited	Scimitar Resources Limited
Mount Burgess Mining NL	SMC Gold Limited
Mount Gibson Iron Limited	Southern Gold Limited
Namakwa Diamond Company NL	Sphere Investments Limited
New Holland Mining Limited	Stellar Resources Limited
Newcrest Mining Limited	Sub-Sahara Resources NL
NGM Resources Limited	Sundance Resources Limited
Nkwe Platinum Limited	Sylvania Resources Limited
North Australian Diamonds Ltd	Synergy Metals Ltd
Northern Star Resources Ltd	Takoradi Limited
Norton Gold Fields Limited	Tanami Gold NL
Nullarbor Holdings Limited	Tasman Resources NL
Olympia Resources Limited	Tectonic Resources NL
OneSteel Limited	Tennant Creek Gold Limited
Ord River Resources Limited	Territory Iron Limited
Oropa Limited	The Ark Fund Limited
Pacmag Metals Limited	Tianshan Goldfields Limited
Pan Palladium Limited	Titan Resources Limited
Paradigm Gold Limited	Tribune Resources NL
Paramount Mining Corporation Limited	Troy Resources NL
Pelican Resources Limited	Union Resources Limited

Australian Sample Companies (*continued*)

Uranium Equities Limited
View Resources Ltd
Vulcan Resources Limited
West Australian Metals Limited
Western Areas N.L.
Westgold Resources NL
Westonia Mines Limited
Yilgarn Gold Limited
Yilgarn Mining Limited
Zinifex Limited

Appendix F: List of Non-Big4 Accounting Firms

Auditor

Alcock Davis Danieli CAs	K Westaway & Assoc.
Barnes Dowell James	Leydin Freyer & Assoc.
BDO	Maxim Audit
BDO Kendalls	Moore Stephens
BDO Stoy Hayward	Nexia ASR
Bentley MRI	Nexia Court & Co
Bill Li & Co	Ord Partners
Brentnalls Assurance	Pitcher Partners
Butler Settineri	PKF
DFK Richard Hill	Priestly & Morris
Draper Dillon	Rix Levy Fowler
DTT Victoria	Robertsons CA
G. Cole & Assoc.	Rothsay CAs
Gould Ralph & Co	RSM Bird Cameron
Graham Abbott Assoc.	Some & Cooke
Grant Thornton	Stantons International
HLB Mann Judd	Stantons Partners
Horwarth Audit	Stirling SCI
Horwath	Webb Callaway Paton
Horwath Sydney Partnership	William Buck CA
Ian D. Riley	Wong & Mayes