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Impact of Adoption of International Financial Reporting Standards and Financial Crisis on Accounting Quality of Australian Listed Companies

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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: …Alappatt Thomas Mathew…

Date: ……30/10/2020……...

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Glossary for key abbreviations

AASB	Australian Accounting Standard Board
AICPA	American Institute of Certified Public Accountants
ASEAN	Association of Southeast Asian Nations
ASX	Australian Securities Exchange
CLERP	Corporate Law Economic Reforms Program
CPA	Certified Public Accountants
FASB	Financial Accounting Standard Board
FRC	Financial Reporting Council
GAAP	Generally Accepted Accounting Principles
GPFR	General Purpose Financial Report
IAS	International accounting standards
IASB	International Accounting Standards Board
IASC	International Accounting Standards Committee
ICAEW	Institute of Chartered Accountants in England & Wales,
IFRIC	International Financial Reporting Interpretations Committee
IFRIC	International Financial Reporting Interpretations Committee
IFRS	International Financial Reporting Standards
IOSCO	International Organisation of Securities Commissions
NASDAQ	National Association of Securities Dealers Automated Quotations
SAC	Statement of Accounting Concept
SIC	Standard Interpretation Committee
SIC	Standard interpretation committee

WTO	World Trade Organisation

Definition of Important Terms

ACCOUNTING QUALITY OF FINANCIAL INFORMATION	A quality financial information must be useful to the stakeholders in making economic decision. To be useful the information must possess qualitative characters, relevance, reliability, comparability, understandability and materiality.
ADOPTION OF IFRS	Using IFRS in the same way as issued by IASB.
BOOK VALUE PER SHARE	Represents the book value at the company's fiscal year end (proportioned common equity divided by outstanding shares)
COMMON SHARES OUTSTANDING	Represent the number of shares outstanding at the company's year-end.
COMPARABILITY	Comparability means that the user must be able to compare financial statements of same entities over different periods and also financial statements of different entities in order to evaluate financial position, financial performance, and cash flow
CONVERGENCE	Accounting standard board of the country and the IASB work together to develop high quality, comparable accounting standard over time.
DATE OF FISCAL PERIOD END	Represents the year, month and day the company closes its books at the end of its fiscal period.

FAIR VALUE	The price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date under current market conditions (i.e. an exit price) .
FUNDS FROM OPERATIONS	Represents the sum of net income and all non-cash charges or credits. It is the cash flow of the company.
HARMONISATION	The process of reducing diversity in accounting practices between IFRS and the domestic GGAP.
MARKET PRICE - YEAR END	Represents the closing price of the company's stock at their fiscal year end.
MARKET VALUE	The share price multiplied by the number of ordinary shares in issue
MATERALITY	An information is material if its omission and misstatement could influence the decision the user make.
NET INCOME	Income after operating expenses, interest and taxes.
NET SALES OR REVENUES	Represent gross sales and other operating revenue less discounts, returns and allowances.
NUMBER OF SHARES	This is the total number of ordinary shares that represent the capital of the company
RELEVANCE	An accounting information is relevant if it can influence the economic decision. It must have predictive value and confirmative value.

RELIABILITY	To be reliable, information must be free from errors, unbiased, faithfully represented and complete.
RETURN ON EQUITY	Net income less preferred dividend requirement divided by average of last year's and current year’s common equity * 100
STOCK EXCHANGE(S) LISTED	Represents the stock exchange(s) the company is traded on.
TOTAL ASSETS	Represent the sum of total current assets, long term receivables, investment in unconsolidated subsidiaries, other investments, net property plant and equipment and other assets.
TOTAL LIABILITIES	Represent all short and long term obligations expected to be satisfied by the company.
UNDERSTANDABILITY	An accounting information is understandable if a reader who have some basic knowledge in accounting are able to comprehend its meaning.

Abstract

The quality of financial statement is a much debated subject among academics and researchers after the adoption of International Financial Reporting Standards (IFRS) by EU countries, Australia, Singapore and many other countries from January 1, 2005, onwards. IFRS is widely accepted by academics, practitioners, companies, investors and capital markets as a high quality globally accepted accounting standard which can be used across the world. It is expected that the implementation of IFRS can improve the quality and consistency of financial statements published by companies. But the financial crisis of 2008 toppled this acceptability. Many economists consider the use of IFRS especially the fair value of accounting model used in IFRS, that require entities to mark down assets value when the market price goes down even if there is no intention to sell it, instigated and amplified the financial crisis. Subsequently, there was pressure on IFRS to make changes in the IFRS and International Accounting Standards Board (IASB) conceded to this pressure. These changes made to IFRS can affect the quality of financial statements. Moreover, the economic distress of the financial crisis can affect the performance of companies which may prompt management to manipulate accounts to show better financial position and performance which can reduce the accounting quality. Based on these two events, this study evaluated the impact of the adoption of IFRS and the financial crisis on the accounting quality of published financial statements of Australian listed companies.

The data for the study is collected from the financial information of 264 Australian listed company from seven selected industry sectors for 14 years from 2002 to 2015 to evaluate the impact of both the events. The data is then classified into four pre-IFRS adoption periods 2002 to 2005 and four post-IFRS adoption periods 2006 to 2009 and accounting quality of financial reports between periods are evaluated and interpreted using three accounting quality measures earning management, timely loss recognition and value relevance. In a similar manner, data are classified into seven pre-financial crisis periods 2002 to 2008 and seven post- financial crisis periods 2009 to 2015 and the effect of the financial crisis on the accounting quality is measured and interpreted using the same accounting quality measures. An analysis of the effect of IFRS adoption and financial crisis on the accounting quality of the seven industrial sectors is also conducted.

The study uses pooled ordinary least squares regression analysis to measure the change in accounting quality between periods. The measures variability change in net income, the ratio of the variability of change in net income to change in cash flow, correlation between accrual and cash flow and frequency of reporting small positive operating savings are used to measure earning management. Timely loss recognition is measured using the frequency of reporting large negative net income and value relevance is measured using price model and return model.

The result shows that there is no significant change in the accounting quality between pre and post IFRS periods among Australian listed companies as a whole based on the first two financial accounting information bases measures earning management and timely loss recognition. The findings that there is no significant change in accounting quality even after IFRS adoption proves that the Australian Accounting Standards Board (AASB) standards the companies were using prior to the adoption of IFRS are equally good as that of IFRS in maintaining accounting quality. The financial crisis also cannot make any impact on earning management and timely loss recognition. When both the events cannot make any change in accounting quality bases on the measures using accounting information, it is evident that besides the quality of accounting standards used, Australia has a very good regulatory system that helps to monitor and maintain the accounting quality under any economic conditions. The value relevance models for 264 listed companies, which are based on market price, registered a mixed result under both IFRS adoption and financial crisis. It can be the effect of economic factors, other than the accounting standards used, that influence the performance and market price of the shares of companies in these sectors. The findings of seven industry sectors are not showing any consistency in the change of accounting quality under any measures between pre and post IFRS periods or between pre and post-financial crisis periods. The effect of economic, legal and political factors differed from sector to sector. These factors influence the profitability, investment requirements, fund management, dividend policies, etc. of each sector resulting in a mixed result especially in market price-based measures.

The finding that the quality of AASB and the good regulatory system helped Australian companies to maintain the accounting quality in both the events, will be of much interest

to all stakeholders of listed companies and increases their confidence in Australian companies. This can improve the investment atmosphere and attract more international fund for the development of Australian economy. The findings also emphases that adoption of IFRS can improve accounting quality only if there is a good regulatory system in the country. Moreover, value relevance cannot be a reliable measure of accounting quality because of the influence of external factors other than accounting information on the market price of shares.

The study contributes to the existing knowledge that the use of accounting standards alone cannot improve the quality of accounting reports. The legal and political system especially the regulatory environment of a country is an important factor that influences the accounting quality. Moreover, because of the influence of economic and legal factors on the market price of companies shares value relevance measures cannot be a reliable measure of accounting quality for sector wise analysis of accounting quality. The findings of the study give confidence to stakeholders importantly the present and prospective investors in Australian companies that the financial information of companies they use in making economic decisions is of high quality.

CHAPTER - 1

1.1 Introduction

The last two decades of the 20th century have witnessed tremendous changes in the business world due to globalisation, the formation of World Trade Organisation (WTO), and the unprecedented development of information and communication technology (ICT). Globalisation has led to trade agreements between nations and the formation of groups of nations for economic cooperation, such as the Association of Southeast Asian Nations (ASEAN); Brazil, Russia, India, China and South Africa (BRICS); European Union (EU); G20; and more. This has compelled many countries to open their product markets, capital markets, and labour markets to producers and investors in other nations. It has also promoted competition in all fields of businesses and facilitated cross-border financing and investment. With the increased integration of economies, corporate entities seeking capital and investors and lenders seeking investment opportunities start looking beyond the borders for their capital requirement.

Today, investors can invest their money all over the world. Companies can attract investors only if their published financial reports give highly relevant, reliable, and useful information. Furthermore, the increased cross-border trade and the flow of international capital have brought a new challenge of financial report presentation by corporate entities across borders. Consequently, the need for a globally accepted quality financial reporting standard that can avoid inconsistencies and conflicts across borders has arisen. The International Financial Reporting Standards (IFRS) Foundation has thus been established to address this issue by developing high quality and globally accepted accounting standard known as IFRS, which can be used by companies across boundaries (Chapman 2018). IFRS has been developed as a common global language of business, which is understandable and comparable across boundaries (Das and Saha 2017). The primary objective of the general-purpose financial reporting is to provide useful financial information that is to be presented to prospective equity investors, lenders, and other creditors in their endeavour for making investment decisions within their capacity as the capital providers (IASB 2008). Therefore, providing a quality financial report is very much important for every company to attract investors and creditors.

1.2 Background of the Study

Growing public investment in corporate securities and the integration of capital market globally demand quality financial reports that provide relevant, reliable, and comparable financial information to investors making their economic decisions. Consequently, the need for a globally accepted quality financial reporting standard that can avoid inconsistencies and conflicts across boarder arose. International accounting standards board (IASB) was established under International Financial Reporting Standards (IFRS) foundation to address this issue by developing a high quality, globally acceptable accounting standard that can be used by companies across boundaries. IASB developed IFRS as a common global language of business which is understandable and comparable across boundaries. To cope with these developments and reap the benefits of changes in the international capital markets, many countries including European Union countries and Australia mandatorily adopted IFRS for reporting periods beginning on or after 1 January 2005.

General-purpose financial reports[1] published by corporations are the only authoritative source of financial information available to the present and prospective investors and creditors in knowing how the fund provided by them are utilised by these companies. As per Para 43 of Statement of Accounting Concept (SAC) 2, the objective of general-purpose financial reporting is "to provide information useful to the stakeholders for making and evaluating decision about the allocation of scarce resources" (AASB 2015c, CPA 2013). Only quality financial reports can provide valuable information to the stakeholders and attract funding to the companies. The quality of the information provided in a financial report is the result of interaction between different factors, such as the accounting standards and their interpretations, the economic conditions of the country in which the organisation works, regulatory authorities' enforcement, the legal framework, income tax legislation, corporation law, and more (Soderstrom and Sun 2007). To maintain the usefulness, reliability, relevance, and quality of such financial reports to the users, most countries have

[1] "General purpose financial report" means a financial report intended to meet the information needs common to users who are unable to command the preparation of reports tailored so as to satisfy, specifically, all of their information needs(AARF 2001).

developed their own accounting standards or adopted IFRS established by the International Accounting Standards Board (IASB). Many countries such as Australia, EU countries, Brazil and more have developed their own accounting standards, while those countries which do not have the expertise and resources to develop their own accounting standards accepted accounting standards developed by other countries or allowed the use of IFRS as their domestic accounting standards. Accounting standards are the standards developed by accounting bodies and recognised by the government and regulatory bodies of each country, which are then used in the preparation of financial reports. It specifies how business transactions are to be recognised, measured, presented, and disclosed in the financial report (CPA 2018). Primary objective of IFRS adoption is to improve the transparency and reliability of financial statements across the globe and facilitate cross border investments (de Moura, Altuwaijri, and Gupta 2020)

Prior to 2005, different countries used country-specific Generally Accepted Accounting Principles (GAAP) basis for their respective economic and legal environment (Soderstrom and Sun 2007). The development of country specific accounting system follows different pattern in different countries (El-Helaly, Ntim, and Soliman 2020). The use of different and country-specific accounting standards from varying countries has resulted in the act of recording similar economic transactions differently, making the financial statement incomparable and complicated for cross-border financial analysis and investment (Bradshaw and Miller 2008). Different standards by these countries can lead to confusion and complications for the individual tasked with preparing the report and the stakeholders, as they cannot compare the financial information of companies from different locations. Therefore, the use of different accounting standards in these varying countries has created barriers to the movement of funds between them (Weaver 2014). The divergence between the standards issued by national and international standard-setting bodies and the globalisation of economic activities has resulted in an increased demand for high quality and internationally comparable financial information (Ochi 2014, AASB 2004). Moreover, the international capital markets will not accept financial reports prepared using country-specific accounting standards. This has increased the momentum for the adoption of international accounting standards due to the perceived benefits of using a single worldwide financial reporting standard (Hines 2007a).

In February 2000, United states (US) Securities Exchange Commission (SEC) accepted the use of IFRS by listed companies, whereas in May 2000, the International Organisation of Securities Commissions (IOSCO) endorsed its usage in the cross-border listing. Similarly, Canada adopted the International Accounting Standards (IAS) from 2006 onwards, while the Institute of Chartered Accountants in England and Wales (ICAEW) also endorsed and enforced IFRS within the EU (Donnelly 2007). The council of EU ministers then issued an official statement on 6th June 2002 (EU Order 1606/2002) requiring all listed companies in the EU capital markets to implement IFRS in their single or consolidated financial statement with effect from the fiscal year starting from 1st January 2005 (Soderstrom and Sun 2007). Meanwhile, Japan allowed the use of IFRS by listed companies from the financial year ending on March 2010, whereas the USA decided to converge the US GAAP with IFRS by 2011 (Atwood et al. 2011). Paananen and Henghsiu (2009) have noted IFRS becoming one of the most widely accepted financial accounting models after its adoption by EU countries. IFRS has gained global acceptance since its adoption by European countries and other countries in 2005(Opare, Houqe, and van Zijl 2020)

1.2.1 Adoption VS Convergence

Adoption and convergence are two different terms but used interchangeably by many. The term adoption means that the country is using and fully complying with the IFRS issued by IASB in preparing the financial reports of reporting entities. Accounting convergence refers to the "process of narrowing differences between IFRS and the accounting standards of countries that retain their own standards" (Ball 2006, p. 9). Therefore, if a country converges its accounting standard with IFRS, there may have some deviations in financial reporting practice from the standard issued by IASB. Convergence can thus eliminate the cost of reconciliations. Convergence and adoption increases accounting quality and the global acceptance of financial report. This in turn raises investors' confidence, enables a more efficient international trading, and makes the capital market strong, stable, and liquid (Institute 2012).

1.2.2 Accounting Quality

Corporate entities are the most popular type of business organisations in the modern world as they can raise the capital needed for their operation from the public through the issue of shares, bonds, and other financial instruments. To comply with the regulatory requirement and to protect the interest of investors and creditors, they are required to prepare and publish financial reports at the end of every financial year. Australian Corporations Act 2001 - Section 292 requires that all disclosing entities incorporated or formed in Australia must prepare annual financial reports and directors' reports for each financial year (Institute 2012, Gassen and Sellhorn 2006). Even though there are a number of stakeholders, such as investors, government, employees, and regulatory authorities, the present and prospective investors and creditors are the primary users of financial reports. They rely on the information disclosed in the published financial report for decision-making. In the decision document, IASB and FASB declare that the primary user group for General Purpose Financial Report (GPFR) is the present and potential capital providers and the objective of financial reports should be "broad enough to encompass all decisions that equity investors, lenders, and other creditors make in their capacity as the capital providers, including resource allocation decision as well as decisions made to protect and enhance their investment(Cheney 2008). As there are different stakeholders in a company, it is not possible for a company to prepare a special purpose financial statement(SPFS)[2] to fulfil the needs of each group of stakeholders. The financial report prepared by the companies is usually known as General Purpose Financial Report (GPFR). GPFR may be used by an array of user groups for many purposes. Nevertheless, it is primarily directed towards the information requirements of existing and potential investors, lenders, and other creditors (Deegan 2012, IFRS 2014, AASB 2015c). An entity cannot provide information directly to potential investors, lenders, and other creditors; they must rely on GPFRs for much of the financial information they need(Frascanada 2015) . Consequently, GPFRs are directed to the present and potential investors and creditors, as they are the primary users of financial reports.

[2] Special purpose financial statement is financial statements designed to meet the need of a specific group or specific purpose (Craig Deegan)

AASB adopted the conceptual framework developed by IASB, which defines the nature and objective of the financial report. The purpose of financial reports is to provide information to investors and creditors on the way money is used in the business and what is the current financial health of a company (AASB 2015c). The objective of general purpose financial reporting is to provide financial information about the reporting entity that is useful to existing and potential investors, lenders, and other creditors in making investment decisions. These decisions involve buying, selling or holding equity and debt instruments, and providing or settling loans and other forms of credit (IFRS 2010, Frascanada 2015). AASB paragraph 12 states that the objective of financial statement is to provide information about the financial position, financial performance, and cash flow of an entity to a range of users to make economic decisions. AASB paragraph 24 specifies that to make information provided by the financial statement useful to stakeholders, it must have qualitative characteristics, namely understandability, relevance, reliability, and comparability (AASB 2015c).

1.2.2.1 Understandability

Information can be useful only if it is readily understandable to the users. To be understandable, IFRS expects the readers to have some basic knowledge in accounting and business. The conceptual framework assumes that the reader has reasonable knowledge of business, economic activity, accounting, and willingness to study information with reasonable diligence. Nevertheless, it does mean that complex information that are relevant for economic decision-making should not be omitted from financial statement merely because it is too difficult for certain users to understand (IFRS 2014, AASB 2015c, Deegan 2012)

1.2.2.2 Relevance

Information can be relevant only if it is useful for the decision-making needs of users. Relevant information must be capable of making a difference in the decisions made by users (Janice Loftus 2013, CPA 2013). Information can be useful for economic decision-making only if it can evaluate past, present, and future events or be used to confirm or correct their past evaluation. That means information must have predictive and

confirmative roles. To have predictive value, information must not be in the form of explicit prediction, but it must assist in making predictions. Confirmative role refers to the utility of information to conform or correct earlier prediction. Relevance is also affected by the nature and materiality of information. Information is materialised if its omission and misstatement could influence the decision the user makes (AASB 2015c, CPA 2013, Deegan 2012).

1.2.2.3 Reliability

Information in the financial statement can be useful only if it is reliable. To be reliable, information must be free from errors, unbiased, faithfully represented, and complete. To be unbiased, the information must be neutral and free from errors. If the selection or presentation of information influences decision made to achieve a predetermined result or outcome, it is biased and not neutral (AASB 2015c). Reliable information must be faithfully represented. A faithfully represented financial statement must not only report the relevant information, but must also faithfully represent what it purports to represent (CPA 2013, Deegan 2012, Janice Loftus 2013).

1.2.2.4 Comparability

One of the most important qualities of financial report that can be achieved by the adoption of IFRS is comparability (Parliament 2005, Ding et al. 2007, Kotlyar 2008). Comparability means that the user must be able to compare financial statements of same entities over different periods and also financial statements of different entities in order to evaluate financial position, financial performance, and cash flow (CPA 2013, Deegan 2012, Janice Loftus 2013). Comparability does not mean uniformity. To be comparable, the users must be informed about the accounting policy employed in preparing the financial statements, change in the policy, and the effect of such change (CPA 2013).

The adoption or convergence of country specific accounting standards to IFRS are expected to increase the quality of financial reports. published by the corporate entities and. This can increase the comparability of financial reports and increases international mobility of the funds bring a number of benefits to the companies, investors and to the economy.

1.3 Importance of International Financial Reporting Standards Adoption

Economic globalisation has compelled many countries such as China, India, Brazil, and more to open their industry and capital markets to investors all over the world. Today, investors can invest their money worldwide, while companies can raise funds from any capital markets where the funds are available at a lower cost. This has led to the importance of IAS development, whereby business entities worldwide follow the same format, rules, and regulations in recognising and reporting their operations. Over the past decade more than 140 countries permit or require the use of IFRS around the world (Tsalavoutas, Tsoligkas, and Evans 2020). IFRA adoption is relevant and important for international businesses and financial markets (El-Helaly, Ntim, and Soliman 2020). The IOSCO has also promoted the internationally-standardised listing rules, including the universal acceptance of IFRS, so that the companies can cross-list their stock worldwide (Donnelly 2007). The investors can rejoice now as the new IFRS renders company financial reports more comparable and enables funds to be invested internationally with more knowledge and confidence (Economist 2008). IFRS improves the analysts' information environment which can help investors in assessing their risk in investing (de Moura and Gupta 2019). Clearly, the adoption of IFRS can increase the international mobility of the funds. IFRS adoption increases a firm's access to foreign capital market and increases the diversity of investors (Gu, Ng, and Tsang 2019).

Accounting standards used in the preparation of the financial reports are an important determinant of the published report quality. However, the use of different accounting standards by varying countries reduces the quality, relevance, and comparability of the accounting information. There are no GAAPs for many developing countries other than what they have inherited from their colonial masters such as the UK or France. As such, the disclosure in the financial reports of companies in these countries is minimal (Ochi 2014, Zehri and Chouaibi 2013). There are diverse accounting practices worldwide, which make it difficult to compare the financial reports for companies in one country to the next. The pattern of developing national accounting standards differ among countries depending on the institutional, economic and cultural factors(El-Helaly, Ntim, and Soliman 2020)

According to the EU parliament, developing a single set of financial reporting standard that can be used by EU countries is essential to ensure a high degree of transparency and comparability of financial statements and efficient functioning of the EU capital markets (Parliament 2005). Use of IFRS is expected to improve disclosure in financial report and comparability of financial information, reducing the cost of information processing and information asymmetry (Opare, Houqe, and van Zijl 2020). The simultaneous adopting IFRS by listed companies around the world can achieve uniformity, transparency, comparability and reliability of financial data on capital markets (Sanabria-García and Garrido-Miralles 2020). If IFRS is adopted worldwide, all firms will follow the same set of accounting standards and the external financial reports generated by them will provide uniform disclosure and useful accounting information for the investors. This is evident from the support and attention given to the adoption of international accounting standards by investors, regulators, and the academic world (Ding et al. 2007, Sanabria-García and Garrido-Miralles 2020). Kotlyar (2008) has further reaffirmed that the adoption of IFRS can increase the comparability of financial reports for companies listed on the stock markets in different countries in evaluating investment opportunities across borders. From the trade perspective, EU countries can attest to its adoption in reducing cross-country differences in financial reporting, thereby promoting international trade (EU 2002, Opare, Houqe, and van Zijl 2020).

The need for IFRS is reflected in the efficient functioning of the capital market (El-Helaly, Ntim, and Soliman 2020). When the accounting information is accurate and timely, it will reduce the risk of investment and reduce the cost of capital (de Moura, Altuwaijri, and Gupta 2020). Ochi (2014) has rightly pointed out that with IFRS developed, IASB has increased the transparency and integrity of financial reporting of companies, which promote the confidence of stakeholders. It will ultimately lead to efficient asset distribution in the capital market and help in maintaining the stability of international finance. The economic consequence of IFRS adoption includes decline in cost of capital, efficiency of capital allocation and international capital mobility(El-Helaly, Ntim, and Soliman 2020). IFRS adoption disseminates more uniform financial information and reduced interpreting costs which increased the incentives to make new investments in capital market (Sanabria-

García and Garrido-Miralles 2020). Empirically, Leuz and Verrecchia (2000) have shown that shifting the accounting standards from German GAAP to IFRS is found to reduce the information asymmetry, which leads to a reduction in the cost of capital. The cost of equity and also cost of debt declined after the mandatory adoption of IFRS in Latin American countries (de Moura and Gupta 2019)

There are different reasons why the adoption of IFRS can improve the accounting quality of financial reports. IFRS reduces the accounting alternatives of recording business transactions, which can decrease the managerial discretion of recognising transactions and lowering the incidence of earning management. IFRS is a principle-based standard, thereby avoiding the possibility of not recognising many liabilities. The principles-based IFRS increases the management judgment and discretion in the reporting process (Gu, Ng, and Tsang 2019, Ball 2006). Furthermore, it allows fair value accounting, which is more relevant and reflects the underlying economics of a company than many domestic standards (Ahmed, Neel, and Wang 2013, Barth 2007, Gu, Ng, and Tsang 2019). This makes the new IFRS more flexible in its adoption and application across companies and countries, as well as helps in minimising the conflicts with the existing legal framework. The principles are also compatible with the use of innovative securitisation products in corporate finance (Donnelly 2007). The principle-based and market-oriented IFRS requires extensive disclosure compared to country-based GAAP (Pekdemir and Türel 2014, Jones and Finley 2011b). IFRS is more principles-based than adopting countries GAAP which increases the management judgment and discretion in the reporting process (Gu, Ng, and Tsang 2019). It reduces the allowable accounting alternatives in the measurement and helps to improve the quality of financial reports so as to better reflect the actual financial position and performance. The principle-based standard will make the adoption and application of IFRS more flexible for the companies and countries alike. The use of principle-based accounting measurement required by IFRS ensures that the accounting numbers reflect the underlying economics of the companies better. Similarly, the adoption of IFRS can thus reduce the earning management and increase the financial reporting quality (Barth 2007, Dimitropoulos et al. 2013, de Moura and Gupta 2019).

It can be argued that limiting the accounting alternatives may also restrict the company's ability to report an amount that clearly reflects its economic condition. It limits the discretion of the management to report accounting numbers that divulge the firm's financial position and performance in a better way (Leuz and Verrecchia 2000, Barth 2007). The principle based IFRS standards and use of fair value model provides more opportunities to managers to manipulate accounts (DeFond et al. 2019).

The stock exchanges in Europe generally accept financial reports prepared in accordance with IFRS and United States National Association of Securities Dealers Automated Quotations (US NASDAQ), whereby many small and new hi-tech public-listed companies have the choice of using either US GAAP or IFRS (Soderstrom and Sun 2007). IFRS adoption is relevant and important for international businesses and financial markets (El-Helaly, Ntim, and Soliman 2020). The disaggregated information provided by IFRS-adopting firms provides better capital market benefits(Li, Siciliano, and Venkatachalam 2020) This has prompted many firms needing foreign investments to choose the IFRS even prior to 2005. Furthermore, most of the developing countries are dependent on foreign capital for their economic development, thereby causing the adoption or harmonisation of the IFRS to significantly help in improving the flow of foreign capital to these countries the (Chamisa 2000, Li, Siciliano, and Venkatachalam 2020). The mandatory adoption of IFRS leads to changes in accounting quality, which in turn can affect the way foreign investors make their investment decisions in the worldwide economy(de Moura, Altuwaijri, and Gupta 2020) Similarly, the financing needs, firm size, and financial performance influence the decision in adopting international accounting standards to a certain extent (Leuz and Verrecchia 2000). The firms with commercial and international source of funds tends to prepare their financial reports according to IFRS (Pignatel and Tchakoute Tchuigoua 2020).

Corporate failures and scandals worldwide have prompted for the information provided in the financial reports to be transparent and represent a fair and true market value of company assets, liabilities, and income (Nolke 2005). The control of corruption can also influence the speed and extend of IFRS adoption (El-Helaly, Ntim, and Soliman 2020). The corporate

scandals are the catalyst for revealing the importance of transparency, accuracy, control, and security of investors (Kotlyar 2008). IASB has insisted for all financial market transactions to be visible in the balance sheet rather than allowing off-balance sheet transactions (Barth 2007). The visibility of financial market transactions in the balance sheet can increase the quality of the accounting report, which can further improve the transparency of financial reports and attract more investors (Johnson et al. 2000).

The adoption of IAS is more important for listed companies as the quality of accounting information is crucial to protect investors' interest. The published financial reports are the only information that investors get from a company for their decision-making. Companies can attract investors only if they give highly relevant and useful information to investors. The disaggregated information provided by IFRS-adopting firms provides better capital market benefits (Li, Siciliano, and Venkatachalam 2020). IFRS is more importance for international businesses and entities raising fund in international financial markets (El-Helaly, Ntim, and Soliman 2020) .Therefore, nations with highly developed equity markets are more likely to observe standards similar to IFRS. This is consistent with the idea that IFRS is developed primarily for publicly traded firms (Outa 2011).

Although there are different objectives and benefits for the adoption of IFRS, quality financial reporting is the major objective (IFRS 2014). IASB and the Financial Accounting Standards Board (FASB) jointly issued a memorandum on 27th February 2006, confirming that they shared the common objective of high-quality accounting standard applicable by the international stock markets (Zehri and Chouaibi 2013). The desired improvement in the accounting quality can be attained only with the improvements in capital market regulations alongside the adoption of IFRS (Ding et al. 2007). The capital market benefits related to IFRS adoption accrues mainly to countries that make concurrent and substantive enforcement changes (Gu, Ng, and Tsang 2019).

1.4 Australian Move Towards IFRS

Australia is one among the Asia-Pacific countries that has committed to the mandatory adoption of IFRS form 1st January 2005(Cheong, Kim, and Zurbruegg 2010). Voluntary

adoption of IFRS prior to its mandatory adoption in 2005 was also not allowed in Australia. (Chua, Cheong, and Gould 2012). The Australian move towards IFRS adoption has resulted from the corporate reform programme initiated by the Commonwealth under Corporate Law Economic Reforms Programme (CLERP 1997). Additionally, the Australian Securities Exchange (ASX) and Financial Reporting Council (FRC) have supported the adoption of IFRS (Jones and Higgins 2006). It is also the first non-EU country that prohibited an early adoption of IFRS prior to January 2005 (Chua, Cheong, and Gould 2012).

Australia always tried to alien its standard with standards elsewhere. In 1994, Australian Accounting Standards Board (AASB) issued Policy Statement 4 of the *Australian New Zealand Harmonisation Policies*, which noted that Australian and New Zealander standard setters would consult in the development of the standards and their conceptual framework in view of eliminating unnecessary differences between their respective standards (CPA 2013). To make the Australian accounting standard compatible with the standards of other nations and international standards, the AASB committed to the international harmonisation of its accounting standards in April 1996, with the release of Policy Statement 6, the *International Harmonisation Policy* (Lonergan 2003). The statement issued was yet another move towards the IFRS Policy Statement 6, which stated that the AASB's international harmonisation objective was to peruse the development of an internationally accepted set of accounting standards adaptable in Australia (CPA 2013).

IASC was replaced by IASB with effect from April 2001, whereby AASB encompassed the activities of IASB in place of its predecessor IASC (ICAEW 2014, De George, Li, and Shivakumar 2016). AASB issued the exposure draft ED 102 of *International Convergence and Harmonisation Policy*, which was intended to merge and revise Policy Statement 4 and Policy Statement 6 to reflect the changes due to the reconstitution of AASB and IASB (AASB 2004). In 2004, AASB issued its new Policy Statement 4 of *International Convergence and Harmonisation Project* with a revised harmonisation objective. In Paragraph 7, it has specified that along with increasing the comparability of financial reporting so as to remove the barriers of international capital flow, reducing the reporting

cost and improving the quality of financial reporting in Australia to attain the best international practice are also the objectives of harmonisation (CPA 2013).

AASB later changed its approach from harmonisation to adoption by adopting the IASB's standard by 2005. The paper entitled '*AASB adoption of IASB standards by 2005'* has noted that the issue of an Australian equivalent to IASB standard to achieve the FRC's strategic directive. It should ensure that for-profit entities applying the AASB standards for reporting periods beginning on or after 1st January 2005 would also be complying with IASB standards (CPA 2013). The mandatory adoption of IFRS by Australia and other countries around the world has sparked the interest of many global capital market participants as to whether its adoption has improved the quality of financial reports (Chua, Cheong, and Gould 2012).

1.5 Link Between the Financial Crisis and Accounting Standards

The financial crisis of 2008 is considered by many economists as the second-largest financial crisis witnessed in the global economy after the great depression of the 1930s. (VYAS 2011, Allen and Carletti 2010a, Quiggin 2011). Back then, it surfaced as difficulties in the USA subprime mortgage market and then escalated and spread to the financial market first, and subsequently to global economy. Several factors have contributed to the world financial crisis, whereby important ones cited include lax regulations on mortgage lending, growing housing bubble, rise of collateralised debt obligations, relaxed credit practices of banks, management incentives, and fair value accounting (mark-to-market accounting) (Deloitte 2015a, Kothari and Lester 2012, Allen and Carletti 2010a). It has ultimately affected the governments and leading to the collapse of financial markets, bursting of the mortgage lending market, unemployment, and more. Weight loss arising from the financial crisis amounted to approximately $14 trillion (Carletti 2009, Kothari and Lester 2012). Furthermore, financial accounting, especially the fair value accounting, has been thought to be one of the contributing factors for the financial crisis (Mala and Chand 2012). The use of fair value accounting required banks to recognise a relevant reduction in the value of their financial assets and has to do large account write down(Menicucci and Paolucci 2016) It is argued that the fair value accounting rule, which

requires the banks to write down their assets to market price even though there is no intention to sell at the price is the basic cause for the financial crisis (ABA 2008, Moradi-Motlagh and Babacan 2015).

Considering these criticisms on top of the pressure from the regulators, policymakers, financial institutions, and the finance ministers from many countries, IASB has undertaken various measures to improve the fair value reporting requirements (Mala and Chand 2012). The political intervention and pressure from different groups of interest can reduce the reliability and credibility of IFRS (Ball 2016). Therefore, the pressure on IASB would have led them to make unjustifiable changes to IFRS that affect their independence and possibly compromise the reliability and credibility of IFRS itself (Alali and Cao 2010). The influence of powerful interest groups who have exerted pressure to have their interests represented in the formulation of the accounting requirement affects the quality of accounting (Bernstein 1992).

The financial crisis of 2008 has relatively less effect on the Australian economy compared to many other advanced countries.(Murphy 2011, Groenewold 2018, Moradi-Motlagh and Babacan 2015), It initially affected the credit market and then, the share market. The risk assessment and risk management have a momentous role in the financial crisis, leading to costly investment decisions (Debelle 2009). An obvious manifestation of the financial crisis to the public in Australia has been noted in the declining stock market, whereby its magnitude had been reflected in the volatility of share prices. At the time, the share price of Australian banks declined and the local market dropped by 54% from its peak in November 2007, albeit less severe compared to other developed countries (Debelle 2009).

1.6 Problem Statement

The adoption of IFRS by many countries across the world and the financial crisis of 2008 were the two major events happened in the business environment in the first decade of 21st century. IFRS adoption anticipates an improvement in accounting quality of financial report. The financial crisis, is a bad economic period, where the economic performance of businesses is expected to affect adversely. Companies are likely to manipulate accounts in

bad economic period like financial crisis to show better financial position and performance Besides that, the changes made in the IFRS by IASB in the light of financial crisis can affect the accounting quality of financial reports. Based on these two issues the research problems identified by the study are, whether the adoption of IFRS has improved the accounting quality and did the financial crisis affected the quality of financial reports listed companies in Australia

In corporate form of organization shareholders are the owners and the management is done by directors and professional managers. The separation of risk bearing function of owners and control function of management provides opportunity to managers to act against the interest of shareholders (Bricket and Chandar 1998). The agency theory of accounting specifies that shareholders are the principal and the management is the agent and as an agent the management has a legal, fiduciary and a stewardship responsibility to act in the best interest of the principal. As such, the management of companies are responsible to provide reliable and relevant information of the company to the shareholders so that they can make informed investment and financing decisions. Accounting is concerned with providing information about the business operation to managers and investors for decision making. IASB developed IFRS with this objective of providing high quality globally accepted accounting standards that can be used by investors and other users of financial information to make economic decisions (IFRS 2014, Deloitte 2016). The adoption of IFRS can thus increase the quality of the published financial reports of entities (Ihlanfeldt 1997). The use of IFRS in financial reporting help the management to provide accurate and reliable information to shareholders which to an extend helps them to meet their fiduciary and a stewardship responsibility as agents. Australia and may other countries adopted IFRS with this objective of providing quality financial report to present and prospective investors. IFRS has gained global acceptance since its adoption by European countries and other countries in 2005 (Groenewold 2018). Worldwide mandatory adoption of IFRS is an important global financial reform in accounting history (de Moura, Altuwaijri, and Gupta 2020).

The mandatory adoption of IFRS can strengthen the positive effect of financial statement disclosure. It increases capital market benefits by providing disaggregated information (Li,

Siciliano, and Venkatachalam 2020). Use of IFRS is relevant and important for international business and capital markets, it reduces cost of capital, increases efficiency of capital allocation and international capital mobility (de Moura, Altuwaijri, and Gupta 2020, El-Helaly, Ntim, and Soliman 2020, Pignatel and Tchakoute Tchuigoua 2020). The adoption of IFRS can achieve uniformity, transparency, comparability and reliability of financial data, reduce interpretation cost and will attract new investors to capital market (Sanabria-García and Garrido-Miralles 2020). The improvement in the accounting quality achieved by mandating IFRS can reduce cost of information processing and information asymmetry, which can positively influence the investors worldwide (Opare, Houqe, and van Zijl 2020). The improvement in the analysist's information environment helps investors to assess their risk in investment (de Moura and Gupta 2019). The principle based IFRS increases management's judgment and discretion in reporting process (Gu, Ng, and Tsang 2019). The improvement in the quality of accounting information by using IFRS can help Australian listed companies to avail the above-mentioned advantages and attract more investors. Based on the above observations the first research problem developed for this study is whether the adoption of IFRS by Australian listed companies has improved the accounting quality of financial reports of these companies.

The financial crisis of 2008 has effected almost all economies world over. Many advanced countries suffered a major economic distress after the financial crisis(Groenewold 2018). Economist across the world point out that adoption of IFRS especially the fair value accounting model used in IFRS is the cause for financial crisis and also for magnifying its effect (Kothari and Lester 2012, VYAS 2011, Mala and Chand 2012). This criticism increased the pressure on IASB from accounting bodies and governments to make changes in IFRS (Bengtsson 2011a). The result of the interference from pressure groups would have forced IASB to make unwarranted changes that affected the reliability, credibility, and quality of accounting (Alali and Cao 2010). Many others similarly consider the influence of political actors in the standard-setting process of IASB is increasing, particularly after the global financial crisis (Bengtsson 2011b). The political interference in the standard-setting process can affect the quality of IFRS (Ball 2009). Moreover, economic distress caused by financial crisis will badly affect economic performance of most of the companies. It is found that the financial crisis was a concern to investors in capital markets

and had even effected commodity market (Zhang and Broadstock 2020). The study by Moradi-Motlagh and Babacan (2015) found that the financial crisis has even effected the efficiency of Australian banks. Usually companies are likely to involve in manipulation of accounts in bad periods to show better financial performance which can affect the quality of the financial reports (Kothari and Lester 2012). Firms even have the incentive to avoid tax in periods of economic distress like financial crisis (Richardson, Taylor, and Lanis 2015). Thus the financial distress of the crisis period may motivate companies to manipulate accounts which can affect the quality of published financial report. Based on this, the second research problem of this study is whether the financial crisis a period of economic distress has affected the accounting quality of Australian listed companies.

The adoption of IFRS can improved accounting quality and the changes made in IFRS due to the interference of pressure groups after the financial crisis and the inclination of companies to manipulate accounts to show a better financial position in bad periods can affect the quality of IFRS. Therefore, this research identifies two research problems based on these two incidents one adoption of IFRS where an increase in accounting quality is expected and the financial crisis of 2008 which can adversely affect accounting quality of financial reports of Australian listed companies and investigates the impact of adoption IFRS by Australian listed companies on the quality of published financial reports and whether the financial crisis 2008 has affected the quality of financial reports of these companies.

1.7 Objectives of the Study

The main aims of this research were to investigate the impact of the mandatory adoption of international financial reporting standards and the financial crisis on the quality of financial reports of Australian-listed companies. Specifically, this research formulated the following objectives:

I. To examine the impact of IFRS adoption on accounting quality of financial reports of Australian listed companies using accounting quality measures, earnings management, timely loss recognition and value relevance.

II. To assess the impact of financial crisis on accounting quality of financial reports of Australian listed companies using accounting quality measures, earnings management, timely loss recognition and value relevance.

Accounting quality of financial report of companies are a widely researched area in accounting literature. Most of these research are on the impact on accounting quality of financial reports of companies due to the change from domestic accounting standards to IFRS. But, unlike those studies this research analyses the impacts of two important events occurred in the business world during the first decade of this century, adoption of IFRS by number of countries and the financial crisis of 2008. Australia adopted IFRS for financial statement prepared for the financial year beginning on or after 1st January 2005. This research on one hand analyses the impact of adoption of IFRS on the quality of financial reports and secondly the effected of 2008 financial crisis on the quality of financial reports of Australian listed companies. Moreover, it is expected that these two incidents affect accounting quality differently. The adoption of IFRS is expected to improve the accounting quality as the primary objective of IFRS is the development of a quality and globally accepted accounting standard and the financial crisis is a condition of economic distress in which the quality of financial report may be adversely affected. The study analyses the impact of these two different events one which is expected to improve the quality of financial report and the other where it is anticipated that the quality of the financial report can affect adversely.

Even though there are many studies which analyse the impact of adoption of IFRS on accounting quality, none of these studies examines the impact of IFRS adoption on different industrial sectors. This research investigates the impact of IFRS adoption on seven selected industry sectors. Moreover, study also investigating the impact of financial crisis on the quality of financial reports. Economic distress like financial crisis usually effect the performance of companies and motivates management to change accounting policies, to present better financial position. Thus the study analyses whether the adoption of IFRS has improved the accounting quality and how an adverse economic situation like financial crisis effected accounting quality of financial reports.

This study evaluates accounting quality under two different situations. The adoption of IFRS, a condition where it is expected that accounting quality will improve and financial

crisis is an economic distress where it is expected that the accounting quality may effect adversely. This can give light as to whether the use of quality accounting standard alone can improve the quality of the financial reports and whether the legal and political system of a county can influence the quality of published financial reports of companies.

The large sample size used in the study is another highlight of this study. In analysing the impact of IFRS adoption the study compares the financial information of 264 Australian companies listed companies for four pre-IFRS periods with four post-IFRS periods. Effect of financial crisis is analysed using the financial information of seven pre-financial crisis periods with seven post-financial crisis periods. The large sample size can give more robust and reliable result in the study.

1.8 Research Question

IASB was formed in 2001, with the objective of developing internationally acceptable high-quality accounting standards utilisable by accountants and auditors worldwide. The Australian listed companies adopted IFRS, the standards developed by IASB from reporting period beginning on or after 1st January 2005. They were not allowed voluntary adoption of IFRS before 2005. Therefore, only financial reports prepared for the year ending on or after 31st December 2005 are prepared as per IFRS. It is expected that the adoption of IFRS will improve the quality of financial reports. The 2008 financial crisis is the other event that affected most of the economies worldwide, including Australia. Many economists consider the fair value method of assets valuation implemented in IFRS to be the cause for the crisis. Subsequently, IFRS has made some changes in the fair value hierarchy of measuring the assets due to these criticisms, which can affect the quality of the financial reports.

Based on the research problem, two primary research questions were developed for the study as follows:

1) How does the adoption of IFRS by Australian listed companies affect the accounting quality of published financial reports?

2) To what extent has the financial crisis affected the accounting quality of published financial reports?

Based on the first main research question, the study formulated the following sub-questions:

1) Did the adoption of IFRS reduce the possibility of earning management by Australian listed companies?
2) Will the adoption of IFRS increase the frequency of timely loss recognition?
3) How far will the value relevance of financial reports increase by adopting IFRS?

Then, based on the second main research question, the following sub-questions were developed:

1) Can the financial crisis affect the earning management activities of listed Australian companies?
2) Did the financial crisis affect the frequency of timely loss recognition practice of Australian listed companies?
3) What is the effect of the financial crisis on the value relevance of the financial reports of Australian listed companies?

To evaluate the improvement of accounting quality after the adoption of IFRS, this thesis compared the quality of published financial reports pre-IFRS adoption period spanning from 2002 to 2005 against post-IFRS adoption period spanning from 2006 to 2009. To know the effect of the financial crisis on accounting quality, the financial reports of the pre-financial crisis period ranging from 2002 to 2008 were compared with those of the post-financial crisis period ranging from 2009 to 2015. The accounting quality was evaluated by using the three measures, namely earning management, timely loss recognition, and value relevance.

1.9 Importance of the Study

Accounting quality of financial report of companies are a widely researched area in accounting literature. Most of these researches are on the impact on accounting quality of

financial reports of companies due to the change from domestic accounting standards to IFRS. But, unlike those studies this research analyses the impacts of two important events occurred in the business world during the first decade of this century, adoption of IFRS by number of countries and the financial crisis of 2008. Australia adopted IFRS for financial statement prepared for the financial year beginning on or after 1st January 2005. This research on one hand analyses the impact of adoption of IFRS on the quality of financial reports and secondly the effected of 2008 financial crisis on the quality of financial reports of Australian listed companies. Moreover, it is expected that these two incidents affect accounting quality differently. The adoption of IFRS is expected to improve the accounting quality as the primary objective of IFRS is the development of a quality and globally accepted accounting standard and the financial crisis is a condition of economic distress in which the quality of financial report may be adversely affected. The study analyses the impact of these two different events on the quality of the financial report. This helps in finding out whether the adoption IFRS alone can improve the quality of financial report of companies. Mongrut and Winkelried (2019) specifies that adoption of IFRS alone is not sufficient to guarantee accounting quality.

Even though there are many studies which analyse the impact of adoption of IFRS on accounting quality, none of these studies examines the impact of IFRS adoption on different industrial sectors. This research investigates the impact of IFRS adoption on seven selected industry sectors. Different industry sectors used different accounting standards depending on their economic transactions and the composition of the assets and liability held by the entities. The sector wise analysis helps in evaluation whether the accounting quality differ among sectors depending on the difference in the accounting standards used.

Moreover, study also investigating the impact of financial crisis on the quality of financial reports. Economic distress like financial crisis usually effect the performance of companies and motivates management to change accounting policies, to present a rosy picture of company's financial position (Li et al. 2020). The managerial remuneration of most companies are linked to the financial performance which prompts managers to show a better financial position in order to escalate their personal benefits (Crocker and Slemrod 2007). Thus the study analyses whether the adoption of IFRS reduces the possibility of

making unwarranted changes in accounting policies in periods of economic distress, to show a favourable financial position and performance.

The integration of capital market witnessed in the recent years, due to globalisation, increased cross border investment and development of financial markets. Adopting IFRS by listed companies around the world improves uniformity, transparency, comparability and reliability of financial data on capital markets and is important for international businesses and financial markets Sanabria-García and Garrido-Miralles 2020). The adoption of IFRS by countries worldwide can increase the efficiency of capital allocation and international capital mobility (El-Helaly, Ntim, and Soliman 2020). One of the intended goal of adoption of IFRS is to attract institutional investment through improved financial reporting quality (DeFond et al. 2019). Australian can attract foreign investors only if it provides quality financial information to investors and it adopted IFRS with this objective. This study investigates whether the adoption of IFRS by Australian companies helped in improving accounting quality and whether it can maintain this quality even in adverse economic conditions like financial crisis. Thus study evaluates the impact of IFRS adoption on Australian economy.

The adoption of IFRS, a condition where it is expected that accounting quality will improve and financial crisis is an economic distress where it is expected that the accounting quality may effect adversely. There are a number of studies which tells that benefits of IFRA adoption can accrues only if the countries make concurrent and substantive enforcement changes (Daske 2008, Christensen et al. 2015, Gu, Ng, and Tsang 2019). This study evaluates accounting quality based on two incidents, one adoption of IFRS where it is expecting an improvement in accounting quality and financial crisis where an adverse effect on accounting quality is expected. This can give light as to whether the use of quality accounting standard alone can improve the quality of the financial reports and whether the enforcement, legal and political system of a county can influence the quality of published financial reports of companies.

The transition to IFRS is considered as the major changes to financial reporting system which is expected to improve the quality of financial reporting and unify the accounting

rule word wide. But immediately after the adoption of IFRS by Australia the financial crisis of 2008 hit all over the world even if it has not affected Australia as many other advanced countries (Groenewold 2018). During financial crisis under the pressure of the economic distress firms are motivated to make accounting choices that reduce costs and strengthen their financial position (Iatridis and Dimitras 2013). This study evaluates whether the financial crisis has affected the accounting quality of Australian listed companies.

The large sample size used in the study is another highlight of this study. In analysing the impact of IFRS adoption the study compares the financial information of 264 Australian companies listed companies for four pre-IFRS periods with four post-IFRS periods. Effect of financial crisis is analysed using the financial information of seven pre-financial crisis periods with seven post-financial crisis periods. The large sample size can give more robust and reliable result in the study.

1.10 Scope of the study

This thesis examines the data from 264 Australian companies listed in ASX. Data for 14 years from 2002 to 2015 is collected using DataStream (Thomason Reuters). The analysis of impact of IFRS adoption on the accounting quality is made dividing the data in to four pre-IFRS adoption periods 2002-2005 and four post-IFRS periods 2006-2009. The effect of financial crisis on the accounting quality is examined dividing the data in to seven pre-financial crisis period 2002 to 2008 and seven post financial crisis periods 2009 to 2015. The year 2005 is included in the pre-IFRS adoption periods because IFRS is mandatory for Australian listed companies from financial year beginning on or after January 1 2005. The financial year of all the companies selected ends before December 31 every year meaning that sample companies financial report for 2005 begins before January 1 2005 and is not using IFRS mandatorily. In the similar manner the year 2008 is included in pre-Financial crisis period because of the same reason. The study uses only data from 2002 to 2015 because at the time of data collection the data of many sample companies for 2016 was not available as the companies are required to publish their financial reports only after three months from the end of reporting period. Likewise, in collecting the market information a

further three months cooling period is given to settle the market after the publishing the annual financial reports. This delays the availability of the data. The non-arability of data for sample companies for any year can make the data unbalanced. Moreover, the effect of financial crisis on accounting quality will not reflect in the financial reports published long after the financial crisis.

The data are analysed using three accounting quality measures earning management, timely loss recognition and value relevance. Earning management is measured using earning smoothing and managing earning towards positive target. To measure earning smoothing the metric used are variability of change in net income(CNI), ratio of variability of change net income to change in cash flow(CNI/CCF) and correlation between accrual and change in cash flow (ACC and CF). Frequency of reporting small positive operating savings (SPOS) is used to evaluate managing earnings towards positive target. Frequency of reporting large negative income (LNEG) is the metric for timely loss recognition. Value relevance is measured using price model and return model. The measures earning management and timely loss recognition evaluates the accounting quality using information from the published financial reports and value relevance uses market information. Thus the study evaluates the accounting quality from the information generated by the company in its financial statements and also based on the market information which makes the study more reliable and robust.

1.11 Thesis Outline

The remaining sections of the thesis are organised in the following manner. Chapter two literature review, explains (IFRS) Land scape, accounting theory and reviews the literature related to the accounting quality and its different measures. Chapter three explains the research methodology used in this study. This chapter gives details of sampling methods, data collection process, different metrics used in evaluating the accounting quality, and the statistical analyses used. Next, Chapter four gives the results obtained for the impact of IFRS adoption on the quality of financial reporting of Australian listed companies. Chapter five subsequently presents the results on how the 2008 financial crisis has affected the accounting quality of financial reports for these Australian listed companies. Finally,

Chapter Six concludes the study with a summary of the key findings, limitations and assumptions, significance, implications, and opportunities for further research.

1.12 Summary

Growing public investment in corporate securities and sophisticated capital market globally demand quality financial reports that provide relevant, reliable, and comparable financial information to investors making their economic decisions. To attract capital, companies have to publish quality financial reports that provide a true and fair view of their financial position and performance. This increases the importance of a quality accounting standard that can be used by companies worldwide in preparing quality financial reports. The primary objective of IFRS is to develop a single set of high quality, understandable, enforceable, and globally accepted financial reporting standards to help investors and other participants of the world's capital markets in making economic decisions. True to this objective, many countries including Australia adopted IFRS from 2005 onwards. Currently, more than 140 countries have either adopted IFRS or permitted the use of IFRS (Tsalavoutas, Tsoligkas, and Evans 2020). Its adoption by a number of countries including Australia, Canada, USA, and EU countries has changed the fundamentals of international business environment. IFRS adoption can also help in improving the comparability of financial reports, reducing the information asymmetry and minimising the cost of capital, increasing the international mobility of funds, attracting foreign capital investments, and increasing the economy of developing countries. Even though there are different objectives and benefits behind the adoption of IFRS, quality financial reporting remains its major objective. Therefore, this study offered a two-fold objective relating to the accounting quality of financial reports prepared per IFRS. The first objective was to investigate whether the adoption of IFRS by Australian listed companies improved the quality of financial reports published by these companies, while the second objective was to evaluate the effect of the 2008 financial crisis on the quality of IFRS.

CHAPTER 2

Literature Review

2.1. Introduction

Reviewing relevant academic literature is indispensable in a research to acquire good knowledge in the area of the study, know about the existing research in the area, and identify the need of further research. A logical and systematic review of the literature is an essential integral part of every research and contributes to the successful completion of the research. It helps to acquire available knowledge in the area of research. Even though it is time-consuming, it gives valuable contribution to the study (Kumar 2011). Literature review is essential to understand the area of research and learn important concepts and research methods, develop research hypothesis, identify different variables to be used in the research, and for accurate use of terminologies. Literature review is an objective critical review of published literature in the area of current research that are relevant and will help to familiarise the research topic (Jackson 2006).

The major objective of financial reports is to provide financial information about a reporting entity that are useful to existing and potential investors and creditors in making economic decisions (AASB 2015c, IFRS 2013b, *ICAEW* 2014). A financial statement can be useful only if it observes the qualitative characteristics as given in the conceptual framework (Frascanada 2015, IFRS 2010). Quality financial report positively influences investors, creditors, and capital providers in making resource allocation decisions and consequently enhances market efficiency (Sanabria-García and Garrido-Miralles 2020). The quality of an accounting report is the primary objective of accounting standards as emphasised by all accounting bodies (IFRS 2014, AASB 2015c). Nevertheless, the problem is how to operationalise and measure the quality of accounting reports. Financial reporting quality is a relative concept because the preferences of each constituent will be different and usefulness of information will be diverse in different contexts. Measuring the quality of financial report is a key problem found in most literature because of its context-specificity, diverse preference among myriads of constituents, and also the various

perceptions of users within a user group towards the usefulness of similar information (Ferdy van Beest 2009). As a result of context and user-specificity, measuring quality directly seems problematic (Botosan 2004). This leads to the use of different methods to measure the quality of financial reports by different authors. The review of earlier literature provides a basis to understand the different measures of accounting quality and to develop hypotheses to evaluate the impact of adoption of IFRS and financial crisis on the quality of financial information provided in the financial reports of Australian listed companies.

The principle objective of IFRS is to develop a single set of high quality, understandable, and globally accepted accounting standards (FSB 2002). Accounting standards are used to present financial information of a reporting entity transparent, consistent, informative, and useful. Accounting theories can assist in determining the appropriate accounting methods to be used and how accounting information should be measured and reported (Janice Loftus 2013). In the following section, a detailed discussion of the IFRS landscape is made and afterwards the two accounting theories used to develop accounting standards, positive accounting theory, and normative theory of accounting are reviewed. Later, the agency theory of accounting, which explains the reasons for a corporate entity to publish a quality financial report, is also discussed. Afterword, different literature in the area of accounting quality measurement and the literature on the benefits of IFRS adoptions are discussed. Finally, the research gap and the objective of research will be brought in.

2.2 The Development of International Financial Reporting Standards (IFRS) Landscape

The study entitled "Impact of Adoption of International Financial Reporting Standards and Financial Crisis on Accounting Quality of Australian Listed Companies" was developed around the quality of International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB). IASB and IFRS are gaining much attention in accounting research due to the adoption or harmonisation of accounting standards by many countries. Since its inception in 2001, IASB has reshaped the financial reports of different entities through the amendments made to International Accounting Standards (IAS) and the issue of different new IFRS. Nevertheless, it is the International

Accounting Standards Committee (IASC) that laid the foundation to IASB and through its 27 years of working from 1973 to 2000 (Zeff 2012). Throughout this study, different concepts, such as International Accounting standards (IAS), International Accounting Standards Committee (IASC), International Accounting Standard Board (IASB), International Financial Reporting Standards (IFRS), and Australian Accounting Standard Board (AASB), accounting quality, and financial crisis are used. This chapter gives a detailed account of the IFRS development and different concepts used in the study.

2.2.1 International Accounting Standards (IAS)

IAS represents a project to harmonise the financial reporting requirement that provides information to investors, employees, tax authorities, public, regulators, and law makers (Donnelly 2007). Considering the advantage of a single set of accounting rules that can be used in the preparation of financial reports by firms worldwide, the experts established the International Accounting Standards Committee Foundation (IASC) in 1973 (Kotlyar 2008). IAS is the accounting standards developed by IASC. IAS specifies how accounting transactions and events are to be measured, recorded, and disclosed in the financial report of companies. Between 1973 and 2001, IASC issued a total of 41 IAS standards. On 1st April 2001, IASB was formed by restructuring IASC. From that date onwards, accounting standards were issued by IASB and were known as International Financial Reporting Standards (IFRS) (AASB 2015c, *ICAEW* 2014). IAS is the standards issued by IASC, the predecessor of IASB (ICAEW 2014). IFRS includes IAS standards issued by IASC, IFRS standards issued by IASB, as well as the interpretations of all standards by the Standards Interpretations Committee (SIC) and the International Financial Reporting Interpretations Committee (IFRIC) (IFRS 2013c).

The history of IAS dates back to 1966 when the most prevalent accounting institutes of the time, namely the Institute of Chartered Accountants in England and Wales (ICAEW), American Institute of Certified Public Accountants (AICPA), and Canadian Institute of Chartered Accountants (CICA), decided to form a study group. This resulted in the formation of Accountants International Study Group (AISG) in February 1967, with an objective to publish papers related to accounting. Many of these papers became the basis of international accounting standards. The study group later agreed to write international

accounting standards that are acceptable internationally (ICAEW 2014). According to Stephen A. Zeff, the evolution of IASC and IASB is a tale of a private sector international accounting standard setter (Zeff 2012). Initially, it earned the respect and support of national accounting bodies, followed by international standard setters, and ultimately the regulators of major capital markets, ministers from governments, preparers, and users of financial statements around the world. The timing of IASC's formation also helped in its success. In the 1990s, when the European Union (EU) decided to create an international capital market and sought for an alternative source of accounting standard for EU listed companies that could replace the United States Generally Accepted Accounting Principles (US GAAP), IASC was the only competent international standard setter (Zeff 2012).

2.2.2 International Accounting Standards Committee (IASC) Foundation

International Accounting Standard Committee (IASC) was founded in July 1973 to begin the work of establishing new international accounting standards that are accepted worldwide (Tweedie and Seidenstein 2005, Deloitte 2015a). IASC Foundation is the umbrella organisation that controls the working of IASB. The establishment of IASC made a significant progress towards the creation of a comprehensive set of standards accepted by many security regulators across the globe (Donnelly 2007). Since early 1973, IASC was perusing a programme to develop a set of accounting standards that would help companies to raise capital in foreign capital markets. This programme resulted from the agreement reached by IASC and the International Organisation of Securities Commission (IOSCO) (Ihlanfeldt 1997). IOSCO also agreed that if such high quality standards are developed, they can be accepted for use in cross border filing of financial reports, which can increase the number of foreign companies raising capital in the US (Pekdemir and Türel 2014). Later in 2010, IASC Foundation changed its name to International Financial Reporting Standards (IFRS) Foundation.

The president of IASC Foundation was the chairman of IASB. The trustees of IASC Foundation also appointed the members of two other bodies, Standard Advisory Council (SAC) and International Financial Reporting Interpretation Committee (IFRIC), which are related to the working of IASB (Donnelly 2007). IASC was restructured and replaced by

IASB with effect from 1st April 2001. Upon restructuring, it was agreed that the standards issued by IASC will continue to be known as International Accounting Standards (IAS) and the new standards of IASB will be designated as International Financial Reporting Standards (IFRS) (ICAEW 2014). IASC operated for 27 years from July 1973 until the end of 2000 and had published a number of accounting standards known as IAS with numbers ranging from IAS 1 to IAS 41.(ICAEW 2014, Hines 2007b)

2.2.3 International Accounting Standards Board (IASB)

The International Accounting Standards Board (IASB) is an independent, private sector organisation of professional accountants that sets IAS and the new accounting rules known as IFRS. IAS, IFRS, and their interpretations developed by IASB are used by accountants and auditors worldwide, to the extent that the national law and practices make them possible (Donnelly 2007). The establishment of IASB in 2001 had accelerated the effort to establish IFRS as a basis of international accounting (Tweedie and Seidenstein 2005). IASB operates under the oversite of International Financial Reporting Standards Foundation (IFRS Foundation). IASB was founded in 2001 as an independent private funded organisation, replacing IASC, with its headquarters at Cannon Street, London (Deloitte 2015a, Benson 1976). It is the responsibility of IASB to ensure the transparency and usefulness of financial reports to stakeholders. IASB has a significant impact in the way company information is made available to the public (Donnelly 2007). IASB has two types of standards, namely IAS and the newer IFRS, which are approved by securities regulators at national, regional, and international levels. The primary accounting rules prepared and issued by IASB are IFRS, which were previously known as IAS (Hines 2007b). IASB has the resources and the framework to facilitate the participation of national standard setters throughout the world, which reduces the concerns of regulators and market participants. IASB published its first accounting standard IFRS 1 "First Time Adoption of International Financial Reporting Standards" in June 2003 (ICAEW 2014). The Board consults Standards Advisory Council (SAC) and the national standard setters before adopting a standard (Donnelly 2007). Since the establishment of IASB, the Board has amended some IAS, proposed amendments to certain other IAS, made suggestions to

replace some IAS with new IFRS, and proposed certain new IFRS in the area where there was no existing IAS (Hines 2007b).

IASB has 14 members (increased to 16 on a date no later than 1st July 2012) chosen on the basis of professional competence and practical experience and expertise in reporting standards and current reporting issues. To maintain the geographical balance and international diversity, from 2012 onwards, the structure of the Board members will be as such: four members from the North American region, four from the Asia /Oceania region, four from Europe, two each from Africa and South America, and the remaining two appointed from any region to maintain geographical balance (Deloitte 2015b, Alali and Cao 2010, IFRS 2014). The term of office of the members is five years. Out of the total members, up to three members can be part-time while the remaining members are active members (full-time) (Deloitte 2015a). The part-time members have to oversee the Board's internal governance (Zehri and Chouaibi 2013, Donnelly 2007). IASB has no representatives from users. Most of the members are officers or accountants from large corporations, for example, International Monitory Fund (IMF), World Bank, United Nations Conference on Trade and Development (UNCTAD), Basel Commission, International Organisation of Securities Commissions (IOSCO), and European Commission and US Securities Exchange Commission (SEC). Japanese Financial Services Authority has observer status in the Board (Alali and Cao 2010).

2.2.4 International Financial Reporting Standards (IFRS) Foundation

IFRS Foundation is a not-for-profit corporation registered under the corporate law of the State of Delaware, USA and operates as a foreign company in England and Wales. IFRS Foundation is the legal entity under which IASB operates (Deloitte 2015a). International Accounting Standards Committee Foundation (IASC Foundation) changed its name to International Financial Reporting Standards Foundation (IFRS Foundation) on 1st June 2010. The change in name was to reflect the primary functions of the foundation. The International Financial Reporting Interpretations Committee (IFRIC) and the Standards Advisory Council (SAC) have also been renamed as the IFRS Interpretations Committee

and the IFRS Advisory Council, respectively, along with the change in name of the IASC Foundation (IFRS 2013a).

The primary objective of IFRS foundation is the publication and promotion of international financial reporting standards (IFRSs). According to IFRS Foundation Constitution Section 2, the objectives of IFRS Foundation are:

(a) to develop, in the public interest, a single set of high quality, understandable, enforceable, and globally accepted financial reporting standards based upon clearly articulated principles. These standards should provide high quality, transparent, and comparable information in financial statements and other financial reporting to help investors, other participants in the world's capital markets, and other users of financial information make economic decisions,

(b) to promote the use and rigorous application of those standards,

(c) in fulfilling the objectives associated with (a) and (b), to take account of, as appropriate, the needs of a range of sizes and types of entities in diverse economic settings,

(d) to promote and facilitate the adoption of International Financial Reporting Standards (IFRSs), being the standards and interpretations issued by the IASB, through the convergence of national accounting standards and IFRSs (Hines 2007b, IFRS 2013aP,5, Deloitte 2015a).

2.2.4.1 Governance of IFRS Foundation

The trustees, appointed by the monitoring body, are responsible for the governance of IFRS Foundation. They appoint the governing organs according to the provisions of constitution. Para 6 of the Foundation Constitution gives an account of the qualification needed for appointment as trustees. The trustees must be committed to IFRS and IASB, financially knowledgeable, must have the ability to meet time commitments, understandable, and sensitive to the challenges related to the adoption of an accounting standard to be used by capital markets throughout the world and other users. There are 22 trustees in IFRS Foundation. Six each from the Asia/Oceania region, Europe, and North America, one from South America, and three from any other area to maintain geographical balance. The term of the trustees is three years, which is renewed once after every term is completed. The trustees appoint the chair and two vice-chairs from among them. They also appoint the

members of IASB, IASB Executive Director, members of IFRS Interpretation Committee, and IFRS Advisory Council (Deloitte 2015a, IFRS 2014, ICAEW 2014).

2.2.5 Standard Interpretation Committee (SIC)/ International Financial Reporting Interpretations Committee (IFRIC)

Standards Interpretation Committee (SIC) was established in 1997 with an objective to stop the variations in accounting practices. The aim of SIC was to provide authoritative guideline on accounting issues. In July 2001, SIC was renamed as International Financial Reporting Issues Committee (IFRIC); however, later in December 2001, SIC was reconstructed to International Financial Reporting Interpretations Committee (IFRIC) (ICAEW 2014, IFRS 2014). The main functions of IFRIC are to review accounting issues relating to IFRS, reach consensus on the appropriate accounting treatment of different transactions, and provide authoritative guidance on the treatment of those items (IFRS 2014). IFRIC also develops and solicits comments on the ways to interpret and apply the standards published by IASB (Hines 2007b). The IFRS Committee appoints the 14 members of SIC to have voting rights and the membership is renewable for a further term of three years. The members will be from different countries and different professional backgrounds. They are selected for their technical expertise and international business and market expertise (IFRS 2014, Deloitte 2015a).

2.2.6 Australian Accounting Standard Board (AASB)

Australian Accounting Standard Board (AASB) is an independent standard setting body based in Melbourne, Australia. It is a government agency formed under Australian Securities and Investment Commission Act 2001 (ASIC Act). The functions of AASB as per the statute include developing a conceptual framework to evaluate accounting standards, establishing accounting standards as required under the Corporations Act 2001, developing a single set of accounting standards that can be used worldwide, advancing and promoting Australian investors' confidence, helping to reduce cost of capital, and assisting Australian entities compete in international finance market (AASB 2015c, CPA 2013, Cellucci 2010). AASB is the body that issues Australian accounting standards and provides interpretations for these standards. The activities of AASB, its functions and powers are set by ASIC Act 2001.

2.2.7 Financial Reporting Council (FRC)

Financial Reporting Council (FRC) is also a statutory body formed under the provisions of ASIC Act 2001. The functions of FRC include monitoring the issue of accounting and auditing standards that are acceptable worldwide and promoting the use and adoption of accounting standards. Furthermore, FRC has set the fundamental objective of setting accounting standards in Australia and oversees the process of setting accounting and auditing standards. It is the FRC that appoints the members of AASB, except for the chairman of the board (FRC 2015).

2.3 Theories of Accounting

Accounting is the language of business through which an entity communicates its financial information to the managers and investors. Accounting is not merely recording financial transactions according to a set of rules or standards, but it also involves decision as to what information is to be provided, which accounting methods are to be applied, and how the information is to be disclosed to users. The principles and rules of accounting that are practiced today are not the ones that occur naturally or by chance. They are the outcomes of the careful application of theories that help to present economically accurate representation of an entity's financial position and performance (Motley 2018). Accounting theory is a logical set of principles that provides a general frame of reference to evaluate accounting practices and guides the development of new practice and procedure (Talpas 2016). The two theories of accounting used in the development of accounting standards are positive and normative theories of accounting.

2.3.1 Positive Accounting Theory

In the positive accounting theory, an entity is considered as the outcome of contracts they have entered into. A firm is a set of contracts between factors of production (Meckling 1976). Therefore, the success of the company will depend on the efficiency of implementing these contracts by reducing the cost of contract and increasing the value generated from the contract. The present and prospective investors and creditors will be interested in knowing the efficiency implemented by the management on these contracts. Positive accounting theory determines how to account for a transaction in future based on

the observation of real-life occurrences. By observing real-life transactions of entities, positive theorist understands how these transactions are accounted for by them and what are the economic consequences of these events. Based on this knowledge, theories are developed as to how such transactions and events are to be accounted for in future.

2.3.2 Normative Accounting Theory

Instead of observing what has already happened, the normative accounting theory tells what should be done based on the theoretical principal. Normative theory explains on how the accounting process should be based on certain specific theories and objectives, and that it is not based on what is currently occurring. Normative methodology is a deductive process in which objectives are formulated and from which principles are developed (Coetsee 2010). The normative theory of accounting is not concerned with is the matter happening now or in future; however, it is concerned with the best practice. It does not mean that it is not related to reality. Normative theories are developed from observations and researches. An example for normative theory of accounting is the conceptual framework. Based on the objective of financial reports stated in the conceptual framework, principles of accounting are developed as to who should report, what qualities should be there for the report, how different elements of accounting should be defined, when these elements are to be recognised in the books of accounts, and how it should be reported (Janice Loftus 2013). Therefore, the normative theoretical base used in the development of a conceptual framework in IFRS can help in maintaining the quality of financial reports.

Positive theory and normative theories have its own limitations. The positive theory is more practical and is based on actual happenings; whereas normative is more theoretical, but ensures that the day-to-day practice does not deviate from its economic concepts. The positive accounting theory will not consider relevant changes in the financials of an entity. Day-to-day changes in the assets and liabilities of an entity are not considered in the positive accounting theory. On the other hand, the normative accounting theory considers the changes in the underlining finance of an entity and establishes what accounting principles should be applied in each situation. Historical cost method and fair value method of accounting are examples for that. Positive theory and normative theories complement each other to replace the weakness of the other (Motley 2018). The use of these two theories

by IASB in developing the accounting standards will ensure the quality of IFRS as envisaged in the conventional framework of IASB. This research is developed with the assumption that IFRS is a quality financial accounting standard and the use of IFRS in preparing the financial reports will ensure the quality of information presented in the financial report.

2.3.3 Agency Theory

One of the main features of corporate entity is the separation of ownership and management. The shareholders are the owners and management is done by their elected representative, the directors or professional managers. Shareholders of the company, the principal, delegate the management to run the business of the company on their behalf to directors and professional managers, who are the agents (Janice Loftus 2013). Shareholders are the investors who take risks and economic benefits of the business, while managers are risk averse and concerned with the maximisation of their benefits. The separation of risk bearing function of ownership and the control function of management give opportunity to managers to take action detriment to the interest of shareholders (Bricket and Chandar 1998). In general, there exists a negative relationship between agency costs and accounting quality This opposite risk preference creates an agency problem. The agency theory discusses the problem that arises when the ownership and management of a firm is separated (Panda and Leepsa 2017).

Agency relationship is a contract between the principal and agent in which the principal engages another person, i.e. the agent, to perform some services on their behalf, involving the delegation of decision-making authority (Meckling 1976). The agency theory explains the assumptions that exist between the principal and agents in a business and is concerned with the principle agent problem when there is a separation of ownership and management of firms (Morris 1987). The management who controls the activities of the company have better knowledge about the financial affairs of the company than the shareholders. Therefore, it is the responsibility of the management to provide reliable and relevant information on the company to the shareholders so that they can make informed investment and financing decisions. The agent has a legal and fiduciary duty to act in the best interest of the principal; but when both parties are interested in maximising their individual interest,

the agent will not always act in the best interest of the principal (Janice Loftus 2013). The management as an agent also has a stewardship responsibility on the resources of the company. IASB considers that providing information to help users assess the management's stewardship contributes towards meeting the objective of financial reporting (IFRS 2015).

In agency relationship, if both parties act with their self-interest, it can lead to agency conflict (Meckling 1976). When managers have personal interest that is in conflict with the interest of shareholders, it can lead to agency problem and wealth loss to shareholders. There are different causes for the agency problem, such as information asymmetry, conflict of interest between shareholders and managers, difference in risk attitude, and unsatisfactory incentive plans. The managers action to protect their personal interest reduces value of the firm termed as agency cost (Bricket and Chandar 1998). Agency problem leads to agency cost. Agency cost is the additional cost incurred by owners of the company due to conflict of interest between shareholders and management when ownership and control are separated (Ross, Westerfield, and Jaffe 2005). Agency cost is the internal cost arising out of conflict of interest between principal and agent and includes monitoring cost; cost incurred to monitor and assess managers' performance in the firm, bonding cost; the cost to set up and operate according to the defined system of the firm and residual cost; cost due to the inefficient management decision (Panda and Leepsa 2017, Janice Loftus 2013)

Managers who look after the affairs of a company know more information about the organisation, while owners depend upon managers to get the information and managers may abuse such information to fulfil their own interest (Panda and Leepsa 2017, Meckling 1976). Information asymmetry is one of the causes for agency problem, which can be reduced by the use of IFRS. The adoption of IFRS can reduce information asymmetry (Leuz and Verrecchia 2000). The implementation of IFRS can reduce the information asymmetry between informed managers and uninformed investors, which can reduce agency cost. (Bushman and Smith 2001). The major objective of IFRS is to provide information useful to the stakeholders for making and evaluating decisions about the allocation of scarce resources (IFRS 2010, CPA 2013, AASB 2015c). IFRS is principle-

based, market-oriented, and requires extensive disclosure (Pekdemir and Türel 2014, Jones and Finley 2011a). Principle-based accounting standards reduces accounting alternative in measuring accounting numbers and presents a quality financial report reflecting better financial position and performance. A financial statement that provides relevant and reliable information can reduce information asymmetry (Frankel and Li 2004). A firms that adopts IFRS acts promptly, promotes quality financial reports, and protects investors' interest, which help to reduce the agency problem (Iatridis 2010). Another cause for the agency problem is the accounting policy choices. The managers who act in their own interest may choose an accounting policy that protects their interest(Janice Loftus 2013). A quality financial report generated by the adoption of IFRS can reduce information asymmetry and reduce the problem in accounting policy choices by the management.

This research is founded on agency theory. In corporate form of organization shareholders are the owners and the management is done by directors and professional managers. The agency theory specifies that shareholders are the principal and the management is the agent and as an agent the management has a legal, fiduciary and a stewardship responsibility to act in the best interest of the principal(Janice Loftus 2013, IFRS 2015). As such the managers as agents has the responsibility to provide information to shareholders about the use of fund provided by them. The management of companies are responsible to provide reliable and relevant information on the company to the shareholders so that they can make informed investment and financing decisions. The managers action to protect their personal interest reduces value of the firm termed as agency cost (Cabán 2015). Accounting is concerned with providing information about the business operation to managers and shareholders for decision making (Bricket and Chandar 1998). IASB considers that providing useful information to present and prospective equity investors through the general-purpose financial reporting is the basic objective of financial reporting (AASB 2019). IASB developed IFRS with this objective of providing high quality globally accepted accounting standards that can be used in preparing financial report (IFRS 2010). The positive and normative theory used in the process of developing accounting standards complemented each other in assuring the quality of IFRS (Motley 2018). Thus the adoption of IFRS can improve the accounting quality and reduce information asymmetry which in

turn reduces agency problem and agency cost. Australia and may other countries adopted IFRS with this objective of providing quality financial report to present and prospective investors. This research investigates whether the adoption of IFRS by Australian listed companies has improved the accounting quality and whether the financial crisis affected the accounting quality of financial reports of these companies. Indirectly the research also investigates how the adoption of IFRS and 2008 financial crisis influenced managements responsibility as an agent, in providing quality financial information to shareholders which in turn reduces agency problem and agency cost.

2.4 Literature on Adoption of IFRS

Changes in the international financial environment, integration of capital markets, and increase in the number of multinational corporations enhance the need for reliable, relevant, comparable, and globally accepted quality financial statements. IASB developed IFRS with the aim of establishing a common accounting language across the world (Ball 2006). Based on the fact that implementation of IFRS can ensure higher investor protection, increase free movement of capital, and encourage competitiveness of the capital market, many European countries have started to implement IFRS mandatorily. The adoption of IFRS by the European Union in 2005 made it the most widely accepted financial accounting model (Paananen and Henghsiu 2009). This led to an increase in the number of accounting research studies on the effect of change in accounting practice from domestic standards to IFRS and whether this change from domestic GAAP to IFRS can increase the quality of published financial reports of reporting entities. In the following section a detailed review of literature on the effect of the change to IFRS is made.

2.4.1 IFRS Adoption and Accounting Quality a Literature Review

With the objective of providing background and guidance for further research in the area of change in accounting quality following the widespread IFRS adoption, Soderstrom and Sun (2007) conducted a research which reviews different literature on the consequences of changing from one accounting principle, e.g. GAAP, to another and the determinants of accounting quality that are likely to influence the effect of the change. The study pointed out that improvement in the information environment depends on many factors like the

ability of IFRS to produce higher accounting quality, whether the accounting system is complementary to the institutional setting of a country, and firms' incentive for a transparent financial report. They arrived at the conclusion that accounting quality is a function of a country's institutional setting, such as accounting standards used, regulatory system, legal and political system of the country, tax system, ownership structure, capital structure, and capital market development. The change in institutional setting among countries causes cross-country changes in accounting quality even after the adoption of IFRS. The researchers thus suggested that accounting quality research has to control institutional and firm specific factors and understand the interaction between accounting standards and these factors. Only then the economic consequences of change in accounting principles can be evaluated. The study also specified that using a single set of accounting standards may not improve accounting quality consistently in all countries as the legal and political system and the incentive of financial reporting may affect earning quality (Soderstrom and Sun 2007). The study made a detailed review of different literature in the area of accounting quality and brought forward the important factors to be considered in accounting quality research and ways to take care of these factors in future researches.

After the mandatory adoption of IFRS by more than 140 countries, there are many academic research that analyze the effect of mandatory adoption of IFRS. However, even though, the extend of compliance with IFRS mandatory disclosure is as important as that of accounting standards, only few authors have studied the extend of compliance with IFRS mandatory disclosure requirements. The research by Loannis Tsalavoutasa, Fanis Tsoligkasb, made a review of the literature from the post 2005 period to evaluate the development of research on compliance with IFRS mandatory disclosure requirements. The research focused on three questions 1. How is research on compliance with IFRS mandatory disclosure requirements developing? 2. What is the focus and critique of the literature on compliance with IFRS mandatory disclosure requirements? 3. What is the future for research on compliance with IFRS mandatory disclosure requirements? (Tsalavoutas, Tsoligkas, and Evans 2020)The study summarized and reviewed 70 articles using 11 classification criteria based on the findings, limitations, and gaps in this literature. Structured review of research examining compliance with IFRS mandatory disclosure requirements for the post-2005 is made using Structured Literature Review (SLR) method.

Overall, the study concludes that majority of the companies are not complying with all the disclosure requirements. An important findings of the study is that, even though, financial companies are economically important these companies are generally excluded from analysis of studies on compliance with IFRS mandatory disclosure requirements because of the difference in the financial statement items and in application of regulations. Therefore, the evidence of financial companies' compliance with IFRS disclosure requirements is limited. The study conclude that accounting standard is only one facet of financial reporting. Cultural and institutional factors such as enforcement mechanisms affects accounting practices and how accounting information is perceived(Tsalavoutas, Tsoligkas, and Evans 2020).The SLR method is subject to the judgment of the analysist which may affect the result of the study.

2.4.1.1 Accounting Quality Analysis from Mixed Samples from Different Countries

The research by Barth, Mary E. Landsman, Wayne R. Lang, Mark H. is a widely-cited study in the area of accounting quality (Barth 2007). The authors investigated whether the application of IAS in the preparation of financial records can create better accounting quality than non-US domestic standards. The study examined accounting quality considering three different factors, namely earning management, timely loss recognition, and value relevance. The first two was based on published financial reports, while the third one was a capital market-oriented measure. The accounting amounts of firms with less earning management, more timely loss recognition, and higher value relevance were considered to be of high quality. Earning management measures are based on variance of change in net income, ratio of variance of change in net income to variance of change in cash flows, correlation between accrual and cash flow, and small positive net income. It was interpreted that higher variability of change in net income, the higher ratio of variability of change in net income to variability of change in cash flows, less negative correlation between accrual and cash flow, and lower frequency of small positive net income were signs of lesser earning management and accounting quality. Another measure of accounting quality used in the study was timely loss recognition and the metric used was the frequency of large negative net income. It is interpreted that higher frequency of large negative net income was evidence of timely loss recognition and accounting quality. The

study also considered value relevance of accounting numbers as a sign of accounting quality. The explanatory power of net income and equity book value for price and value relevance and explanatory power of stock return for earnings were used as the measures of accounting quality. Higher explanatory power was a sign of value relevance and higher quality accounting.

The samples for the study were companies from 21 countries that arbitrarily adopted IAS between 1994 and 2003. The samples consisted two groups: 1) companies that voluntarily adopted IAS; and 2) matching samples of companies that did not adopt IAS and were using non-US domestic standards. The study thus related to periods before the mandatory adoption of IAS by most of the sample firms and it was found that changed incentives to adopt IAS might have influenced them. Therefore, to reduce the effect of changed incentives to adopt IAS and changes in the economic environment, a number of control variables were included in the metric. The study also used a matched sample design to mitigate this effect by selecting a firm that applied non-US domestic standard in the same country and of similar size for every sample firm that adopted IAS. To evaluate whether the accounting quality of firms applying IAS was higher as compared to those applying non-US domestic standards, the researchers made a three-dimensional comparison in the study. First, a comparison of accounting quality of firms applying IAS was made with those applying non-US domestic standards in the period after firms began applying IAS. Second, to identify whether the difference in accounting quality exhibited by the firms applying IAS in the post–adoption period was due to differences in the period before firms adopted IAS, thus the accounting quality of the groups in the pre-adoption period were also compared. Third, the accounting quality of firms that voluntarily adopted IAS before and after the IAS adoption period was compared. If the accounting quality of firms applying non-US domestic standards and firms applying IAS was similar in the pre-adoption period but different in the post-adoption period, it was less likely that the difference was due to economic characteristics and was due to the adoption of IAS instead (Barth 2007).

The result of the comparison made between the quality of financial records of IAS firms with NIAS firms in the post-adoption period revealed that the firms applying IAS evidenced less earning management, more timely loss recognition, and more relevant

accounting amount than NIAS firms, indicating that in the post-adoption period, IAS firms exhibited better quality than that of NIAS firms. Besides, a comparison of financial records of IAS firms and NIAS firms in pre-adoption period was made. For earning management and value relevance, there was no significant difference between IAS firms and NIAS in the pre-adoption period. It indicated that the difference in earning management and value relevance between IAS firms and NIAS firms in the pre-adoption period did not explain their difference in the post-adoption period. In contrast, for timely loss recognition, it revealed that IAS firms recognised more timely loss in the pre-adoption period too. Therefore, the improvement in accounting quality between IAS and NIAS firms reflected through timely loss recognition in the post-adoption period could attribute towards the difference in economic factors. Finally, a comparison of accounting quality between post and pre-adoption periods of IAS firms were made. The result of all tests consistently showed that the improvement of accounting quality was due to the adoption of IAS and not due to the economic characteristics of the firms. Nevertheless, the sample companies were taken from different countries that had differences in their economic environment and could influence the findings. Similarly, the sample companies adopted IAS voluntarily at different time periods, which might affect the result of the finding as there could be differences in the economic condition between the periods (Barth 2007).

The quality of financial reporting is largely influenced by the cultural environment, quality of the national accounting standard adopted and the intention to regulate and enforce the quality of accounting. During the last two decades' number of studies reiterated the influence of cultural, on quality of the national accounting standard adopted. However, these studies are silent on how the cultural environment of a country influence the acceptance of IFRS, which is an external accounting standard. Moataz El-Helalya, Collins G. Ntimb, Mark Silliman, in their study explores the association between cultural environment and IFRS adoption decisions between 2003 and 2014 based on data from 76 non-EU countries (El-Helaly, Ntim, and Soliman 2020). The aim of the study is to understand the country-level characteristics that influenced IFRS adoption, which can help IASB to promote adoption of IFRS in countries with similar institutional settings (El-Helaly, Ntim, and Soliman 2020).

The study uses five cultural dimensions: Uncertainty avoidance (UA); feel threatened by uncertain or unknown situation. Masculinity (MAS); a masculine society is one in which men are assertive, tough and concerned with material success, whereas women are more modest, tender and interested in the quality of life. Feminine societies, is one where both men and women are equally concerned with the quality of life. Individualism (IDV); there are few ties beyond those of nuclear family and in socialistic society, people are bonded to unified groups. Power distance (PDI); less powerful members think that power is distributed unequally. And long-term orientation (LTWOVS); whether people's effort should be focused on the future or the past. Past means people's effort should be to maintain traditions and societal changes are viewed with suspicion (El-Helaly, Ntim, and Soliman 2020).

Based on data from the adoption status of 76 companies the study run 3 OLS regression with adoption year, adoption extend and adoption as dependent variables and UA, MAS, IDV, PDI, and LTWOVS as independent variables by assigning index score for each country in each cultural dimension and control variables like legal origin of each country, investor protection and audit environment as independent variables. The study interprets that countries with higher values of uncertainty avoidance, individualism, masculinity and power distance are positively associated to early adopt IFRS. Therefore, those countries can mandate IFRS and issue relevant rules and regulations to ensure proper adoption of IFRS. Long-term orientation shows a negative association with the IFRS Adoption. Our findings confirm that uncertainty avoidance values, power distance, masculinity positively linked with earlier adoption of IFRS(El-Helaly, Ntim, and Soliman 2020). The study included a number of control variables that can possibly influence IFRS adoption, but there can be other unobservable that are not controlled.

Microfinance institutions (MFI) are financial institutions that provide fund to the poor and small businesses in developing and emerging economies by combining banking and development motivations. Most of these MFI are working in jurisdictions where the use of IFRS is not mandatory. Even then many MFI voluntarily adopted IFRS in the preparation of their financial reports. Pignatel and H. Tchakoute Tchuigoua, investigates what are the reporting incentive or motive of MFI to voluntarily adopt IFRS in the preparation of their

financial reports. The study focuses on maturity(age) and the ownership type as the two factors which motivates MFI to adopt IFRS. (Pignatel and Tchakoute Tchuigoua 2020).

The study used unbalanced panel data of MFI-audited financial statements over an 8-year period (from 2007 to 2014) from 71 countries collected from the data base Microfinance Information eXchange (MIX). The study analysed the determinants of choice of IFRS using pooled probabilistic regression with an estimated model based on earlier studies. Considering the commercialisation as a proxy the result suggests that for–profit MFI with commercial and international source of fund are tends to prepare their financial reports according to IFRS. Form the maturity perspective it is found that young and mature MFI are more likely to have higher probability in complying with IFRS. It is also found that modification and evaluation of financial structure due to change in form of ownership creates an incentive to adopt IFRS. Based on the control variables the study found that Audit by big four audit firms increases the prospect of using IFRS in their financial report and high leveraged MFI usually favour national standards over IFRS. The study concludes that the for-profit status and maturity are likely to motivate MFI to choice IFRS in their financial reporting (Pignatel and Tchakoute Tchuigoua 2020). The un-balanced nature of the data may affect the final result of the study.

The study made by Ahmed, Neel, and Wang (2013) looked at the accounting quality of firms selected from a broad set of 1,600 firms from 20 countries that mandatorily adopted IFRS in 2005 and a benchmark group of firms from 15 countries that had not adopted IFRS. This study related accounting quality to faith full representation of underlying economies of the reporting entity. Consistent with the international accounting standards, accounting quality was interpreted as one that reduced income smoothing and managing earning towards target profit and timely loss recognition. The result of the study was not consistent across all proxies.

The study showed that all the three measures of income smoothing, namely variability of change in net income, ratio of variability of change in net income to variability of cash flow, and correlation between accrual and cash flow, exhibited a decrease in the post-adoption period. Taking all income smoothing measures together, the study found that after

mandatory adoption, the firms exhibited more income smoothing. The study also compared the impact of mandatory adoption on accounting quality between countries with a strong rule of law and countries with a weak rule of law. It was found that firms in countries with weak enforcements exhibited more income smoothing in the pre-adoption period as compared to firms in strong rule of law countries. There was no significant change in the accounting quality of firms in weak enforcement countries after IFRS adoption.

In the test for managing earning towards a positive target, for the pooled sample, it was found that the benchmark firms were less likely to report small positive income in the post-IFRS adoption period as compared to the pre-adoption period, and there was no much difference in managing earning between IFRS adopters and benchmark firms. When a comparison between strong enforcement and weak enforcement countries was made, it was found that managing earning towards a benchmark was significantly negative in strong enforcement countries, but insignificant in weak enforcement countries. Overall, there was evidence that firms adopting IFRS exhibited a decrease in managing earning towards a benchmark. Nevertheless, there was insufficient evidence to support that IFRS adoption per se was the source of such decrease.

In the analysis of IFRS adoption's impact on accruals, a separate analysis was made for the pooled samples and strong/weak enforcement samples. The analysis showed an insignificant coefficient for benchmark firms in all sample groups, indicating there was no change in the accruals between pre and post-adoption periods. Nevertheless, an increase in accruals was observed for IFRS adopters as compared to benchmark firms in all three sample groups, meaning that IFRS adopters reported accruals more aggressively (Ahmed, Neel, and Wang 2013).

Regarding timeliness of loss recognition, for pool samples and strong/weak enforcement sample sets, bad news was recognised in a timelier manner than good news. For benchmark firms, there was no systematic change in timely gain recognition or timely loss recognition. IFRS adopters displayed a decrease in the asymmetric loss recognition. This result was consistent with the earlier findings of more aggressive accrual reporting. The authors also believed that their findings may be driven by IFRS adopters of strong enforcement

countries where it was observed that there was an increase in timeliness of gain recognition and also a decrease in asymmetric loss recognition (Ahmed, Neel, and Wang 2013).

This study concluded that they found evidence of a significant increase in income smoothing and accruals aggressiveness and a significant decrease in timely loss recognition for firms in IFRS adopted countries as compared to benchmark firms. The study could not find any change in meeting earning targets for IFRS firms after adoption. This study discovered that the adoption of IFRS resulting in reduced accounting quality was conditional. First, they presumed that accounting quality was driven principally by the management's discretion and exercises of judgement. Second, in the study, they took only two years of the post-adoption period. The study specified that over a longer period of time, the effect of IFRS adoption might not persist due to persistent implementation guideline, familiarity with IFRS, and improved institutional structure. Finally, the samples from strongly enforced countries were mainly from the US and Japan. The unbalanced sample from strong and weak enforcement countries might have affected their findings. Another interesting finding of the study was that the voluntary adopters exhibited decreased income smoothing, and increased timely loss recognition; thus, showing high quality accounting after the adoption of IFRS. The study suggested that it may be because the voluntary adopters were likely to have strong incentives for high quality accounting numbers (Ahmed, Neel, and Wang 2013).

The adoption of IFRS leads to increased disclosure and reduces the information asymmetry between the companies and investors and, thus have a critical impact on pricing of Seasoned Equity Offering (SEOs). Solomon Oparea, Muhammad Nurul Houqea, Tony van Zijlb, investigates whether the standardised accounting information provided by the use of IFRS will improve the comparability of financial reports and reduce information asymmetry which can subsequently, reduce SEO underperformance. Use of IFRS is expected to improve disclosure in financial report and comparability of financial information, reducing the cost of information processing and information asymmetry. This in turn reduces the SEO underperformance (Opare, Houqe, and van Zijl 2020).

The study investigated the effect of IFRS adoption on SOE underperformance for pre and post-IFRS adoption period and between adopters and non-adopters using difference-in-

difference method. The sample for the study is 29,534 SOEs from 42 IFRS adopted countries and 9 non-IFRS adoption countries for the period1997 to 2017. Following regression model the study examined SEO underperformance from two different angles. One whether the IFRS adoption has an impact of SEO underperformance and secondly whether the level of enforcement reinforced the impact of adoption on SOE underperformance (Opare, Houqe, and van Zijl 2020).

The result of the study documented that the large increase in financial accounting disclosure, increased comparability of financial statements and number of accounting changes are the channels through which adoption of IFRS affects SEO underperformance. The finding suggests that the adoption of IFRS has reduced the SOE underperformance. The study also found that the SEO underperformance is lower in countries with strong enforcement mechanism and implementation credibility(Opare, Houqe, and van Zijl 2020).

The research conducted by Lang, Raedy, and Yetman (2003) investigated whether the accounting quality of firms cross-listed in the US capital market improved the accounting quality of earnings reported in domestic markets. The study was conducted on the premise that even though there was no direct link between cross-listing and domestic reporting, cross-listing caused a systematic difference in the transparency of reporting due to the increased enforcement by U.S. Securities and Exchange Commission (SEC), more demanding litigation environment, and more disclosure and reconciliation requirement of the US GAAP.

A comparison between the firms currently cross-listed in the US exchange was made with a sample of non-cross-listed firms. The matched sample firms were selected considering the country, year, industry, growth and whether the matched samples satisfied the listing criteria of the exchange in which the cross-listed firms were traded. The samples consisted of observations from 21 countries representing developed, emerging markets as well as countries that had code and common law systems. The study was based on the samples of cross-listed firms obtained from the Bank of New York Global Equity Investing Depositary Receipt Service (BNY) and matched samples of non-cross-listed firms. The cross-listed companies were the ones that were traded on the New York Stock Exchange (NYSE),

American stock Exchange or NASDAQ and required SEC registration. The study used three accounting quality criteria, namely earning management, timely loss recognition, and value relevance, in analysing the accounting quality. To know whether changes in accounting quality between cross-listed and non-cross listed firms were due to cross-listing, first an analysis of accounting quality of cross-listed firms and non-cross-listed firms in the post-listing period was made. Afterwards, an accounting quality analysis between pre and post-listing periods of cross-listed firms were made. Finally, an accounting quality analysis of cross-listed firms and non-cross-listed firms in the pre-listing period was performed. In line with the prediction, the overall result across all tests indicated that cross-listed firms reported higher accounting quality than non-cross-listed firms with lower earning management, timely loss recognition, and value relevance (Lang, Raedy, and Yetman 2003).

A large number of literature supports the view that better enforcement can increases the quality of mandatory financial reporting. The study made Zhaoyang Gua, Jeff Ng and Albert Tsang investigates whether better enforcement would strengthen or weaken the positive relationship between IFRS adoption and firms' voluntary disclosure and the in formativeness of management earnings forecasts to investors (Gu, Ng, and Tsang 2019). The study also examines several qualitative attributes of management earnings, including forecast precision, forecast attribution, forecast disaggregation, forecast accuracy and forecast timeliness.

The study used firm-year observations and management forecasts from 30 countries (17 of which mandated IFRS in 2005) and a difference-in-difference methodology to control for time-series variation across IFRS-adoption and non-IFRS-adoption countries. Regression model was used to evaluate the quantitative (likelihood and frequency) and qualitative (in formativeness and other properties) change in the management forecasts in countries which concurrently made changes in enforcement along with the mandatory adoption of IFRS (Gu, Ng, and Tsang 2019).

The result on the first hypothesis suggests that IFRS adoption is associated with an increase in the likelihood and frequency of management forecasts. Even though firms from the IFRS adoption countries displayed an increased likelihood and frequency of issuing management

forecasts in post-IFRS adoption countries, concurrent and substantive changes in enforcement weakened these increases. Regarding changes in enforcement and management forecast in formativeness, the study suggests a reduction in in formativeness of management forecasts issued by firms from IFRS-mandating countries that coupled concurrent and substantive enforcement changes along with mandatory IFRS adoption (Gu, Ng, and Tsang 2019). Study generally provides that changes in enforcement concurrent with IFRS adoption has a stronger causal effect on firm's voluntary disclosure

The Impact of IFRS adoption on value relevance of earnings and book value of equity relating to emerging markets in African and Asian regions made by Chebaane and Othman (2014) was conducted at a time when many developing and emerging economies accepted IFRS following the wave of IFRS adoption in European countries. Nevertheless, the authors were sceptical about the effectiveness of IFRS adoption in developing countries as these countries were considered as having lower human development indices, dominance of the public sector, and undeveloped accounting systems. The purpose of this study was to examine whether the mandatory adoption of IFRS by countries in the African and Asian regions improved the value relevance of earnings and book value of equity.

Most of the studies on value relevance are based on the explanatory power of price on net income and book value known as price model and return model, where the return is regressed on net income. The focus of this study is on price model with some modifications to the model of earlier authors such, which helped examine the effect of value relevance on leverage, size of the firm, and growth (Barth 2007, Chua, Cheong, and Gould 2012). The data for the study was collected from the United Arab Emirates (UAE), Bahrain, Jordan, Kuwait, Qatar, Turkey, and South Africa. The result of the study reported an increase in value relevance of earnings per share and book value of equity with IFRS adoption in emerging economies and the legal system had a positive effect on value relevance. It was more prominent in common law countries than in code law countries. In a further analysis, it was also reported that size and leverage had an effect on value relevance, but sales growth had no effect on value relevance. Similarly, the economic openness of the country, investor protection, protection of minority shareholders interest, and sophistication of capital market influenced the value relevance of market price and

book value. Therefore, the study concluded that the IFRS adoption was effective for emerging economies (Chebaane and Othman 2014).

Many researches investigates the economic consequences of IFRS adoption. Most of these studies directly estimate the economic consequences of regulatory changes. The assumption in prior studies is that IFRS increases accounting disclosure quality that in turn drives reduction in cost of capital, IPO under-pricing, earnings usefulness etc. Thus, so far, it is not clear how the IFRS adoption drives the economic consequences. The study made by Bin Li, Gianfranco Siciliano and Mohan Venkatachalam examines the link between mandating IFRS and disclosure outcome and how disclosure outcomes leads to economic consequences. A two stepped analysis is used to study to economic consequences of IFRS adoption to the disclosure quality. The first step documents the link between mandating IFRS and disclosure quality and then the disclosure changes are related to the benefits and costs of IFRS adoption. The study is based on the postulate that higher count of non-missing line items or grater disaggregation of items in financial report is a sign of quality financial report (Li, Siciliano, and Venkatachalam 2020).

Based on many prior researched difference-in-difference (DID) research design based on mandatory IFRS adoption is used in the study. The sample covers six years from the period 2002-2007 from 16 countries consisting 14,838 firm-year observations for mandatory IFRS adopters and 51,666 firm-year observations from 17 countries that have not adopted IFRS. The study found that firms that adopt IFRS marked a significant improvement in market liquidity and it was higher in firms that furnished more disaggregated information. Thus improved disclosure occurred from IFRS adoption increases market liquidity. Secondly the study documented an increase in audit fee in IFRS adopted firms, but the variation in audit fee is not linked to the disclosure improvement from IFRS adoption. The findings of the study suggest that disaggregated information provided by IFRS-adopting firms provides better capital market benefits (Li, Siciliano, and Venkatachalam 2020)

2.4.1.2 Accounting Quality Analysis of Regulated Market

Liu, Yao, Hu, and Liu (2011) conducted a study on the impact of IFRS on accounting quality of companies in highly regulated Chines markets with an intension to answer the question whether IFRS could work properly in regulated markets. This study was different

from all the other studies as China has different institutional, economic, and political environments as compared to other countries. China is adopting only substantially IFRS-convergent accounting standards mandatorily for listed companies in 2007 rather than IFRS issued by IASB. The study can be of particular interest to international investors as China is among the fast growing emerging markets in the world (Liu et al. 2011).

Based on the earlier studies, accounting quality was evaluated by using the two measures, namely earning management and value relevance. Samples for the study were taken from the stock information available in Compustat Global database for the period of 2005 to 2008 from listed companies with A-share, which were listed in one stock market only. Information for a sample of 870 companies for four years were taken for the study. 66% of the samples in the study were from the manufacturing sector, which could influence the result of the study. Moreover, only data for two years before and two years after the adoption were taken for the study (Liu et al. 2011).

The findings supported the hypotheses that the quality of accounting, especially reported earnings, significantly improved with the compulsory adoption of substantially IFRS-convergent standards in China. The study concluded that there is significant improvement in accounting quality, showing less earning management and higher value relevance of reported earnings. The result also indicated that the improvement in accounting quality was significantly large after the adoption of IFRS in firms that were not audited by the big four accounting firms and in firms that did not have incentive for transparent reporting before IFRS adoption (Liu et al. 2011)

China mandated adoption of IFRS for publicly traded firms from 2007 with the objective of increasing accounting quality and to attract more foreign investment. The Proponents of IFRS claims that its use can increase accounting quality, reduces information asymmetry and information cost thereby increasing the of cross border investment. Prior researchers found that IFRS adoption has a positive impact on capital market. However, much of these researches are based on evidence from European countries where the economic and legal institutions are strong. But the institutional setting in China is much different from these countries. Moreover, the principle based IFRS standards and use of fair value model provides more opportunities to managers to manipulate accounts (DeFond et al. 2019).

Therefore, Mark DeFond, Xinzi Gao, Oliver Zhen Li, Lijun Xia predicts that IFRS adoption in china cannot improve accounting quality and attract foreign investors. Based on this postulate the researchers investigated the impact of IFRS adoption on the foreign institutional investment in China's domestic stock market. They also evaluated the influence of IFRS adoption on foreign institutional investment in firms with high ownership concentration, large state ownership, with opportunities to manipulate earnings through fair value accounting and in firms from countries with relationship-based institutions (DeFond et al. 2019).

The financial information of A-share companies listed in Shanghai and Shenzhen stock exchanges over a period four years from 2005 to 2008 was used for the study, as the main investment channel of foreign institutional investors in China is A-share market. To test the hypothesis, the data for the year 2005 and 2006 were taken as pre-IFRS periods and 2007 and 2008 were taken as post IFRS period. Following prior research regression models were uses to analyse the data. The findings of the study supported the authors prediction that the investment by qualified foreign institutional investors declined in China after the adoption of IFRS. The decline in investment was more evident in firms with weak incentives to credibly implement IFRS and firms that have opportunities to manipulate earnings by using fair value model of IFRS. The drop in the association between the earnings and return of foreign institutional investors after adoption of IFRS is another factor that affected investment by foreign institutional investors. The study also found that the ability to identify profitable investments decline in investment from countries with relationship-based institutions. Home country's experience of IFRS adoption also influenced the decline in foreign intuitional investment in China (DeFond et al. 2019). The study used only two pre-IFRS and two post-IFRS period for the study. Moreover, the inclusion of 2008 in the post IFRS period can influence the result of the study as the economic distress of financial crisis can impact the cross investment and financing.

2.4.1.3 Accounting Quality Analysis of Australian Listed Companies

Chua, Cheong, and Gould (2012), based on the evidence from Australia, investigated the impact of IFRS adoption by Australian companies on accounting quality. The study focused on three perspectives of accounting quality, i.e. earnings management, timely loss

recognition, and value relevance. The sample for the study comprised 172 companies selected from top 500 firms by market capitalisation form companies listed on the Australian Securities Exchange (ASX) in both the pre-adoption and the post-adoption periods. The overall findings suggested that accounting quality improved after Australian listed firms moved from Australian GAAP to IFRS. This corroborated Financial Reporting Council's (FRC) expectation that the adoption of IFRS by Australia should enhance the overall quality of the financial reporting system (Chua, Cheong, and Gould 2012).

Another study in the area of accounting quality on Australian companies is the one made by Bryce, Ali, and Mather (2015). The research evaluated the effect of IFRS adoption on accounting quality as well as the impact of IFRS on the effectiveness of audit committee in improving accounting quality. The study was based on financial information of 200 sample listed companies in the Australian Stock Exchange for six years from 2003 to 2008, which consisted of three years of pre-IFRS adoption period and three years of post-IFRS adoption period. The study used a different criterion to measure accounting quality via earning management and accrual quality. It was found that there was only little change in the levels of earning management and accrual quality between pre-IFRS adoption period and post-IFRS adoption period. It was suggested that IFRS adoption had only a negligible effect on accounting quality. The study discovered that both measures of accounting quality were reported to be stable under Australian GAAP and IFRS. Regarding the effectiveness of audit committee, the result indicated that audit committees were generally more effective in promoting accounting quality under IFRS than the previous Australian GAAP (Bryce, Ali, and Mather 2015).

Compliance with accounting standards, including disclosure requirements, is key to accounting quality. There is severe criticism from regulators around the word about the level of compliance to IFRS. US Securities and Exchange Commission, the Institute of Chartered Accountants in England and Wales and UK Financial Reporting Council found problem in disclosure compliance relating to several areas. High quality disclosure is important to improve investors' confidence and efficient functioning of capital market. Australia is applying IFRS for over 10 years after its mandatory adoption of IFRS in 2005. At this juncture Xiaojiao (Jo) Wang in their research examines the compliance of

Australian companies with the disclosure requirements of eight standards in the context of mandatory adoption of IFRS. The researcher claims that examining disclosure compliance can help in identifying potential deficiencies in accounting policies and enforcement in Australia (Wang 2019).

The sample for the study consisted of 112 large listed companies selected from ASX 200 corporations and data of three point of time between 2005 to 2014 are used to examine disclosure compliance. A checklist of 23 disclosure items from seven accounting standards considering the Australian business environment were chosen. A disclosure index is used in the study using the number of items actually disclosed divided by the number of required/applicable items to evaluate the compliance of disclosure (Wang 2019).

The study found that the disclosure compliance displays an improvement in large Australian companies from first time adoption of IFRS. The improvement was evident across all sectors and all requirement even though there was some noncompliance initially. Investigating whether noncompliance is associated with any particular standard, the research found that the requirement related to AASB137 (provision) caused the highest noncompliance. Increasing familiarity of preparers and auditors is the major cause for improvement in disclosure quality. Other influence of disclosure quality was listing or delisting, takeover/merger and change of auditor. The ultimate goal of IASB is to developing a single set of high-quality, understandable, enforceable and globally accepted financial reporting standards. But the result of this study shows that the goal of IASB is compromised due to lack of full compliance and good quality disclosure which reduced transparency and comparability of financial information(Wang 2019).

2.4.1.4 Accounting Quality Analysis of European Countries

Morais and Curto, through their research conducted in 2008 investigated whether adopting IASB standards by Portuguese companies was associated with higher earnings quality and higher value relevance. Being a member of the European Union, Portuguese listed companies were required to adopt IASB standards in the preparation and presentation of consolidated financial reports for periods beginning on or after 1st January 2005 as per rule 1606/2002 of the European Commission. The study compared the accounting quality of financial reports by listed companies for Portuguese GAAP period and IFRS adoption

period by using the three accounting quality measures, namely earning management, timely loss recognition, and value relevance. Sample for the study consisted of 34 Portuguese listed companies that prepared the financial reports using IASB standards (IFRS) in 2005. The data for Portuguese GAAP adoption period were from the period from 1995–2004 and for IFRS adoption period was 2005-2006. The study reported a reduction in earning management and timely loss recognition when companies adopted IFRS as compared to the period when they were using national standards. However, the value relevance of accounting information registered a reduction in IFRS adoption period, suggesting a reduction in accounting quality (Morais and Curto 2008).

Nevertheless, the authors believes that the accounting environment in Portuguese, which is a civil law country, was much different from many other countries that accepted IFRS. They stated that IASB standards were developed in an environment where the accounting practices were directed to the private sector, reporting rules were largely unaffected by taxation requirements, and capital was traditionally raised in public markets. On the other hand, Portuguese institutional and legal environment was different, the state controlled most of the large firms, and the financial system could be classified as debt-based. In such an environment, the legal protection for minority shareholders were less and as such, the importance of accounting quality was also less. The information about the sample selection and the period for which data to be collected for Portuguese GAAP period and IFRS adoption period were different. These discrepancies could bias the result of the study (Morais and Curto 2008) .

The adoption of IFRS by Spanish listed companies along with other EU countries as of 1 January 2005 facelifted comparability of financial information with other European listed companies. This improved the understandability of financial report of Spanish non- cross listed (NCL)companies in a less costly manner. In this context Sonia Sanabria-García and Pascual Garrido-Miralles in their study investigates heterogeneous impact the adoption of IFRS has on Spanish listed companies depending on whether they are cross-listed or non-cross-listed. The study mainly investigates two aspects of the effect of IFRS adoption by Spanish listed companies. One whether the adoption of IFRS has improves the accuracy of

the financial analysts' earnings forecasts and secondly whether it improved the stock trading volume of NCL Spanish companies (Sanabria-García and Garrido-Miralles 2020).

The sample for the study consists 369 observations from of 98 listed companies for 2004 to 2007 (80 NCL companies and18 CL). The data on the companies were collected from Factset database and data on volume of trade were collected from Com-pustat database. To examine the impact of IFRS on the accuracy of financial analysts' earnings forecasts and volume of trade, Ordinary Least Squares (OLS) was used. The model included a number of control variables and distinguished between CL and NCL companies to get the desired result. The finding suggests that CL companies are subject to greater control by supervisory bodies, as such, IFRS has not made any change in the financial data environment. Therefore, there was no significant improvement in analysts' earnings forecast error in CL companies. But mandatory IFRS adoption has a positive effect on volume of trade on the Spanish capital market. However, this effect was witnessed only in NCL companies. Thus the study suggests that, IFRS adoption disseminates more uniform financial information and reduced interpreting costs which increased the incentives to make new investments in the Spanish capital market (Sanabria-García and Garrido-Miralles 2020).

The change in the standard setting structure following the takeover of standard setting responsibility from IASC by IASB in April 2001 and IASB's preference for fair value measurement of assets and liabilities over historical cost methods can make changes to the accounting quality of companies. This prompted Paananen and Henghsiu (2009) to investigate the change in accounting quality of German companies caused by the revisions made to IASs and the development of new IFRSs. The evaluation of accounting quality was made for three periods: when they were applying IAS in 2000 to 2002; IFRS voluntary period in 2003–2004; and IFRS mandatory period in 2005–2006. Following the earlier research studies, accounting quality was measured using earning smoothing, timely loss recognition, and value relevance metric (Paananen and Henghsiu 2009).

Contrary to the present researchers' expectations, the results suggested a decrease in accounting quality among German firms after the mandatory EU adoption of IFRS. The study found that earning and book value of equity became less value relevant during the

IFRS mandatory period as compared to both IAS period and IFRS voluntary period. The finding on earning smoothening and timely loss recognition also corroborated their earlier finding. They documented that accounting quality improved between the IAS period and IFRS voluntary period, but it never showed any improvement in the IFRS mandatory period. Their final conclusion was that the revision of IAS and addition of new IFRS decreased the quality of financial reports in Germany (Paananen and Henghsiu 2009).

Another study made on the accounting quality of German listed companies was made by Christensen, Lee, Walker, and Zeng in 2015. Germany allowed the adoption of IFRS voluntarily from financial year 1998 to 2005 and made it mandatory for all firms in 2005. The companies that adopted IFRS voluntarily were regarded to have adopted IFRS due to incentives and the companies that adopted IFRS in 2005 were considered as forced adaptors. In countries where voluntary adoption of IFRS is not allowed before mandatory adoption, it is difficult to distinguish the effect of underlying managerial incentives for transparent financial reporting. Germany provides a setting to evaluate whether accounting quality change can be attributed to the change in accounting standards per se or due to the incentive to adopt IFRS. The study examined accounting quality based on the three measures used in earlier research, i.e. earnings management, timely loss recognition, and value relevance, but gave more emphasis to the first two as these measures were more related to managerial discretion and were therefore likely to be influenced by incentive (Christensen et al. 2015).

There were two types of samples taken for the study. The first one was switch samples, which were companies that made mandatory adoption IFRS in 2005 and used German accounting standards before 2005. This sample was used to analyse accounting quality. There was a total of 310 samples consisting of 177 firms that adopted IFRS mandatorily and 133 companies adopted IFRS voluntarily. The second category of sample was cross-sectional sample and comprised 123 companies that adopted IFRS but cannot identify the year in which they switched to IFRS and had annual reports for 2004 but did not have annual reports for the period before or after IFRS adoption. These samples were used in the additional tests of insider characteristics. The result showed a decrease in earnings

anagement, increase in timely loss recognition, and value relevance among the voluntary adoption of IFRS, indicating an improvement in accounting quality. In contrast, there was no evidence of improvement in accounting quality among mandatory adopters. The study put forward two explanations for the said findings. First, the flexibility in the application of IFRS was ineffective in restricting earning management, and second, IFRS standards were not sufficient to decrease earning management, increase timely loss recognition, and increase value relevance. The results suggested that mandating IFRS would not improve accounting quality unless firms received incentives to adopt IFRS (Christensen et al. 2015).

Spain adopted IFRS for public companies along with the other European countries as of 1st January 2005. Since the European financial and capital markets are highly integrated for cross-border investment, they gave much importance for the adoption of IFRS and to know the impact of adoption on the quality and transparency of financial reporting and its consequences on the efficiency of the capital market. The study by Martínez, Martínez, and Lin (2014) investigated the reaction of the market towards the accounting numbers under IFRS. The transition to IFRS in Spain was done in two stages. In the first stage, the companies were required to report aggregate book values of equity and net income under both Spanish Accounting Standards (SAS) and IFRS, in the interim report published in the end of first semester of 2005. In the second stage, the companies had to disclose individual IFRS reconciliation adjustments to SAS book value of equity and net income in the 2005 annual report. This gave an opportunity to the researchers to evaluate whether the market reacted to the aggregate numbers or to the reconciliation adjustment. The focus of the study was on the reconciliation adjustment of nine accounting items that had the most impact on the book value and net income. The accounting items selected were intangibles, leases, business combinations, financial instruments, treasury stocks, inventories, deferred taxes, property, plant and equipment, and employee benefits (Martínez, Martínez, and Lin 2014).

The study selected 72 companies from 129 IFRS adopters from the Comisión Nacional del Mercado de Valores (CNMV) database to test the comparative value relevance of SAS and IFRS earnings and book value. Copies of original annual reports of these companies under SAS and IFRS were used for the study. The study used three measurement models to check

the value relevance of book value and net income. In the primary model, in order to know the value relevance under SAS and IFRS, they used adjusted R^2 from the regression of share price on book value and net income for both SAS and IFRS periods. As for identifying the incremental value relevance of the aggregate effect of IFRS, two more independent variables, namely book value difference and net income difference between SAS and IFRS, were included in the first regression model and the explanatory power of the model was evaluated. Finally, incremental value relevance of reconciliation of nine individual adjustment made by IFRS to SAS was checked by another model in which a value relevance was checked with book value and net income and also with adjusted book value and adjusted net income. Adjusted book value and net income were the values that excluded the reconciliation adjustment of IFRS to SAS (Martínez, Martínez, and Lin 2014).

In contrast to the result of the earlier studies, the overall value relevance tests indicated a slight lower value relevance under IFRS, but it was not statistically significant. The incremental value relevance test of the aggregate effect of IFRS adjustments revealed that aggregated IFRS adjustment to net income had a marginal increase in value relevance and the IFRS adjustment to book value showed a significant increase in value relevance. The incremental value relevance of individual accounting adjustment for book value was positive and significant across all accounting adjustments; whereas for net income, the result showed a mixed result of value relevance. The result provided the evidence that adopting IFRS might not increase value relevance unless the firms disclosed sufficient valuable information on the effect of adoption to the market (Martínez, Martínez, and Lin 2014).

The idea of mandatory adoption of IFRS by the European Union is based on the assumption that it can ensure higher investor protection, free movement of capital, and encourage the competitiveness of the capital market. Nevertheless, the result at the international level in the research on the effect of IFRS adoption on accounting quality gave a mixed outcome. More than that, most of the research studies in this area are related to developed countries. Romania being an emerging market, the research by Dobre, Brad, and Ciobanu (2015), investigated the change in timely loss recognition and the value relevance of the Romanian

listed companies after the adoption of IFRS was of interest to investors and academics. Romania adopted IFRS starting from 2012, requiring all listed companies to prepare their individual financial statements using IFRS. However, Romania began using IFRS from 2007 onwards in consolidated financial statements when it became a member of the European Union. The study was based on financial information from 2010 to 2013 of 71 companies that had to comply with this regulation according to the Romanian Supervision Authority at the end of 2013. This research aimed to investigate the changes in accounting quality of financial reports prepared by companies listed in the Bucharest Stock Exchange (BSE) using IFRS (Dobre, Brad, and Ciobanu 2015).

The metrics used to evaluate accounting quality were timely loss recognition and value relevance based on earlier studies (Chua, Cheong, and Gould 2012, Barth 2007). An entity must recognise loss when it occurs rather than reporting loss on several periods of time. Based on this fact timely loss recognition is used to evaluate earnings management. The study found that the frequency of reporting losses (LNEG) was very rare in Romanian companies and that the frequency of reporting LNEG was higher in years 2011, 2012, and 2013 as compared to 2010. Using the regression model of timely loss recognition, it was discovered that the Romanian firms using IFRS in individual financial reports were recognising losses in a more timely manner and it was higher in firms audited by the big four audit firms (Dobre, Brad, and Ciobanu 2015). The value relevance measure also showed a similar result. The adoption of IFRS improved the value relevance of the individual financial reports published by the companies. The study disclosed that in BSE, the number of listed company's changes from year to year and as such, the sample companies included in each year were different. This might influence the result of the study (Dobre, Brad, and Ciobanu 2015).

The UK is a common law country that has an active stock and debt market, good investor base and investor protection mechanism, and an investor-oriented capital market that provides a good setting for IFRS transition. Many of the earlier studies showed that the adoption of IFRS can improve accounting quality and information needs of the investors (Barth 2007, Lang 2006). The study by George Iatridis explored the differences in accounting quality of UK firms listed in London Stock Exchange in the light of IFRS

adoption. Accounting quality was examined by comparing the accounting quality measures, i.e. earning management and value relevance of financial reports, under UK GAAP and IFRS (Iatridis 2010).

The study was based on the data from 241 UK companies listed in London Stock Exchange. The analysis was formed on the official adoption period of 2005 and pre-adoption period of 2004; thus, only the data of 241 companies for two years were used for the analysis. The result of the first earning management measure change in net income showed higher volatility of change in net income, indicating lower smoothing of earning. Ratio of volatility of change in net income to change in cash flow was also higher under IFRS reporting, showing no evidence for use of accrual to manage earnings. The next earning management measure correlation between accrual and cash flow was significantly positive in the IFRS period and negative in UK GAAP, indicating reduction in earning management. The ordinary least squares (OLS) regression result of discretionary accrual on cash flow, profitability, leverage, and size displayed a positive value of Financial Reporting System (FRS), which indicated that there was lesser earning management in the IFRS period. Both value relevance measures also supported the earlier result that IFRS adoption improved the value relevance of accounting numbers. The study concluded that IFRS-based financial information was useful to financial analysists and stock market authorities and assisted investors in making unbiased predictions about a firm's future performance (Iatridis 2010).

The transition to IFRS can bring many changes in accounting practices of entities by introducing fair value accounting, impairment of assets, deferred tax accounting, lease accounting, revenue recognition principles etc. This can increase the reliability, relevance, and quality of accounting information of countries' financial statements that adopt IFRS. The European Union adopted IFRS since 1st January 2005. This encouraged Kouki (2018) to compare the value relevance of the accounting information of financial statement that adopt IFRS and that not adopted IFRS in his study. The data for the study were from 106 companies listed in three stock exchanges in European countries, namely Germany, France and Belgium, because of the similarity in their accounting regimes. A comparison of the

value relevance of five years in the pre-IFRS adoption period from 2000 to 2004 and six years in the post-IFRS adoption period from 2006 to 2011 was made using 1,166 firm observations. The study excluded 2005 as it was the transition period. Based on the earlier studies, price model and return model were used in comparing the value relevance of accounting information (Kouki 2018).

The author used two price models to regress the share price with book value and earning per share; one with an additional variable for voluntary adoption to know the impact of voluntary adoption, and another without the variable for voluntary adoption. In the return model, a similar modification was done to know the impact of voluntary adoption. The study made a three-way comparison of value relevance. First, a comparison between voluntary adopters and non-voluntary adopters in the pre-adoption period was made. Second, non-IFRS adopters in pre and post-IFRS periods were compared. Third, a comparison between IFRS voluntary adopters in the pre and post-IFRS periods was made. The result on voluntary adoption concluded that there was no improvement in value relevance and voluntary IFRS adoption negatively affected value relevance. The result of the return model on voluntary adoption of IFRS also gave a similar result that there was no improvement in value relevance. The price model and return model on mandatory adoption indicated an increase in value relevance of share price after adoption of IFRS. Overall, the result showed that the mandatory adoption of IFRS did not affect the value relevance of firms that adopted IFRS voluntarily before the transmission period (Kouki 2018).

2.4.1.5 Accounting Quality Analysis of Companies from Emerging Markets

In the journal article published Bowrin (2007a) examined the financial reporting environment of Trinidad and Tobago and investigated whether the adoption of IAS, now known as IFRS, as their national standards improved the financial reporting's uniformity. There was no prescribed accounting standard in Trinidad and Tobago before it adopted IAS, in 24th February 1988. The publically traded companies selected generally accepted accounting principles (GAAP) from different jurisdictions based on the management's preference. The purpose of this study was to evaluate whether the adoption of IAS as the national standards of Trinidad and Tobago could increase the uniformity of financial

reporting practices among companies listed in the Trinidad and Tobago Stock Exchange (TTSE) (Bowrin 2007a).

The researcher compared the financial reports of publicly traded sample firms four years before the adoption of IAS as national standards (before 1987) and four years during the period following the adoption (1995, 1999, 2002 and 2003). The sample for the study comprised 18 companies taken from the 21 listed companies in Trinidad and Tobago Stock Exchange (TTSE) in 1987 and were in the trading list in all the study periods. Content analysis for six financial statement elements of publicly traded corporations that were prone to diversity in reporting were used to determine their financial reporting practices. Two measures were used to operationalise the uniformity of financial reporting practices. The first measure had two elements, the range of different alternative methods used and the distribution of firms across the alternative methods used to account for a particular financial statement element. Meanwhile, the second measure was the concentration of financial reporting practices used. The study concluded that the uniformity of financial reporting practice for all financial statement elements examined among publicly listed companies increased after the adoption of IAS as their national standards. This study thus concentrated only on the uniformity in financial reporting among companies, which was one of the objectives of IAS adoption (Bowrin 2007a).

The governments of Latin America countries have adopted IFRS to benefit investors, analysts, lenders, and other users and to develop their capital markets. But the enforcement and the regulatory mechanism of Latin American countries are weak and not made much changes since the adoption of IFRS. Identifying this institutional environment and the limited literature on the impact of IFRS on accounting quality of Latin America countries, André Aroldo Freitas de Mouraa, Aljaohra Altuwaijrib, Jairaj Gupta, investigates the impact of IFRS adoption on the cost of equity and the cost of debt in Latin American countries(de Moura, Altuwaijri, and Gupta 2020).

The research focus on financial information on non-financial services firms from Argentina, Brazil, Chile, Mexico, and Peru, listed on Latin American stock exchanges. The sample period for the study is from January 1, 2005 to December31, 2015. To investigate the long-term effect of IFRS, four years before and four years after the official dates of

mandatory IFRS adoption for each country were analyzed. Based on earlier studies the mean of four regression models were used in estimating the cost of equity because all models used to estimate cost of equity are subject to econometric estimation errors. To investigate overall effect of IFRS on the cost of debt, regression model with cost of debt as dependent variable and control variables are used. The findings suggest that the cost of equity declined after the mandatory adoption of IFRS in five Latin American countries. Moreover, the firm level incentive can influence the cost of equity to a certain degree. Finally, the study documents that the cost of debt also declined after the adoption of IFRS in five Latin American countries. Overall the findings concluded that Latin American countries with weak institutional settings are also benefited from the mandatory adoption of IFRS(de Moura, Altuwaijri, and Gupta 2020). The difference in institutional settings and date difference in mandatory adoption of IFRS by companies can influence the result of the study.

The study by Adibah Wan Ismail, Anuar Kamarudin, van Zijl, and Dunstan (2013) investigated the earning quality of companies in a developing country, Malaysia, after the adoption of IFRS-based accounting standards, Financial Reporting Standards (FRS), which was made effective from 1st January 2006. The adoption of IFRS-based accounting standard created some major changes in the Malaysian accounting field due to the use of fair value accounting and greater disclosure requirement through impairment of assets, goodwill, and other intangibles. These changes can improve the quality of financial reporting practices in Malaysia. The accounting quality of earning reported in the financial reports of listed Malaysian companies was evaluated in this study by comparing earning management and value relevance of the financial report of three years before FRS adoption and three years after FRS adoption. Earning management was measured using the absolute value of abnormal residual, which was the residual from the regression of total accrual on change in revenue, change in receivable, and property plant and equipment. A higher absolute value of abnormal accrual was taken as a sign of low quality accounting. On the other hand, value relevance was measured by regressing market value with book values. The research concluded that the earnings quality was higher after the adoption of the new IFRS-based accounting standards, FRS. Earning management was significantly lower and

value relevance was higher after the adoption of IFRS-based standards (Adibah Wan Ismail et al. 2013).

The Egyptian government pursued a policy of harmonisation between Egyptian Accounting Standards (EAS) and IFRS with an objective to attract domestic and foreign investors to the Egyptian capital market and to improve decision-making. According to the decree of the Minister of Investment, EAS established 35 EAS based on IFRS with minor adoption to local conditions and required all companies to comply with this standard (UN 2008). In the journal article by Ebaid (2016) examined whether the mandatory adoption of IFRS by Egypt could enhance accounting quality. Egypt is a code-law country where the accounting standards are set by the government, banks are the prominent suppliers of capital, the enforcement system is week, lesser investor protection, and explicit linkage between tax law and accounting. This study aimed to examine whether the adoption of IFRS led to accounting quality improvements in the financial settings of Egypt (Ebaid 2016).

Only one measure of accounting quality, earning management, was used to evaluate accounting quality. The four measures of earning management, namely variability of change in net income, ratio of variability of change in net income to variability of operating cash flow, Spearman's correlation between accrual and cash flow, and frequency of reporting small positive net income are used to evaluate accounting quality. Samples for the study were 74 companies that consisted of 10% of non-financial companies listed in the Egyptian Stock Exchange (ESX). A comparison of each accounting quality measure for the pre-adoption period (2000–2006) and the post-adoption period (2007–2009) of these companies was made to see the change in accounting quality (Ebaid 2016).

The accounting quality, measured by earnings management, had decreased in the post-adoption period as compared to the pre-adoption period. The result suggested that even if the adoption of IFRS was generally supposed to be of higher quality than domestic standards, it might not always lead to higher accounting quality in code-law countries like Egypt. The result indicated that incentives for the IFRS adoption was an important determinant of accounting quality (Ebaid 2016).

It is presumed that the adoption of high quality IFRS can provide high quality financial information, improves comparability of financial reports and increase the analysists forecast accuracy than the domestic accounting standards. Past researchers also report that a quality financial reports can improve in analysts' information environment. However, incentive to adopt IFRS, strong enforcement and countries investor protecting mechanism all have an impact on the quality of accounting information. Most of the earlier studies findings that adoption of IFRS can improve analysts' information environment was based on developed nations. The study by André Aroldo Freitas de Moura and Jairaj Gupta, focuses on Latin American countries, which have a unique institutional setting and a different reporting regime, investigates whether the improvement in the analysts' information environment documented by previous research are due to stricter enforcement, or due to the IFRS adoption (de Moura and Gupta 2019).

The focus of the study was from five Latin American countries, Argentina, Brazil, Chile, Mexico, and Peru across the sampling period from 2003 to 2015 divided in to four pre-IFRS period and four post-IFRS periods based on the official dates of the mandatory adoption of IFRS in each country. Only industrial firms listed on Latin American stock exchanges were used in the study. To measure the improvement in analysts' information environment, forecast accuracy of earnings, forecast dispersion of earnings, forecast dispersion of target price and number of analysts following Latin American firms in the post-IFRS adoption period were evaluated. The study used regression analysis to test the hypothesis developed (de Moura and Gupta 2019)

These results indicate that analysts' forecast errors, as well as analysts' forecast dispersion, decrease after mandatory IFRS adoption. The number of analysist's following Latin American firm increases significantly and this can be because of the increases in the disclosure of financial information required by IFRS. The improvement in the precision of public and consensus information in the post IFRS period supports the explanation that IFRS adoption can improve the quality of information available to analysts. Firms' reporting incentives is another factor that influence the analysts' information environment. The study concludes that the mandatory adoption of IFRS as well as the governments' policies regarding the implementation of these standards improves the analysts'

information environment which can help investors in assessing their risk in investing in these emerging economies(de Moura and Gupta 2019).

Providing transparent information to investors is important for the functioning of capital market. Lack of firm specific information effects the reputation of companies, increases cost of capital and lead to reduced trading in capital market. Investors always need transparent information of companies to make informed decision. Latin American stock exchanges require listed companies to comply with IFRS since late 2000 and early 2010 with the objective of increasing transparency of published financial reports which is essential for the proper functioning of financial markets. The adoption of IFRS by Latin American countries like most other countries aimed at reducing opacity of financial information. Based on this postulate Samuel Mongruta and Diego Winkelried through their study aims to investigate whether IFRS adoption was effective in reducing opacity in Latin American countries (Mongrut and Winkelried 2019).

Earlier many companies in emerging market subject their account to be audited by a well-reputed auditor such as one of the Big 4, to increase a sense of confidence and safety to investors. But the proportion of companies audited by Big 4 audit firms reduced after 2008 which might be the impact of mandatory adoption of IFRS in Latin American companies. This paper also investigates this unintended effect of IFRS adoption in Latin America. Many Latin American firms are listed in US stock markets through American Depositary Receipts (ADRs) which are subject to different regulations. Auditors in Latin American companies provided a number of other services beyond auditing which is forbidden by US as in their opinion it is conflict of interest and effects transparency. Finally, this study also investigates the role of audit quality on ADR firms (Mongrut and Winkelried 2019).

The study is based on panel data with information from a number of firms through time from listed companies of six Latin American countries. Regression analysis is used to analyse the data. The findings of the study suggest that firms are more opaque after adoption of IFRS. This can be due to overconfidence of managers that mere adoption of the IFRS is sufficient to assure higher transparency of financial information. The research also found two unintended effects of the IFRS adoptions in Latin American firms. One their audit quality is lower and they are more opaque after adoption of IFRS and secondly

for those firms with ADRs this adoption makes no difference. The study concludes that in the long term, opacity can affect the functioning of emerging economies, as they cannot attract investors which can deter their economic development (Mongrut and Winkelried 2019). The study is not providing much details of the samples used in this study.

2.4.2 Summary of Literature on Impact of IFRS on Accounting Quality

The review on the different literature in the area and effects of accounting standards on the quality of published financial reports provided a mixed outcome. The study by Barth (2007) on a group of companies selected from 21 different countries found that accounting quality improved after adopting IFRS. In contrast, a similar study made on samples from 20 countries by Ahmed, Neel, and Wang (2013) gave a contradicting result that the IFRS adoption reduced accounting quality. The study on the changes to IFRS by a group of African countries from domestic standards by Chebaane and Othman (2014) suggested an improvement in accounting quality. The change to IFRS-based standard in China's restricted market marked an improvement in accounting quality (Liu et al. 2011). Among the two studies made on Australian listed companies Chua, Cheong, and Gould (2012), it was concluded that there was significant improvement in accounting quality after the adoption of IFRS. Nevertheless, Bryce, Ali, and Mather (2015) reported a stable accounting quality after the change from Australian GAAP. In a further analysis, they found that audit committees were generally more effective in promoting accounting quality.

There are studies made on the changes in the accounting quality of listed companies from European countries. Morais and Curto (2008) conducted a study on the effects of accounting quality of Portuguese listed companies after their change from domestic standards to IFRS. They found a reduction in earning smoothing, indicating an improvement in accounting quality, but a decrease in value relevance and accounting quality after adopting IFRS. The two studies made on German companies, which allowed voluntary IFRS adoption before the mandatory IFRS adoption, discovered a somewhat similar result. When the study by Paananen and Henghsiu (2009) found that accounting quality improved in the voluntary adoption period, Christensen et al. (2015) suggested that the increase in accounting quality was more in voluntary adopters of IFRS and it is the

incentive to have a transparent financial report that prompted these companies to adopt IFRS voluntarily, which was the actual cause for the increased accounting quality. In Spain, companies were required to report transition from domestic standards to IFRS in two stages. In the first stage, companies were required to report absolute accounting numbers under both standards in the half early financial report. Meanwhile, in the second stage, companies were required to show the adjustment from domestic standards to IFRS in the annual report. Martínez, Martínez, and Lin (2014) performed a study to identify the most value relevant information. The result provided evidence that value relevance increased only after providing sufficient valuable information on the effect of adopting to the market in the annual report. Romania, another European country, adopted IFRS for the consolidated financial reports of companies from 2007, when they became a member of the European Union and for all other listed companies from 2012 onwards. The study by Dobre, Brad, and Ciobanu (2015) on the accounting quality of listed Romanian companies found that the frequency of timely loss recognition and value relevance of accounting numbers improved only after IFRS adoption on individual financial reports. Another study made on 241 UK companies listed in the London Stock Exchange by Iatridis (2010) found that there is an improvement in accounting quality after the adoption of IFRS. He also concluded that the IFRS financial information was more useful in making valuable prediction on the future performance of companies. The study by Kouki (2018) on the value relevance of listed companies in three European countries discovered that the value relevance of companies that adopted IFRS mandatorily without voluntary adoption registered an improvement in value relevance and accounting quality.

There are also studies made on the effect of IFRS adoption in companies from emerging countries. Bowrin (2007a) conducted a study on the improvement in the comparability of financial report elements after the adoption of IFRS as their national standard. The study used a content analysis of six financial statement elements and found that the uniformity of all the financial statement elements examined increased after the adoption of IAS as their national standard. Another study from emerging countries is the one on Malaysian listed companies after the adoption of IFRS-based accounting standards, Financial Reporting Standards (FRS), by Adibah Wan Ismail et al. (2013). They discovered that FRS adoption reduced earning management and improved value relevance, signifying an

improvement in accounting quality. Egypt is an emerging country that has a code-law system. Ebaid (2016) performed a study on the changes in accounting quality on the IFRS adoption by Egypt. Based on the finding, the author suggested that even though IFRS adoption usually improved accounting quality, it might not always lead to improvement in accounting quality in a code-law country like Egypt.

Findings of various studies made by different authors on the impact of IFRS adoption on accounting quality gave contradicting results. When some studies found significant improvement in accounting quality after the adoption of IFRS, others suggested a reduction in accounting quality after the adoption of IFRS. There are also studies that recommend a stable accounting quality, meaning that the IFRS adoption has not affected the accounting quality. These results support the findings of Soderstrom and Sun (2007), where he emphasised that it was the institutional settings that decide the quality of accounting in each country. Since the institutional settings differ among countries, there will be changes in the accounting quality between countries even after the adoption of IFRS.

On reviewing the literature relating to latest period's it can be found that most of these studies concentrates on the economic consequence of improvement in accounting quality due to adoption of IFRS. The mandatory adoption of IFRS can strengthen the positive effect of financial statement disclosure. It increases capital market benefits by providing disaggregated information (Li, Siciliano, and Venkatachalam 2020). Use of IFRS is relevant and important for international business and capital markets, it reduces cost of capital, increases efficiency of capital allocation and international capital mobility (El-Helaly, Ntim, and Soliman 2020, Pignatel and Tchakoute Tchuigoua 2020, de Moura, Altuwaijri, and Gupta 2020), achieve uniformity, transparency, comparability and reliability of financial data (Sanabria-García and Garrido-Miralles 2020). The improvement in the accounting quality achieved by mandating IFRS can reduce cost of information processing and information asymmetry, which can positively influence the investors worldwide (Opare, Houqe, and van Zijl 2020). The uniformity of information and reduced interpretation cost achieved through the adoption of IFRS will attract new investors to capital market (Sanabria-García and Garrido-Miralles 2020). The improvement in the analysist's information environment achieved by adopting IFRS assists

investors in assessing their risk in investment (de Moura and Gupta 2019). The high quality accounting standard, IFRS, increases the transparency and reliability of financial statement across globe and facilitates cross boarder investments (de Moura, Altuwaijri, and Gupta 2020). The principle based IFRS increases management's judgment and discretion in reporting process (Gu, Ng, and Tsang 2019) .

Based on the literature discussed above, it can be seen that there are different factors that influence the quality of published financial reports. These include accounting standards used, the legal and political systems of a country, institutional settings, tax system, ownership structure of the entity, capital market developments etc. Thus, the accounting standard used in the preparation of financial report is an important factor that contributes towards accounting quality. With the objective to develop, in the public interest, a single set of high quality, understandable, enforceable, and globally accepted financial reporting standards, IASB developed IFRS (IFRS 2013c). Many countries including Australia adopted IFRS with effect from the year beginning on or after 1st January 2005. One of the aims of this study is to evaluate the impact of IFRS adoption on the accounting quality of Australian listed companies. The accounting quality of published financial reports is evaluated in two different dimensions. First, the accounting quality of a group of 264 samples of listed companies is evaluated using the different accounting quality metrics, namely earning management, timely loss recognition, and value relevance based, on the earlier studies. Afterwards, these 264 companies are divided into seven industry groups based on the Global Industry Classification Standards (GICS) and the impact of IFRS adoption on each of these industry groups is also evaluated.

2. 5 Literature on Effect of Global Financial Crisis on IFRS

The financial crisis of 2008 effected the economies around the world. Many economists consider IFRS especially fair value measurement used in accounting as one of the contributing factor of global financial crisis (Banziger 2008, Deloitte 2008). There was much concern for the accounting regulators on the application of Fair Value Accounting (FVA) in IFRS. In a survey made by EU countries they found that FAV is complicating the application of IFRS and it may affect its convergence. Some of the European countries

even threatened to curve out from IFRS unless changes are made to FAV (Mala and Chand 2012). China took a conservative attitude towards application of FVA restricting FVA only to investment properties (Liu et al. 2011). Even if IASB opposed the changes initially the continued pressure from the financial institutions policy makers and finance ministers of prominent countries IASB reconsidered its decision and took extraordinary steps in a thoughtful manner to the crisis. Later IASB published guide line on the use of FVA when there is no active market for a financial instrument. In the light of these criticisms, Mala and Chand (2012) through their study highlighted the important implications of global financial crisis on financial reporting. This study investigated whether the financial crisis interrupted the movement towards IFRS adoption.

Studying the important implication of global financial crisis on financial accounting especially the trend towards convergence of IFRS, due to the problem of FVA, it is found that the financial crisis has not hindered the convergence. The financial crisis has not affected the intention of the countries to converge and they adopted IFRS as planned. IASB received a number of recommendations to improve the accounting environment emerged from financial crisis and the improvement made in the standards helped in enhancing the transparency, reducing complexity and restoring confidence in the market leading to global financial stability and economic growth (Mala and Chand 2012).

The article by S. P. Kothari and Rebecca Lester, discussed the cause of financial crisis with special focus on the role of US accounting standard. The origin of financial crisis is from the two bad events occurred in US, particularly the technology/dot-com bubble of 2000, and 7/11 terrorist attack of 2001 which effected USA economy very badly. To boot the economy US federal reserve took some significant fiscal and monetary policy which include the lowering interest rate, lowering taxes, encourage lending, and devaluation of dollar. The lower interest rate and the encouragement for lending prompted many Americans to become home owners. Seeing the healthy signals of economic growth by 2005 Federal Reserve started to increase the interest rate to 5 percent in 2005 and up to 8.25 percent in 2007. As interest rate increased many subprime house owners cannot afford to pay their loans and started to default. This lead to the large losses to financial institutions

with large subprime lending. The announcement of losses by many firms created a drop in their market value and resulted in the prolonged recession(Kothari and Lester 2012).

The authors are of the opinion that many factors contribute to the financial crisis in that the poor implementation of fair value accounting also made some contribution. The critics of fair value accounting argues that it is the accounting system, especially the fair value accounting, which require the banks to write down the assets when market goes down, which reduced the bank's capital and lending capacity which is the cause for financial crisis. The opponent's states that the relaxed lending criteria, negligent regulators, increase in subprime lending, improper risk assessment, uninformed borrowers and predatory lenders all factors contributed to the financial crisis. If fair value accounting is implemented properly it would have given clear information to investors about banks financial health. The study concludes that the poor implementation and application of fair value also had some contribution to financial crisis along with other factors (Kothari and Lester 2012).

The financial crisis of 2008 and the resulting EU debt crisis required many companies to make adjustments in their commercial and production policies to overcome the consequences. Firms also are inspired to use alternative accounting methods to present a better financial position. This raised the question whether the EU companies are motivated to use accounting choices that reduced the reliability of financial statements reported or whether IFRS adoption has established a strong and stable background to EU companies and what was the role of big auditing companies in maintaining the quality of financial report. Iatridis and Dimitras (2013) investigated this issue in their research based on data from five European countries.

The data for the study was from 789 non-financial listed companies from five EU countries, Portuguese, Irish, Italian, Greek and Spanish. The information from the financial statement of these companies from 2005 to 2011 prepared using IFRS was used in the study. The analysis was made using the two variables earning management and value relevance. The findings gave a mixed result on the relation between audit by big 4 auditors and earning management. When Portugal, Italy and Greece display stronger possibility for earnings

management. Ireland displayed less evidence of earnings manipulation, while the findings was neutral in Spanish companies. The result of value relevance also showed a mixed result in different countries indicating that firms audit by big 4 auditors do not necessarily report higher value relevance. The authors states that findings of the study will give useful insight to the policy makers and regulators when they prepare defiance mechanism to reduce earning manipulations in periods of economic crisis (Iatridis and Dimitras 2013).

Many advanced countries suffered major recession after 2008 global financial crisis. But Australia was able to whether away the worst effect 2008 financial crisis. The Australian government of the time claims that it is the fiscal-policy response avoided the impending crisis. However along with the fiscal policies, the strength of export demand from China and operation of monitory policy helped bettering Australian performance. The study by Nicolaas Groenewold evaluates the relative importance of these stimulus measures in avoiding the recession (Groenewold 2018).

The study uses vector-autoregressive (VAR) model with four variables, real output, a fiscal policy variable, a monetary policy variable and a foreign demand variable, which helps in deriving separate estimates of the contributions of the three main contenders. Data for the variables was taken from the Australian Bureau of Statistics website, dXtime data base and the Reserve Bank of Australia website. It if found that, fiscal policy had a negative effect on real output, during the period 2009–2011. It was mainly because instead of spending the government outlay households saved cash receipts, cut consumptions and reduced household debts. The export demand assisted a little in protecting Australia from 2008 financial crisis and monitory policy had a modest positive effect in offsetting the recession of financial crisis. The study found that the continued level of export to China helped Australia in moderating the effect of financial crisis but was not sufficient to offset the fall in export demand by other countries. The contribution of monetary policy on an average was positive and contributed to offset the adverse effect of fiscal policy (Groenewold 2018).

2.6 Research Gap

The integration of capital markets and the increase in the number of multinational companies in the last decade of the 20th century have necessitated the development of high quality and comparable accounting standard. IASB has developed IFRS with the aim of establishing a common accounting language across the world (Ball 2006). With the aim of improving the accounting quality of financial reports and allowing a competitive capital market, the EU, Australia, and many other countries have adopted IFRS. Mandatory adoption of IFRS by different countries worldwide is the most widespread global financial reform in accounting history (de Moura and Gupta 2019). It has increased the importance of IFRS, leading to rising numbers of accounting research conducted on the impact of change from country-specific accounting standards to IFRS on the quality of financial reports and the factors that influence the accounting quality. Much of the research has evaluated the accounting quality based on the quality measures of earning management, timely loss recognition, and value relevance. However, the findings of these studies are not consistent. It is found that the change to IFRS improves the quality of published financial reports for companies (Paananen and Henghsiu 2009, Barth 2007, Chebaane and Othman 2014, Liu et al. 2011, Martínez, Martínez, and Lin 2014, Dobre, Brad, and Ciobanu 2015, Iatridis 2010, Bowrin 2007b, Adibah Wan Ismail et al. 2013, Chua, Cheong, and Gould 2012, Opare, Houqe, and van Zijl 2020, de Moura, Altuwaijri, and Gupta 2020, DeFond et al. 2019, de Moura and Gupta 2019).

There are also researchers which concluded that IFRS adoption reduced or made no change in accounting quality (Ahmed, Neel, and Wang 2013, Kouki 2018). Meanwhile, some other studies considered the influenced of legal system on accounting quality (Lang, Raedy, and Yetman 2003). There are also studies which suggest that mere adoption of the IFRS is not sufficient to guarantee transparency of financial information (Mongrut and Winkelried 2019). The accounting standard is only one facet of financial reporting. Cultural and institutional factors such as enforcement mechanisms affects accounting practices and how accounting information is perceived (Tsalavoutas, Tsoligkas, and Evans 2020).

Incentive to use IFRS is also another reason for adoption of IFRS (Paananen and Henghsiu 2009, Christensen et al. 2015, Ebaid 2016, Sanabria-García and Garrido-Miralles 2020).

These research works can be grouped into studies based on the information from companies listed in the capital markets of developed countries, developing countries, controlled economies, code law countries, and companies located in different countries.

Some of these studies have discussed the change in quality of financial information of companies located in different countries that changed from their current GAAP system to IFRS. Barth (2007) have collected data of companies from 21 countries, which had changed from non-US domestic standards to IAS. The study revealed that firms applying IAS show evidence of less earning management, more timely loss recognition, and more relevant accounting amount, suggesting an improvement in accounting quality (Barth 2007). Contrary to the above, the study by Ahmed, Neel, and Wang (2013) based on the data from companies that adopted IFRS in 2005 and located in different countries have shown that all earning smoothing measures exhibit higher-earning smoothing in post-IFRS adoption period. In another comparison, firms in countries with weak enforcements have been found to exhibit more income smoothing in the pre-adoption period compared to firms in countries of strong code of law. Meanwhile, the research by Lang, Raedy, and Yetman (2003) has analysed the change in accounting quality of earnings as reported in the domestic markets by firms cross-listed in the US stock market. It has been revealed that cross-listing firms report higher quality earnings in domestic markets than non-cross listed firms. The results of the study made by Opare, Houqe, and van Zijl (2020) show that the shift from domestic GAAP to IFRS has had positive impact on non-cross-listed companies, leading to the improved accuracy of financial analysts' earnings forecasts and an increase in investments. The study by (Sanabria-García and Garrido-Miralles 2020) suggests that, IFRS adoption provides more uniform financial information and reduced interpreting costs which increased the incentives to make new investments in capital market.

Similarly, Chebaane and Othman (2014) have conducted an investigation on the value relevance of earnings and book value of companies listed in the emerging markets of African and Asian regions. They have found that the adoption of IFRS is linked with an improvement in value relevance and that the legal system has a positive effect on value relevance. Moreover, a study on the value relevance of companies listed in three stock exchanges in European countries, namely Germany, France, and Belgium, has been

undertaken by (Kouki 2018). It has generated a three-way comparison; one between non-voluntary and voluntary adopters in the pre-mandatory IFRS adoption period; one between non-voluntary adopters between pre and post-IFRS adoption period, and one between voluntary adopters between the pre and post-mandatory adoption period. Consequently, mandatory adoption has been found to yield no improvement in value relevance between the pre and post-mandatory adoption periods among firms that adopted IFRS voluntarily before the mandatory adoption period.

Other studies have evaluated whether IFRS can work properly in a regulated market such as China, whereby accounting quality is assessed based on the earning management and value relevance. The results have shown that the accounting quality, especially reported earnings, improves considerably well with the compulsory adoption of substantially IFRS-convergent standards in China (Liu et al. 2011). As the institutional settings of China is different from other economies DeFond et al. (2019) investigated whether IFRS adoption in china can improve accounting quality and attract foreign investors. The finding suggested a decline in foreign instructional investment in china.

Various studies on the change from domestic standards to IFRS for companies located in different European countries have also exhibited mixed results. Morais and Curto (2008) have undertaken their study on the change in accounting quality after a shift from national standards to IFRS based on the evidence from Portuguese-listed companies by using the accounting quality measures of earning management, timely loss recognition, and value relevance. The outcomes of the study have been diverse for different measures. When earning smoothing measure has reported a reduction suggesting an increase in accounting quality, the value relevance of accounting information has marked a reduction after the adoption of IFRS. A three-way comparison of accounting quality for German companies made by Paananen and Henghsiu (2009) between the IAS period, IFRS voluntary period, and IFRS mandatory period following the formation of IASB that revision IAS and developed new IFRS. Contrary to many earlier studies, the results have revealed that the accounting quality did not improve during the mandatory IFRS period, but an increase is marked between IAS period and voluntary IFRS period. They have finally concluded that the revision of IAS and the development of new IFRS have not improved the financial

reporting quality of German companies. Germany has allowed voluntary adoption of IFRS even before 2005. This has prompted Christensen et al. (2015) to identify whether the accounting quality is an outcome of mandatory IFRS adoption, or is due to the incentive to adopt IFRS. The results have revealed an increase in accounting quality during the voluntary IFRS adoption period, but no evidence for improvement in accounting quality in the mandatory IFRS period.

Then, the value relevance of accounting numbers in Spain-listed companies under IFRS has been analysed by Martínez, Martínez, and Lin (2014) to know the market's reaction to IFRS. The result has contradicted earlier studies, indicating an insignificant reduction in value relevance under IFRS. The study has also concluded that IFRS can show better results only if the firms disclose sufficient valuable information in the financial reports.

Romania is a developing country that adopted IFRS in 2007 when it became a member of the EU. Florin Dobre, Laura Brad and Radu Ciobanu have studied the change in the accounting quality of financial reports for the companies listed in Romanian stock market, Bucharest Stock Exchange (BSE). The study has used timely loss recognition and value relevance as the measures of accounting quality and thus arrived at the conclusion that both indicate an improvement in accounting quality after changing to IFRS (Dobre, Brad, and Ciobanu 2015). An investigation into the change in accounting quality for companies listed on London's stock exchange by Iatridis (2010) has opted for quality measures, namely earning management and value relevance. The study has also concluded that the change to IFRS has improved the accounting quality of financial information being published financial reports, making it useful to analysts, investors, and the stock market authorities. Sanabria-García and Garrido-Miralles (2020) investigates heterogeneous impact the adoption of IFRS has on Spanish listed companies depending on whether they are cross-listed or non-cross-listed. The finding suggests that IFRS has not made any change in the financial data environment CL companies as they are subject to greater control by supervisory bodies.

Many emerging capital markets have also adopted IAS as their accounting standards or allowed the use of IFRS. Based on such change from one accounting standard to another in developing countries, Bowrin (2007b) has conducted a research on the financial

reporting environment among companies in Trinidad and Tobago to assess whether the adoption of IAS as their national accounting standard improves the financial reporting uniformity. The study has further concluded that the use of IAS has improved the uniformity of financial reports of companies. Malaysia adopted IFRS-based accounting standards, namely Financial Reporting Standards (FRS) made effective from 1st January 2006 onwards. In light of the change, Adibah Wan Ismail et al. (2013) have looked into the change in evaluating the quality of Malaysian listed companies. The study has thus confirmed that earning management is reduced and value relevance is improved after the change to IFRS-based standards. Meanwhile, Egypt as a code-law country has harmonised its Egyptian Accounting Standards (EAS) with that of IFRS after a minor modification with local conditions, mandating for all companies to comply. In such environment, Ibrahim El-Sayed Ebaid has assessed whether the adoption of IFRS enhances the accounting quality by using accounting quality measure of earning management. The results have indicated that the adoption of IFRS cannot always improve the accounting quality, especially in code-law countries, and the incentive for such adoption is an important element that contributes towards accounting quality (Ebaid 2016). The research by de Moura, Altuwaijri, and Gupta (2020) , examines the impact of IFRS adoption on the cost of equity and the cost of debt in Latin American countries. The findings suggest that the cost of equity and also cost of debt reduced after Adoption of IFRS. The findings suggest that Latin American countries with weak institutional settings are also benefited from the mandatory adoption of IFRS.

The research by Yi Lin (Elaine) Chua, Chee Seng Cheong, and Graeme Gould has evaluated the impact of IFRS adoption on the accounting quality for Australian listed companies. Using earning management, timely loss recognition, and value relevance, it has evaluated accounting quality and concluded that an improvement in all three areas is seen after the adoption of IFRS by Australian listed companies(Chua, Cheong, and Gould 2012). The impact of an audit committee on the accounting quality of pre and post-IFRS adoption periods of Australian listed companies assessed by (Bryce, Ali, and Mather 2015) is done specifically in the context of Australia. Earning management and accrual quality have been used to measure accounting quality, revealing contrasting outcomes. It has indicated that IFRS adoption has negligible effect only on the accounting quality of financial reports,

while audit committees have an effective role in improving the quality of the financial reports.

The aforementioned works have concentrated on evaluating the effect of change for accounting standards from national accounting standards to IFRS on the financial reporting quality. There are also studies on the impact of IFRS adoption of by Australian listed companies, but the findings of these studies gives contrasting results. This research entitled "Impact of Adoption of International Financial Reporting Standards and Financial Crisis on Accounting Quality of Australian Listed Companies" evaluated the impact of two important economic events that happened in the first decade of 21st century, viz. the mandatory adoption of IFRS and financial crisis of 2008, on the quality of financial reports of companies listed in ASX. Even though there are studies on the impact of IFRS on accounting quality no studies investigate the impact of financial crisis a bad economic period on accounting quality. Moreover, in the first events, IFRS adoption, it is expected that accounting quality can be improved and in the second event, financial crisis, it is expended that accounting quality may affect adversely. This can yield insight as to whether adopting IFRS alone can improve the quality of financial reports. There are no studies made so far which analyse the impact of two opposing events on the quality of financial reporting. This can bring forward the importance of other factors like enforcement and compliance in maintaining financial reporting quality. Furthermore, the impact of IFRS adoption on the accounting quality of financial reports is analysed using two different angles. First, 264 ASX-listed companies from seven industry groups, as per Global Industry Classification Standards (GICS) are incorporated in the sample, whereby the impact of mandatory IFRS adoption on the quality of published financial reports for these companies taken as a single group is analysed. Second, from the 264 selected companies, the financial reporting quality for each group of companies is analysed separately to identify whether the adoption of IFRS affects consistently on each of these seven industry groups. An analysis as to how the financial crisis affects the quality of financial reports is made for all companies collectively, and also for individual industry sectors separately.

There are different studies regarding the role of IFRS in the global financial crisis of 2008 and how the financial crisis effected IFRS. Many critics consider IFRS which embraced

fair value accounting as one of the contributing factor of financial crisis. In the study made by Mala and Chand (2012) they points out that some EU countries threatened to curve out from the convergence of IFRS if changes are not made to the FVA. But, the improvements to FVA made by IASB based on the recommendations from regulators and accounting bodied around the world has enhanced the financial accounting quality, restored confidence in the market and regained global financial stability and economic growth. The study by Kothari and Lester (2012) suggests that it is the poor implementation and application of IFRS which lead to the financial crisis. If it is properly implemented it would have given clear information about the financial health of banks which would have reduced the impact of financial crisis. Another study by Iatridis and Dimitras (2013) made on companies from different EU countries as to whether the adoption of IFRS helped in maintaining accounting quality in financial crisis period and whether audit by big 4 audit firms can influence the quality. The finding showed a mixed result in different countries and concluded that audit firms has not helped in reporting lower earning management or higher value relevance. These studies suggest that adoption of IFRS can help in maintaining the accounting quality even in bad periods like financial crisis.

The global financial crisis of 2008 effected almost all the countries throughout the world. Many economists consider IFRS especially the use of FVA as one of the factor that contributed to the financial crisis. In the light of the criticism from the banking sector, regulators, accounting bodies and governments of different countries, IASB made some changes in the accounting standards to suit this particular situation. In the literature discussed above it is also mentioned that the motivation to change accounting policies, to present better financial position in the financial reports are very high in bad periods like financial crisis. Based on these the study also evaluates how financial crisis had affected the quality of published financial reports of Australian listed companies. Accounting quality of financial reports of the Australian listed companies before and after financial crisis are compared use the three accounting quality measures earning management, timely loss recognition and Value relevance. To test the impact of adoption of IFRS and the effect of financial crisis on the accounting quality of Australian listed companies the following two hypotheses are proposed

H1: The adoption of IFRS positively influences the accounting quality of published financial report of Australian listed companies.
H2: The global financial crisis 2008 affects the accounting quality of published financial report of Australian listed companies.

These hypotheses will be tested using different accounting quality metrics, earning management, timely loss recognition and value relevance.

2.7 Summary

This chapter presented a review on the fundamental accounting theory used to develop IFRS and also the accounting theory that explains the need to publish a quality financial report by reporting entities. The fundamental accounting theories used in developing IFRS are the positive theory and normative theory. The positive accounting theory observes economic consequences of real-life transactions of companies and based on that, decides the ways transactions and economic events of entities are to be recorded in future. The normative theory uses a deductive methodology. It formulates the objective first and based on that, principles are developed. It explains the accounting process based on some theories and principles. In developing the IFRS, these fundamental theories of accounting are used. The agency theory of accounting explains the need for a quality financial report. In corporate entities, there is separation of management and ownership. The mangers and the agent of owners manage the companies on behalf of the owners. They have a stewardship responsibility to manage the company in the best interest of the owners. Managers who look after the day-to-day affairs of companies have more information on companies and shareholders and investors have to depend on them to obtain this. The adoption of IFRS, the objective of which is to present quality financial reports, can reduce the information asymmetry between informed managers and uninformed investors. Thus the adoption of IFRS helps managers in achieving their responsibility of providing true and fair view of the financial performance and position to the shareholders which can reduce the agency problem and agency cost.

Based on the literature discussed above, it can be concluded that the accounting quality of published financial report is influenced by a number of factors, such as the accounting standard used, legal and political environment of a country, incentives to have a quality financial report, tax system, capital market developments etc. Therefore, the quality of a financial report may vary from country to country even after adoption of IFRS. Financial crisis usually has an adverse effect on the financial performance of entities. This may motivate many entities to make changes in the accounting policies to show a better financial position. The adoption of IFRS can help in maintaining the accounting quality of financial reports even in bad periods like financial crisis. This study evaluated the impact of IFRS adoption and the financial crisis of 2008 on the accounting quality of Australian listed companies.

CHAPTER-3

Methodology

3.1 Introduction

IFRS is the most widely accepted financial accounting model around the world. Approximately more than 120 countries permit the use of IFRS or require its use by domestic listed companies. Nevertheless, only approximately 90 countries have fully confirmed with IFRS as promulgated by IASB and require to include a statement acknowledging its use in audit reports (AICPA 2018). Australia also adopted IFRS from 2005 financial year onwards and quality financial report is the main objective of adoption of IFRS. This study evaluates whether the quality of financial reports of Australian listed companies improved after the adoption of IFRS and also whether the financial crisis, which is a bad period in the economy, has affected the quality of financial report of these companies. The analysis of accounting quality is made using three accounting quality metrics, i.e. earning management, timely loss recognition, and value relevance.

The study entitled "Impact of adoption of International Financial Reporting Standards and financial crisis on accounting quality of Australian listed companies" can only be a success when appropriate methods and tools are used in a bid to achieve the research objective as well as to answer the research questions. The Methodology chapter presents methods, strategies, and tools that were used in the research to collect, validate, and analyse data in the study. Subjects discussed in the Methodology chapter include research design, types of data, data sources, data collection, and data analysis. Multivariate regression analysis was used in the study to ensure validity and reliability of the study and to generate dependable results.

3.2 Research Design

The importance of research design cannot be undermined for the success of any research project. A research design is the strategy that a researcher employs in the research to

achieve the objective of research (Brenda Laurel 2003). A research design is the strategy, plan, and structure to be followed in conducting a research (Carriger 2012). Research design is a systematic plan of research that helps in enhancing the validity of the study (Denise F. Polit and by 2001). Thus, the research design is the master plan of a research that explains how, when, and from where data are collected and analysed to maximise the validity of conclusion. A research design must be appropriate to the research process right from framing research questions until finally analysing and reporting the data. The research design must ensure that evidence collected through data actually helps to answer the research question. In other words, when developing a research design, it should be able to ensure that the data collected can answer the research question. If a researcher makes a mistake in designing the research strategy, the research process will be in vain, as the success of any research depends on the design of the research strategy (Dawn Iacobucci 2005).

To investigate the changes in the accounting quality of Australian listed companies after the mandatory adoption of IFRS and to evaluate how the financial crisis affected the quality of financial reports, this study collected and analysed financial information of 264 Australian listed companies for a period of 14 years from 2002 to 2015. The data were then classified into pre and post-IFRS periods and pre and post-financial crisis periods, and the accounting quality between the periods was compared and interpreted using the accounting quality metrics of earning management, timely loss recognition, and value relevance. In this section, a detailed discussion of the following elements of research design are discussed.

1) Objective of the research study
2) Data collection method to be adopted
3) Sample design – the sample and the sample size
4) Data collection tools
5) Data analysis – quantitative or qualitative.

Every research must have clearly stated objectives that guide the researcher to achieve the aim of the research. As such, this research has developed two objectives as explained in the first chapter. They are:

1) To investigate whether the mandatory adoption of International Financial Reporting Standards (IFRS) improved the quality of financial reports of Australian listed companies.

2) To study how the international financial crisis in 2008 affected the quality of financial reports of Australian listed companies.

3.2.1 Data Collection Method, Type of Data, and Data Sources

The research on impact of adoption of international financial reporting standards and financial crisis on accounting quality of Australian listed companies, analysis the quality of financial reports of different periods using the information from published financial statements of companies listed in Australian Securities exchange (ASX). The study is thus based on the secondary data. Secondary data is information derived from already existing sources. Sources of secondary data include books, journals, periodicals, magazines and internet among many others (Saunders 2007, Kothari 2008). The major source of secondary data for this study is the information from published financial reports of Australian listed companies. The study could be successful only if reliable secondary information on listed company's financial records over a period of time is gathered to evaluate the quality of accounting records. All listed companies in ASX must provide ASX a half yearly financial report in appendix 4D as per listing rule 4.2, an annual financial report in appendix 4E as per listing rule 4.3, and a quarterly financial report in appendix 4C as per listing rule 4.7 (ASX 2015). The annual financial reports submitted to ASX by listed companies are audited financial reports, prepared and published as per the requirements of corporate law and listing rules and are used extensively by the stakeholders of every company for making financial decisions. Therefore, these published financial reports are most reliable source of information.

This study uses secondary data and uses proportionate stratified random sampling to collect data. The secondary data for the study is the information from the published financial reports of Australian listed companies from year 2001 to 2015. The study uses stratified

sampling because the study is analysing the change in accounting quality of all the sample companies taken together and also seven industry groups separately. The data for the study was collected from DataStream (Thomson Reuters). The sample companies for this study is taken from 2169 companies listed in Australian Stock Exchange (ASX) as on March 2015. From 2169 companies listed in ASX in March 2015 was only 724 companies have financial statements of full 15 years starting from 2001 to 2015. The data for the study is taken from 15 years' financial statement of sample companies selected from these 724 companies. Therefore, the population for the study is 724 companies.

3.2.2 Sample Design

The Global Industry Classification Standard (GICS) classifies the shares of companies into 11 sectors, 24 industry groups, 68 industries, and 157 sub-industries (S&P 2016). There were 2169 ASX listed companies in all the sectors together (see table 4.1). From the 2169 ASX listed companies as on March 2015, companies which were listed in ASX before 2001 and still in the official trading list are identified. Companies listed in ASX with financial reports for more than 15 years from 2001 is taken as the population for the study, this constitutes 719 companies (see appendix-1, page 294 for the list of population companies). Out of the total population, first minimum sample size was calculated using the formula n = 385 ÷ (1+ 385/p), which gave 250 companies (Hamburg 1985, Raosoft 2004, Comer 2006). This comes to 34.77% of the population. From the population, this research selected financial reports of companies from 7 GICS industry sectors. Afterwards, using proportionate stratified random sampling to get a more representative sample and statistically significant result, 50% of the population from each selected group of companies in the Global Industry Classification Standard (GICS) was calculated (See Table 3-1 page 116). The study used panel data for analysis, which needed a minimum of 40 observations in each GICS industry group to give a statistically significant result. Therefore, to create a statistically significant result from each industry group, which have a population of 30 or more companies were selected as the industry group and half of each group (50%) is taken which makes the sample size to 264 companies which is more than minimum sample size 250. List of the companies in the population and the sample are given in (see appendix 1 page-294 and appendix-2 page 313).

The study excluded banking sector with 8 companies and insurance sector with 5 companies from the sample selection as only sectors with more than 30 companies are included in the sample. In accounting and finance literature, it is common to exclude financial companies from analysis because of differences in financial statement items, difference in their accounting standards and in applicable regulations (de Moura, Altuwaijri, and Gupta 2020, de Moura and Gupta 2019, Tsalavoutas, Tsoligkas, and Evans 2020, Wang 2019). Moreover, the high leverage that is normal for these firms probably does not have the same meaning as for nonfinancial firms, where high leverage more likely indicates distress (FAMA and FRENCH 1992). Banking sector is highly regulated by separate regulatory authorities. The Council of Financial Regulators (CFR) consisting of Australian Prudential Regulation Authority (APRA); Australian Securities and Investments Commission (ASIC); Reserve Bank of Australia (RBA); and Australian Treasury is the body that controls and regulate Australian financial system including banking sector (RBA 2020). Basel III aim to strengthen the regulation, supervision and risk management of banks. It covers the minimum capital requirement for market risk and liquidity coverage ratio (BIS 2020). This make a difference in the equity section of balance sheet of banks from other sectors. These special features of banks make its financial information different from other sectors which is another reason for not including banking sector in the sample selection.

In the analysis of the impact of IFRS adoption, four pre-adoption years and four post-adoption years were compared. This would give only 60 observations in each period. Therefore, seven industry groups with more than 30 companies were identified and 50% of companies from each group are selected at random. The selected industry groups and number of companies in each sector were as follows: commercial and professional services 18, diversified finance 31, energy 46, health care and equipment services 15, materials 107, real estate 19, and software services 28. The total number of samples was 264 companies (see appendix -2, page 308 for list of sample companies). Industry groups which have 30 or more listed companies were selected because this would make the total number of samples above the minimum sample size of 250 and each group of companies would also have more than 40 observations needed for the panel data analysis of each industry group (see Table 3.1, page 116). The study followed this method as it could better estimate the

quality of financial report of each industry sector and also all 264 companies taken together. The change in accounting quality of the financial report of each group is evaluated using the data from 2002 to 2015. The information from the financial statements of 264 companies for 14 years, makes a total of 3,696 years' financial statements.

3.2.3 Data Collection

This study gathered secondary data on the financial information of Australian listed companies from 2001 to 2015. DataStream (Thomson Reuters), Morningstar Data Analysis premium and ASX website were used in collecting data. First the information on Australian companies listed at ASX and their company code was gathered from the ASX website. Then using Morningstar DatAnlaysis premium, information of companies listed in ASX before 2001 with full 12-month published financial reports from 2001 to 2015 were identified. Later, the database of each company was searched using the company code with DataStream (Thomson Reuters) and financial information from 2001 to 2015 were collected for analysis. Even though the financial information from 2002 to 2015 was used for the study, the information for 2001 was also needed to find the opening figures for 2002 or to find the change in the accounting amount in comparison to the previous year. This study analysed the quality of financial reports of companies from two different angles. First, whether the mandatory adoption of IFRS has enhanced the accounting quality of financial reports of Australian listed companies. Second, what is the impact of financial crisis on the accounting quality?

Australia adopted IFRS mandatorily from the financial year beginning on or after 1st January 2005. Therefore, the financial reports of four years (2002, 2003, 2004, and 2005) were taken as the pre-IFRS adoption period and another four years (2006, 2007, 2008, and 2009) were taken as the post-IFRS adoption period. Four years of the pre-IFRS adoption period and four years of the post-IFRS adoption period were taken as many of the companies were listed after 2001 and the financial information prior to 2001 of these companies was not available. A comparison between the financial information from the financial reports of the pre-IFRS adoption periods and post-IFRS adoption period was made to evaluate the change in accounting quality between the periods. An investigation of the effects of the international financial crisis 2008 on the accounting quality of financial

reports of the listed companies was also made. For that, seven years before the international financial crisis, which were 2002, 2003, 2004, 2005, 2006, 2007, and 2008, were taken as the pre-financial crisis period, and seven years after the international financial crisis, which were 2009, 2010, 2011, 2012, 2013, 2014, and 2015, were taken as the post-financial crisis period. A comparison of the accounting quality of these two periods was then made to identify whether the financial crisis affected the accounting quality of financial reports. Therefore, the study used financial information from the published financial reports of Australian listed companies for 14 years from 2002 to 2015. and a panel data analysis was used to analyse the accounting quality of financial reports of the listed companies.

3.2.4 Data Analysis

Data needed for the analysis are collected from the data base, DataStream (Thomson Reuters), which is a reliable source of financial data of listed companies. The data collected are analysed using pooled ordinary least squares (OLS). In pooled OLS regression where all observations are pooled and estimate the regression ignoring cross-section and time-series nature of the data, the error term capture the residuals. In this research change in accounting quality between pre and post adoption periods and pre and post financial crisis periods are evaluated and interpreted using different metrics CNI, ratio of CNI/CCF, correlation between ACC and CF, SPOS, LNEG and value relevance price model and return model. In all this measures a regression is run separately using firm observations for each periods pooling data for corresponding periods. The result generates two set of residuals one set for IFRS and another for financial crisis. The variance of these residuals calculated for pre and post-IFRS and pre and post-financial crisis periods are further analysed to determine the change in accounting quality between the periods. It is assumed that by including a number of independent variables in the regression analysis the residual will reflect the effect of use of IFRS and financial crisis on the quality of financial reports.

As the study is using residuals, it is not necessary to conduct Breusch-Pagan Lagrange Multiplier and Hausman-specific tests to identify fixed effect or random effect. Moreover, all the major studies in this area are not using Breusch-Pagan Lagrange Multiplier and Hausman-specific tests because they are using the residual for analysis (Barth 2007, Chua,

Cheong, and Gould 2012, Liu et al. 2011, Ahmed, Neel, and Wang 2013, Paananen and Henghsiu 2009, Dobre, Brad, and Ciobanu 2015, Ebaid 2016)

Cross-sectional dependence is a problem in macro panels with long time series (over 20-30 years). It is not much of a problem in micro panels with few years and a large number of cases (Baltagi 2008, Baltagi et al. 2007). More over only very few studies in this area are using methods to ensure robustness (Tsalavoutas, Tsoligkas, and Evans 2020) In this evaluating the effect of IFRS on accounting quality study regresses four pre-IFRS and four post-IFRS periods separately for 264 companies thus a total of 2112 observations are used in the analysis. Similarly, in analysing impact of financial crisis the study regresses separately seven pre and post-financial crisis periods for 264 companies which is 3696 firm observations.

Breusch-pagan LM test are required when both serial correlation and random individual effects are suspected. In this research we do not observe the presence of serial correlation (See the correlation metric table-4.2.2). Therefore, we need not go for Breusch-Pagan lagrange multiplier test and Hausman-specific tests. Having said this to improves the accuracy of the result research has conducted normality test and multicollinearity test of data.

The research uses multivariate regression analysis to evaluate the quality of financial reports as twenty-one different variables for 14 years are used to analysis accounting quality. The statistical procedures such as regression, correlation, t-test, analysis of variances etc., are parametric tests, and can produce accurate and reliable result only if the population from which the data are collected follows a normal (Gaussian) distribution. Therefore, before the regression analysis it is appropriate to test the normality of the data. A normality test is a statistical procedure which determines whether the population from which data collected follows the normal distribution. The normality assumption is necessary to get a reliable and accurate conclusion from statistical tests. Therefore, the analysis begins with a normality test. The normality of data can be tested graphically or numerically. This research used both graphical and numerical tests for testing the normality.

3.2.4.1 Skewness and Kurtosis

Skewness and kurtosis are the two important quantitative tests that are commonly used to measure the normality of a distribution. This research uses these two tests to check the normality of the distribution (Hair 2014, Kline 2011, Tabachnick and Fidell 2013). Skewness and kurtosis explain the shape of the data distribution. Skewness explains whether the data are distributed symmetrically and kurtosis explains the peakedness of the probability distribution. A positively skewed data indicates that most of the data points are to the left and the tail of the distribution is towards the right and a negative value of the skewness shows that the distribution is tailed to the left and majority of the data points lie on the right side. A positive kurtosis indicates the peakedness of the distribution and a negative kurtosis explains a flat distribution. A higher value of kurtosis specifies that the distribution is more peaked and lesser the value, the distribution is flatter. In a perfectly normal distribution the value of skewness and kurtosis will be zero. When the distance of these values from zero increases the normality of the data reduces (Field 2009). Even though the normality of data distribution is good for better result possibility of getting a perfectly normal distribution is rare. More over for sample size more than 200 will not make significant difference in the result (Tabachnick and Fidell 2013). This study follows the benchmarks suggested in the earlier studies to evaluate the values of skewness and kurtosis. The benchmark value of Skewness and kurtosis used in this study is based on the method followed by Kline (2011) which specifies that value of skewness greater than 3 and Kurtosis greater than 10 is an indication of non- normality and if the value goes above 20 it is a serious problem. A value of skewness below 3 and a value of kurtosis below 10 is considered as a sign of normal distribution (Kline 2011, Rindskopf and Shiyko 2010). Following this benchmark, a value of skewness above 3 and a value of kurtosis above 10 is taken as a sign that the data is not normality distributed.

3.2.4.2 Q-Q Plot

Q-Q plot (Quantile-Quantile plot) is a graphical tool used to test the normality of the data distribution. It is a visual method which gives a graphical view of the data points. If the data points in the Q-Q plots are around the straight line it is assumed that the data is approximately normally distributed.

3.2.4.3 Multicollinearity

Multicollinearity is a situation where two independent variables in multivariate regression model are highly correlated (Field 2009, Hair 2014, Pallant 2010). When dummy variables are used as independent variables in multivariate regression analysis it may lead to dummy trap because of multicollinearity of variables. If the multicollinearity is higher it increases the variance of the regression coefficient which reduces the statistical significance of the variable (Ibrahim Murtala Aminu 2014). Multicollinearity can be tested by using correlation and also by tolerance and Variance Inflation Factor (VIF). When the correlation between independent variables are high, it is an indication of multicollinearity (Ibrahim Murtala Aminu 2014). Different researchers propose different threshold for correlation. A threshold of 0.9 and above is considered as an indication of multicollinearity (Hair 2014). Pallant (2010) suggest a value above 0.7 as an indication of multicollinearity. Based on the value suggested by Hair J. F., Hult G. T. M., Ringle C. M., and Sarstedt M., this study takes value above 0.7 as the benchmark of correlation to test multicollinearity (Hair 2014).

The other two most reliable statistical tests used to examine multicollinearity are tolerance and VIF. The relation between VIF and tolerance is that the coefficient of VIF is the reciprocal of the value of tolerance. Based on the earlier researchers a threshold value of less than 0.10 for tolerance and VIF of 10 and above is taken as an indication that there is multicollinearity (Hair 2014, Pallant 2010, Kutner and Świtała 2004).

3.2.4.4 Descriptive Statistics

Before the analysing the accounting quality of financial reports on adoption of IFRS and the effect financial crisis made on the accounting quality, descriptive statistics of the data are computed. Descriptive statistics gives a basic description of the features of different variables used and gives a summary of its value. The study uses financial information of 264 companies listed in ASX. From the financial information of these companies, 21 variables needed for the study are collected and used in the analysis. The descriptive statistic is calculated dividing the data into pre-IFRS adoption period and post-IFRS period. The mean, standard deviations, and median for each period were calculated. The statistical significance of the difference in value of mean was evaluated using mean comparison test; whereas statistical significance of the standard deviations between the periods was

compared using two sample variance comparison tests. In a similar way, the descriptive statistics of pre-financial crisis and post-financial crisis periods were also computed and the difference in mean and standard deviation of the two periods was compared and analysed.

3.3 Measures of Accounting Quality

The primary objective of IFRS is to develop high quality accounting standards that can be used by entities worldwide in preparing financial reports. Financial information from these reports is the basis for making economic decisions by stakeholders. The conceptual framework of IFRS states that the objective of general purpose financial reporting is to provide financial information about the reporting entity that is useful to existing and potential investors, lenders, and other creditors in making economic decisions (Frascanada 2015, IFRS 2010, 2018). The quality of financial information in GPFR can increase the usefulness of the information to present and potential investors and creditors (Deloitte 2015b). Even though there is no agreed definition for the term accounting quality, faithful representation of underlying economies is accepted broadly by the standard setters, regulators, practitioners, users, and academics as the important feature of high quality accounting (Ahmed, Neel, and Wang 2013). The qualitative characteristics of financial information are understandability, relevance, reliability, and comparability (AASB 2015c, IFRS 2013b, AASB 2019). Thus, a quality financial report that faithfully represent the underlying economies of the entity, must be relevant, reliable, comparable, and also understandable to the users.

Accounting quality depend on the quality of financial information provided by the entity to equity investors. A quality accounting information must communicate what it purports to communicate. Accounting quality is the accuracy of the financial information in the financial report provided to the equity investors (Biddle, Hilary, and Verdi 2009, Callen et al. 2010). Accrual quality approach is one of the models extensively used in measuring accounting quality based on the quality of information in the financial report provided by the entity to shareholders. The accruals can be categorized in to two. One nondiscretionary accruals which are made strictly following GAAP and are objective. Secondly

discretionary accruals arising from the exercise of managements accounting judgement and are subjective (Pounder 2013). If the management use discretionary accrual violating GAAP to manage earnings it effects the accounting quality. A higher discretionary accruals are used as a proxy for earnings management, which is interpreted as lowering earnings quality. Most literature considers high discretionary accruals as indication of low earnings quality (Ewert and Wagenhofer 2015). The use of discretionary accrual effects asymmetrically the timely gain or loss recognition (Guay 2005). Marquardt and Wiedman (2004) in their research found that earning management using discretionary accrual decreases value relevance. Volatility of earning and accrual are good proxies for measuring quality of accrual and earning quality which in turn effects accounting quality (Dechow and Dichev 2002). Thus accrual quality approach model is used in this research which describes that the use of discretionary accrual can affect earning management, timely loss recognition and value relevance and by that the accounting quality. Different researchers use various methods to measure the quality of financial reports. There are a number empirical researches which earning management, timeliness and value relevance as proxy for accounting quality following accrual quality model (Barth 2007, Paananen and Henghsiu 2009, Chua, Cheong, and Gould 2012, Ames 2013, Lang 2006, Ahmed, Neel, and Wang 2013, Kouki 2018, Apergis 2015, Lang, Raedy, and Yetman 2003, Schipper and Vincent 2003). Following those researches this study uses the three measures given below as the proxy for accounting quality.

1. Earning management;
2. Timely loss recognition; and
3. Value relevance.

The proposition is that financial reports that show less earning management, have timely recognition of losses, and high value relevance of accounting numbers are considered as high quality financial reports (Kouki 2018, Ahmed, Neel, and Wang 2013, Liu et al. 2011, Ebaid 2016, Barth 2007, Chua, Cheong, and Gould 2012, Apergis 2015). Consistent with the studies on quality of international accounting standards, accounting treatments that result in income smoothing, managing earning to meet target net profit, and overstating earnings by not recognising losses in a timely manner can be interpreted as signs of

compromising faithful representations of the economies of the firm and bad quality financial reporting (Ahmed, Neel, and Wang 2013, Barth 2007, Leuz and Verrecchia 2000, Ebaid 2016, Lang 2006, Paananen and Henghsiu 2009, Lang, Raedy, and Yetman 2003). Even though there are different perspectives from which accounting quality is measured, this research follows the abovementioned perspectives based on the interpretation given by previous researchers, who related accounting quality to the concept of transparency, which they defined as the ability of users to follow the underlying events and transactions that took place in the firm in the last financial period. Managing earning and not recognising losses in a timely manner are some of the manipulations done by entities to show a desired result. Moreover, if the accounting numbers are presented reliably and faithfully it will improve the quality of financial reports. Firms with less earning management, more timely loss recognition, and high value relevance measurements are considered as demonstrating high accounting quality (Gassen and Sellhorn 2006). Figure 3.1 below shows the different accounting quality elements used in this study.

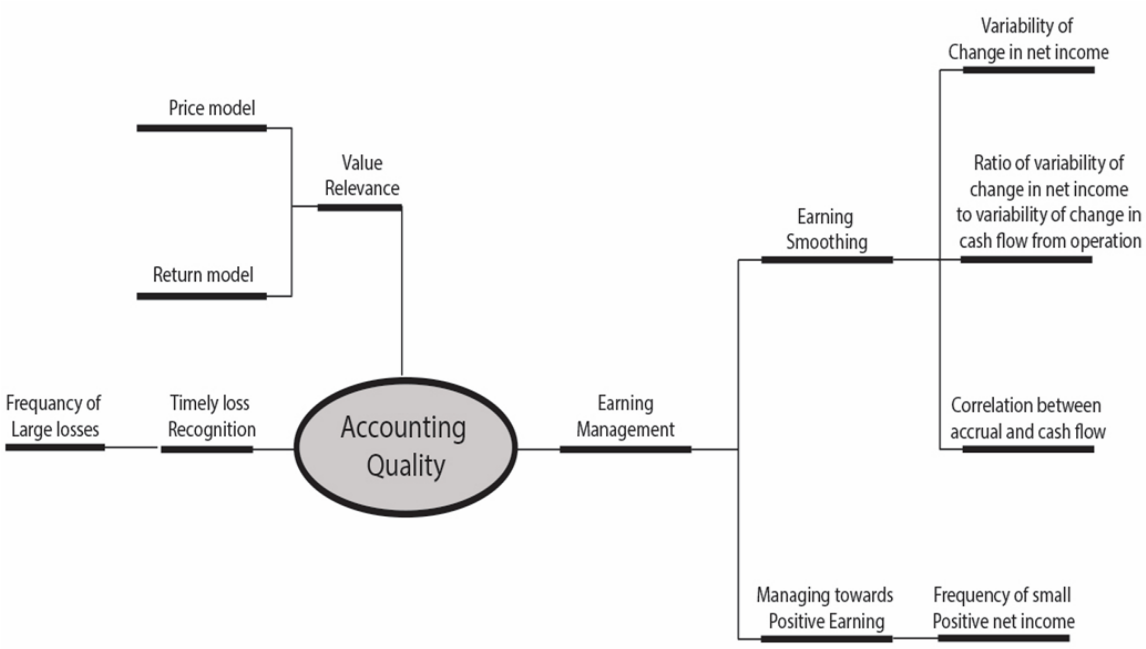
3.3.1 Earning Management

Investors are always interested in knowing the performance of the entity where they invest their money. Reported earnings of a firm is one of the most important information used by present and potential investors in making economic decisions (Cudia and Dela Cruz 2018). Managers also have a personal interest in showing better earnings, as in many firms, their remunerations and promotions are linked to financial performance. Therefore, the management of every entity always has a vital interest to present better earning numbers in financial reports. The concept of earning management comes into the picture when the management wants to show a desired result rather than the economic reality of the company. Earning management is a deliberate change in the accounting practice that can create a desired result of earning. Earning management is the use of acceptable rules and procedure to achieve a desired result (Cudia and Dela Cruz 2018). The quality of a financial report depends on how well the accounting numbers in the financial report reflects economic reality. Thus, earning management reduces the accounting quality of the financial reports. Opportunistic earning management deteriorates the value of information

about the performance of a firm and leads to economic losses to stakeholders (Hyun-Ah and Won-Wook 2016).

The main objective of IASB is to develop quality accounting standards that can be used in the preparation of financial reports. It is expected that the preparation of financial accounts using IFRS, the standard developed by IASB, will make earning less managed. IFRS limits the allowable accounting alternatives and requires the accounting measurements to reflect the firm's economic performance. This reduces earning management and through that improves the quality of financial reports. Earning management is measured using two manifestations, namely earning smoothing and management towards positive earnings. The proxies for earning smoothing are variability of change in net income, ratio of variability of net income to variability of change in operating cash flow, and correlation between cash flow and accruals. The proxy used for managing towards positive earnings is frequency of small positive net income (Morais and Curto 2008, Chua, Cheong, and Gould 2012, Lang 2006, Barth 2007, Othman and Zeghal 2006, Cudia and Dela Cruz 2018, Apergis 2015).

Figure 3.1 Accounting quality elements



3.3.1.1 Earning Smoothing

Earning smoothing is the practice of reducing the variations in income from year to year. Investors usually prefer a stable income stream as investment in a firm with fluctuations in income from year to year, is considered risky. Based on earlier studies the present study uses three measures to evaluate earning smoothing. (Chua, Cheong, and Gould 2012, Paananen and Henghsiu 2009, Ahmed, Neel, and Wang 2013, Cudia and Dela Cruz 2018, Lang 2006, Lang, Raedy, and Yetman 2003),

a) Variability of change in net income (CNI);

b) Mean ratio of variability of change in net income (CNI) to variability of change in operating cash flow (CCF); and

c) Spearman's correlation of accruals (ACC) and cash flow (CF).

The firms with less earning smoothing will exhibit more variability in change in net income, higher ratio of variability of change in net income to variability of change in cash flows, and a less negative correlation between accruals and cash flows.

3.3.1.1.1 Variability of Change in Net Income (CNI)

The first earning smoothening measure is the variability of change in net income (CNI). If all other things remain the same, an organisation that manages earning opportunistically will have only lower earning variability. Based on previous studies, to moderate the effect of change in the scale of operation between the firms, the change in net income is scaled by total assets (Chua, Cheong, and Gould 2012, Barth 2007, Paananen and Henghsiu 2009, Othman and Zeghal 2006, Liu et al. 2011, Apergis 2015). CNI is taken as the measure with the assumption that if an entity is showing similar amount of net income without much variation from year to year it can be an indication of manipulation of income and affect the quality of a financial report. The study assumes firms with less earning smoothing shows more earning variability and higher quality financial report (Chamisa 2000). It is interpreted that the smaller variance of the change in net income is an evidence of earning smoothing and absence of accounting quality.

The earning reported by the companies is sensitive to a number of other factors that are not attributable to the adoption of IFRS. Therefore, this study does not consider change in net income scaled by total assets (CNI) as the measure of variability of change in net income. The interpretation is based on CNI*, which is the residual generated from the relevant regression of change in net income on control variables identified in prior literature (Narayanan 2014, Barth 2007, Chua, Cheong, and Gould 2012, Ahmed, Neel, and Wang 2013, Lang 2006, Adibah Wan Ismail et al. 2013, Lang, Raedy, and Yetman 2003, Chen 2011b). The present study develops the following hypothesis for variability of change in net income (CNI):

H1= Higher variability of change in net income leads to lower earning smoothing and higher quality financial report.

The variability of change in net income (CNI*) is taken as the residual of Equation 1 from the regression of change in net income (CNI) on the control variables (Equation-1a).

Variability of $CNI^* = \sigma^2\ Error\ (CNI)it$ *Equation 1*

Where CNI* = Residual from the regression of CNI on the control variables (Equation 1a).

Regression of CNI on control variables:

$$CNI_i = \alpha_0 + \alpha_1 SIZE_{it} + \alpha_2 GROWTH_{it} + \alpha_3 EISSUE_{it} + \alpha_4 LEV_{it} + \alpha_5 DISSUE_{it} + \alpha_6 TURN_{it} + \alpha_7 CF_{it} + \alpha_8 AUD_{it} + \alpha_9 NUMEX_{it} + \alpha_{10} XLIST_{it} + \alpha_{11} CLOSE_{it} + Error_{(CNI)it}$$ *Equation 1a*

CNI = the change in net income is scaled by total assets;

SIZE = natural logarithm of market value of equity;

GROWTH = percentage change in sales;

EISSUE = percentage change in common stock;

LEV = total liabilities divided by equity book value;

DISSUE = percentage change in total liabilities;

TURN = sales divided by total assets;

CF = annual net cash flow from operating activities divided by total assets;

AUD= dummy variable that equals 1 if the firm's auditor is KPMG, Arthur Andersen,

Ernst & Young, or Deloitte Touche Tohmatsu, and 0 otherwise;

NUMEX = number of exchanges on which a firm's stock is listed;

XLIST = dummy variable that equals 1 if the firm is listed on any U.S. stock exchange, and Worldscope indicates that the U.S. exchange is not the firm's primary exchange;

CLOSE = percentage of closely held shares of the firm as reported by Worldscope.

The above equation is run separately for firm observations pooled for pre-IFRS adoption period and post-IFRS adoption period. This will generate two sets of residuals (CNI*): one

for pre-adoption period and another for post-adoption period. The variations in the value of CNI* between two periods are then compared using paired student's independent t-test to analyse and interpret the impact of IFRS adoption on the quality of financial report. Similarly, to analyse the effect of financial crisis on accounting quality, the above regression is run separately for seven years of pre-financial crisis period and seven years of post-financial crisis period. The residual generated from the regression, CNI* of each respective period is then compared using paired student's independent t-test and the result is analysed to evaluate the effect of financial crisis on the accounting quality of financial reports.

3.3.1.1.2 Ratio of Variability of Change in Net Income (CNI) to Variability of Change in Operating Cash Flow (CCF)

The regression of equation 1a uses a number of variables to mitigate the influence of other factors that affect accounting quality. Even then, there are a number of firm specific characters that still influence the variability of earnings that affect the underlying volatility of cash flow stream. When the cash flow of a firm is volatile, then obviously volatile net income is also expected. Nevertheless, if firms use accrual to manage earnings, variability of the change in net income should be naturally lower than variability of operating cash flow (Barth 2007). The ratio of CNI/ CCF is used to supplement the first measure CNI. The change in net income can be either due to change in cash flow or can also be due to earning management. This measure is used to see whether the change in CNI is due to use of accrual to manage earning or is because of change in cash flow. The ratio of CNI/CCF will be lower if a firm uses accrual to manage earnings. Based on the above arguments and prior studies, the second earning smoothing measure is the mean ratio of variability of change in net income to variability of change in operating cash flow (CNI/ CCF) (Chua, Cheong, and Gould 2012, Gassen and Sellhorn 2006, Barth 2007, Cudia and Dela Cruz 2018, Adibah Wan Ismail et al. 2013, Othman and Zeghal 2006, Chen 2011b). Naturally, firms that experience more volatility of cash flow typically have more volatile net income (Chua, Cheong, and Gould 2012, Barth 2007, Soderstrom and Sun 2007). CCF is sensitive to a variety of factors unattributable to financial reporting system. Therefore, an equation similar to the Equation 1a with variability of change in operating cash flow scaled by total assets (CCF) as the dependent variable and control variables as the independent variables

is used (See Equation 2a). Variability of change in cash flow $CCF^{\#}$ is the residual from the above regression and CNI* for calculating the ratio is the residue from Equation 1. The hypothesis developed to evaluate the ratio of CNI*/CCF is:

H2. Higher ratio of variability of the change in net income to the variability of change in operating cash flows leads to lower earning smoothing and better quality of financial report.

$$\frac{Variability\ of CNI^*}{Variability\ of CCF^*} = \frac{\sigma^2\ Error(\text{CNI.})it}{\sigma^2 Error(CCF)it} \qquad \textit{Equation 2}$$

Where:

CNI^* = residual from the regression of CNI on the control variables from *Equation 1a*

CCF^* = residual from the regression of CCF on the control variables from E*quation 2a*

Regression of CCF on the control variables:

$$CCF_i = \alpha_0 + \alpha_1\ SIZE_{it} + \alpha_2 GROWTH_{it} + \alpha_3 EISSUE_{it} + \alpha_4\ LEV_{it} + \alpha_5 DISSUE_{it} + \alpha_6 TURN_{it} + \alpha_7 CF_{it} + \alpha_8 AUD_{it} + \alpha_9\ NUMEX_{it} + \alpha_{10} XLIST_{it} + \alpha_{11} CLOSE_{it} + Error_{(CCF)it} \qquad \textit{Equation 2a}$$

To know the impact of IFRS adoption on earning smoothing, the ratio of CNI*/CCF* is calculated separately for four years of pre-IFRS adoption period and four years of post-IFRS adoption period. The impact of financial crisis on the accounting quality of financial reports is evaluated using the ratio CNI*/CCF* for seven years before the 2008 financial crisis and seven years after the 2008 financial crisis. This results in two ratios for analysing the effect of IFRS adoption and two ratios for analysing the effect of financial crisis. Later, a comparison of the ratios of the pre and post-IFRS adoption periods and pre and post-financial crisis periods is done by means of paired student's independent t-test.

3.3.1.1.3 Spearman's Correlation Between Accruals and Cash Flow

The third measure used for earning smoothing is Spearman's correlation between accruals and cash flow. This measure is also used to supplement the first measure CNI. Earning smoothing usually leads to poor cash flow, and to smooth the variability of cash flow, firms

use accruals. Naturally, there is a negative correlation between accruals (ACC) and cash flow (CF). But if an entity uses accruals to smooth variability of cash flow the negative correlation between accruals and cash flow will be large. Thus if the negative correlation between ACC and CF increases it is an indication of using accrual to smooth variability of cash flow and is a sign of earning management. Prior studies argued that a large magnitude of negative correlation between accruals and cash flow is an indication of earning smoothing, if all else are the same. (Yetman 2003, Barth 2007, Chua, Cheong, and Gould 2012, Lang, Raedy, and Yetman 2003, Paananen and Henghsiu 2009, Liu et al. 2011, Huifa et al. 2010).

As in the earlier metric, there are a number of factors other than the adoption of IFRS that influence the cash flow and accruals. Therefore, instead of taking the values of CF and ACC directly in calculating the correlation between cash flow and accruals, residuals from the regression with CF as dependent variables and control variables as independent variables as in Equation 3a are taken as cash flow denoted by CF*, while residual from Equation 3b with ACC as the dependent variable and control variables as independent variables are taken as accrual denoted by ACC*. In Equation 3a, cash flow is the dependent variable, so it is excluded from the control variables. Based on the above, the hypothesis developed is as follows:

H3. Small magnitude of negative correlation between accruals and current period cash flow is a sign of lower earning smoothing and higher quality financial report.

Spearman's correlation between cash flow (CF*) and accrual (ACC*)

$= CORR\ (Error_{(CF)it,}\ Error_{(ACC)it}),$ *Equqtion 3*

*CF** = residual from the regression of *CF* on the control variables from Equation 3a

ACC* = residual from the regression of *ACC* on the control variables from Equation 3b

Regression of CF on the control variables:

$$CF_i = \alpha_0 + \alpha_1\, SIZE_{it} + \alpha_2 GROWTH_{it} + \alpha_3 EISSUE_{it} + \alpha_4\, LEV_{it} + \alpha_5 DISSUE_{it} + \alpha_6 TURN_{it} + \alpha_7 AUD_{it} + \alpha_8\, NUMEX_{it} + \alpha_9 XLIST_i + \alpha_{10} CLOSE_{it} + Error_{(CF)it}$$

Equation 3a

$$ACC_i = \alpha_0 + \alpha_1 SIZE_{it} + \alpha_2 GROWTH_{it} + \alpha_3 EISSUE_{it} + \alpha_4 LEV_{it} + \alpha_5 DISSUE_{it} + \alpha_6 TURN_{it} + \alpha_7 AUD_{it} + \alpha_8 NUMEX_{it} + \alpha_9 XLIST_{it} + \alpha_{10} CLOSE_{it} + Error_{(ACC)it}$$

Equation 3b

ACC = net income less cash flow (*ACC = NI- CF)*

The change in earning smoothing behaviour is evaluated by comparing Spearman's correlation for pre- and post- IFRS adoption periods and pre- and post-financial crisis periods. Fisher *r* to *z* transformation is used to assess the difference between two correlation coefficients based on an earlier study (Cramer 1987).

3.3.1.2 Managing Towards Positive Earning

Earning management is also analysed from the perspective of managing earning towards positive target. The management usually prefers to report small positive earnings rather than negative income. A commonly conjectured outcome of earning management is an unusually high frequency of small positive reported earnings resulting from discretionary accrual management (Yetman 2003). Therefore, if an entity displays small positive operating income frequently it can be a sign of manipulation of accounts to show profit rather than reporting a loss. Reporting small positive operating savings frequently is taken as a sign of earning management. The measure for managing earnings towards positive targets is the frequency of reporting small positive net income (SPOS). IFRS, which limits the discretion of management in measuring and recognising accounting transactions, should result in higher variability of net income (Gassen and Sellhorn 2006). Therefore, a higher frequency of reporting small positive earning is considered as managing towards positive earnings and is not a sign of quality accounting (Lang, Raedy, and Yetman 2003, Yetman 2003, Barth 2007, Paananen and Henghsiu 2009, Chua, Cheong, and Gould 2012, Ebaid 2016, Ahmed, Neel, and Wang 2013, Liu et al. 2011, Morais and Curto 2008). The metrics used to measure managing earnings towards positive target is the frequency of small positive operating savings (SPOS).

3.3.1.2.1 Small Positive Operating Savings (SPOS)

Prior studies have taken the frequency of small positive earning as a manifestation of managing towards positive earning. Small positive operating savings (SPOS) is the proxy used to measure the frequency of reporting small positive savings. Logistic regression is used as SPOS and POST are the dummy variables and the dependent variable SPOS is the dichotomous variable. The frequency of small positive income will be lower in a quality financial report. Based on the previous studies, the present study used a dummy variable for SPOS, whereby 1 is for an observation in which annual net income scaled by total assets is between 0 and 0.01, and 0 otherwise (Barth 2007, Yetman 2003, Paananen and Henghsiu 2009, Morais and Curto 2008, Liu et al. 2011, Chalmers 2007). Considering the modification made by earlier studies Chua, Cheong, and Gould (2012), this study took variable SPOS as the dependent variable and variable POST and other control variables as independent for the regression. POST is a dummy variable with a value 0 (zero) for pre-IFRS adoption period and 1 (one) for post-IFRS adoption period. Similarly, for analysing the effect of financial crisis, POST for pre-financial crisis period is taken as 0 (zero) and post-financial crisis period is taken as 1 (one). This is mainly because Australia has never allowed the voluntary adoption of IFRS; it made a mandatory adoption from 1st January 2005 onwards. This modification in model will help to evaluate the change in reporting small positive operating savings after the adoption of IFRS and after the 2008 financial crisis. Bases on this assumption, the study developed the following hypothesis:

H4. Lower frequency positive net income is a sign of managing towards positive earning and lowers quality financial report.

A logistic regression of SPOS on POST and other control variables used in the earlier metric is done and the coefficient of β_1 generated from Equation 4 is interpreted. The measure for managing earning towards positive target is the coefficient of POST. Positive coefficient of POST specifies incremental frequency of small positive income in the post-IFRS adoption period and a negative value marks less frequency of small positive income in post-IFRS adoption period as compared to pre-IFRS adoption period. A similar interpretation is given for pre and post-financial crisis periods. The metric used for the logistic regression to evaluate the frequency of small positive savings is as follows:

$$SPOS_{it} = \alpha_0 + \beta_1 POST_{it} + \beta_2\, SIZE_{it} + \beta_3 GROWTH_{it} + \beta_4 EISSUE_{it} + \beta_5\, LEV_{it} + \beta_6 DISSUE_{it} + \beta_7 TURN_{it} + \beta_8 CF_{it} + \beta_9 AUD_{it} + \beta_{10}\, NUMEX_{it} + \beta_{11} XLIST_{it} + \beta_{12} CLOSE_{it} + Error_{it} \qquad \textit{Equation 4}$$

POST = dummy variable that is 1 (one) for an observation that is in the post–adoption period, and 0 (zero) otherwise.

SPOS = dummy variable that is 1 for an observation in which annual net income scaled by total assets is between 0 and 0.01, and 0 otherwise.

3.3.2 Timely Loss Recognition

Recognising losses as and when they arise is a sign of quality accounting. It is in line with the conservative and prudence principles of accounting (Dobre, Brad, and Ciobanu 2015). Many firms are reluctant to recognise large losses in a timely manner as it leads to poor financial performance. Timely loss recognition means recognising large losses in the period in which they happen rather than delaying them to coming periods. (Ball 2006, Yetman 2003, Lang 2006). If the frequency of reporting large loss is higher it is taken a sign that the entity is not manipulating accounting to show a better financial performance and is a sign of better accounting quality. Following earlier studies, recognition of losses in a timely manner is another measure of earning management used in the study (Ahmed, Neel, and Wang 2013, Dobre, Brad, and Ciobanu 2015, Lang, Raedy, and Yetman 2003, Barth 2007).

3.3.2.1 Frequency of Large Negative Income

The proxy for timely loss recognition is the frequency of recognising large negative income (LNEG). Recognising large losses in a timely manner by firms is considered as a sign of quality accounting. The timely loss recognition increases the incidences of extreme negative earning outcome. Thus, higher frequency of large losses is regarded as a sign of quality accounting. A quality accounting recognises large losses as they occur rather than differing to future period (Yetman 2003, Chua, Cheong, and Gould 2012, Soderstrom and Sun 2007, Paananen and Henghsiu 2009, Barth 2007, Lang 2006). The difference in timely loss recognition between pre and post mandatory adoption of IFRS and pre and post

financial crisis periods are taken as another measure to evaluate the quality of financial reports. Timely loss recognition is also related to earning smoothening. The frequency of the reporting large losses will be higher in a quality financial report. Based on the prior studies, large negative income (LNEG) is taken to be a dummy variable that equals to 1 for observations with annual net income scaled by total assets less than 0.20 and zero otherwise.(Barth 2007, Chua, Cheong, and Gould 2012, Paananen and Henghsiu 2009, Chamisa 2000).

In the regression equation-5, to evaluate timely loss recognition also, the study follows the modification made by Yi Lin (Chua, Cheong, and Gould 2012). A logistic regression is run with LNEG as dependent variable and POST and other control variables as independent variables as in equation-5. POST is a dummy variable with a value 0 (zero) for pre-IFRS adoption period and 1(one) for post-IFRS adoption period. Similarly, for analysing the effect of financial crisis, pre-financial crisis period is taken as 0 (zero) and post financial crisis period is taken as 1(one). As explained earlier this change in model will help to evaluate whether the possibility of reporting LNEG has changed after the adoption of IFRS and after 2008 financial crisis. A logistics regression is used as the variables LNEG and POST are dummy variables and dependent variable LNEG is dichotomous variable. A hypothesis as below is developed to analyse the result from the regression.

H5. Recognising large losses frequently is a sign of quality financial report.

Regression equation used to measure frequency of large negative income, *LNEG* is:

$$LNEG_i = \alpha_0 + \beta_1 POST_{it} + \beta_2\, SIZE_{it} + \beta_3 GROWTH_{it} + \beta_4 EISSUE_{it} + \beta_5\, LEV_{it} + \beta_6 DISSUE_{it} + \beta_7 TURN_{it} + \beta_8 CF_{it} + \beta_9 AUD_{it} + \beta_{10}\, NUMEX_{it} + \beta_{11} XLIST_{it} + \beta_{12} CLOSE_{it} + Error_{it} \qquad \textit{Equation-5}$$

LNEG = Dummy variable that is set at 1 if net income scaled by total assets is less than -0.20 and 0 (zero) otherwise.

POST = dummy variable that is 1(one) for observation that are in the post–adoption period and 0 (zero) otherwise.

The probability that firms report large losses differently in pre-adoption and post-adoption period and pre and post-financial crisis period are interpreted using the coefficient β_1 from equation-5. A positive value of POST is interpreted as an incremental frequency of reporting large negative income and a negative value is taken as decrease in reporting large negative income.

3.3.3 Value Relevance

Value relevance measures of accounting quality are based on the efficient market theory hypothesis which proposes that financial markets reflects all known relevant information. Therefore, if an entity provides quality financial report, the market value of the shares of the firm will also react accordingly, increasing comparability of these numbers. Based on this postulate value relevance is the taken as the criteria to measure accounting quality. Unlike the variables used earlier, all of which are based on the accounting information, value relevance is a measurement based more on capital market-oriented information. A high-quality accounting resulting from the application of IFRS have three features. One it recognises faithfully the amount that are intended to represent a firm's underlying economies and secondly it is less subject to opportunistic management discretion (Perotti and Wagenhofer 2014). Thirdly quality accounting practice reflects less non-opportunistic error in estimating accruals (Barth 2007). These three features of a quality financial report result in improving the explanatory power of accounting numbers and market value. The two models used to evaluate value relevance are price model and return model.

3.3.3.1 Price Model

Price model explains that all else equal, firms with high quality accounting are expected to have high association between share price and accounting data (Barth 2007, Perotti and Wagenhofer 2014, Chua, Cheong, and Gould 2012, Chen 2011b, Collins, Maydew, and Weiss 1997b, Kouki 2018). The reported income and equity book value will be more value relevant with market price of shares if the quality of information in financial report is higher. In line with the above the first value relevance measure is based on the explanatory power from a regression of stock price on net income and equity book value. A two-step regression model is used to evaluate the value relevance. First stock price (P) is regressed

on industry and time fixed effect before regressing the residual (P*) on equity book value per share (BVEPS) and net income per share *(NIPS)*. Adjusted R^2 from the above regression is interpreted to know the value relevance. The two-stage regression techniques is followed in the study to obtain an adjusted R^2 that is unaffected by industry and time fixed effect (Chua, Cheong, and Gould 2012, Barth 2007, Paananen and Henghsiu 2009, Martínez, Martínez, and Lin 2014, Dimitropoulos et al. 2013). Following prior studies, this study takes the stock price six months after the end of the fiscal year as Section 319 of Corporations Act 2011 requires Australian listed companies to lodge their financial report with the Australian securities and investment commission (ASIC) within three months after the end of financial year (Register 2018). A further 3 months cooling period is also given to stabilize the market price after publishing the financial report. To test the vale relevance of market price to book value of shares and net income per share, the study developed the following hypothesis:

H6. High association of share price to equity book value of shares and net income per share is a sign of quality financial report.

The regression of P*on *(BVEPS)* and (NIPS) is:

$$p_i^* = \delta_0 + \delta_1 \, BVEPS_{it} + \delta_2 NIPS_{it} + Error_{it,} \qquad \textit{Equation-6}$$

Where:

P = share price six months after fiscal year end;

P* = residual from the regression of P on industry and time (year) fixed effect;

BVEPS = book value of equity per share;

NIPS = net income per share.

Consistent with the earlier studies the above regression is run separately for pre-IFRS adoption period and post-IFRS adoption period. R^2 from the regression of the two periods are compared to interpret the change in value relevance between periods. The impact of financial crisis on value relevance, is also assessed by comparing R^2 from regression run separately for pre and post financial crisis period.

3.3.3.2 Return Model

Second value relevance measures are based on the explanatory power from a regression of net income per share scaled by beginning of the year share price (NIOP) on annual return per share (RETURN) (Chua, Cheong, and Gould 2012, Barth 2007, Chen 2011b, Paananen and Henghsiu 2009, Kouki 2018, Collins, Maydew, and Weiss 1997b). Similar to the earlier value relevance model, here also higher explanatory power of market information and accounting numbers is taken as a sign of quality accounting. As in the case of price model to obtain the adjusted R^2 unaffected by industry and time fixed effect, we use two-stage regression technique followed in prior studies. NIOP is regressed on industry and time fixed effect first and the resulting residue NIOP* is regressed on RETURN. This regression process is done for the pre-IFRS adoption period and post-IFRS adoption period and the adjusted R^2 from the two periods are compared and interpreted to evaluate the difference in value relevance between the two periods. To know the effect of financial crisis on the value relevance return model the two-staged regression process explained earlier is done separately for pre and post-financial crisis periods and the value of R^2 is interpreted to know the difference in value relevance. The hypothesis developed to test the explanatory power of NIOP to return is:

H7: High association between net income per share scaled by share price to annual return per share is a sign of accounting quality.

The regression equation for return modal is given in equation -7.

$$NIOP_i^* = \delta_0 + \delta_1\ RETURN_{it} + Error_{it} \qquad \textit{Equation-7}$$

Where:

NIOP =net income per share divided by the beginning of the fiscal year share price

NIOP * = residual from the regression of NIOP on industry and time (year) fixed effect and

RETURN = shareholders' total annual return from nine months before the fiscal year end to 3 months after fiscal year end.

3.4 Link Between Objective and Hypothesis

The study evaluates whether the adoption of IFRS by Australian listed companies improved accounting quality and also what is the impact of financial crisis on accounting quality. Accounting quality is evaluated using three elements of accounting quality, earnings management, timely loss recognition, and value relevance. Based on this, the objective of the study is to examine the impact of the adoption of IFRS and financial crisis on accounting quality using, earnings management, timely loss recognition, and value relevance. Earning management is measured using earning smoothing and managing earning towards positive target. To assess earning smoothing the metric used are CNI, ratio of CNI/CCF and correlation between ACC an CF. The first hypothesis *H1= Higher variability of change in net income leads to lower earning smoothing and higher quality financial report*, is developed to assess CNI. Hypothesis developed to evaluate ratio of CNI/CCF is *H2. Higher ratio of variability of the change in net income to the variability of change in operating cash flows leads to lower earning smoothing and better quality of financial report. H3. Small magnitude of negative correlation between accruals and current period cash flow is a sign of lower earning smoothing and higher quality financial report*, is used to measure correlation between ACC an CF. Managing earning towards positive target is measured using SPOS and *H4. Lower frequency of positive net income is a sign of managing towards positive earning and lowers quality financial report.* The next accounting quality measure is LNEG. The hypothesis developed for assessing LNEG is: *H5. Recognising large losses frequently is a sign of quality financial report.* The hypothesis developed is suitable to evaluate accounting quality of different periods and to attain the objectives of the study.

3.5 Summary

This chapter gives a detailed account of sampling method used, data collection, data validation and explains the metrics and tools of analysis used in the research. The study used stratified sampling method in collecting the data. From the population of 719 companies which have 14 years' financial reports for full 12 months, 264 sample companies are selected from seven different industry groups as per GICS classification of

listed equities using proportionate stratified random sampling. The financial data of the selected companies are collected from the data base DataStream. Before analysing the impact of IFRS adoption on accounting quality and the effect of financial crisis on the quality of financial reports, normality test, multicollinearity and analysis of descriptive statistics of the variables used for the study will be made. To test the normality of the population from which data was collected, numerical, method, skewness and kurtosis and graphic method Q&Q plots will be used. Base on the earlier studies a benchmark value of skewness greater than 3 and Kurtosis greater than 10 is considered as an indication of non-normality. Q&Q plot is a visual method and the spread of the data points near the straight line is considered as normality.

Multicollinearity of the data can lead to errors in the result of regression analysis. Therefore, before regression analysis multicollinearity of the data is also checked using correlation between the variables, tolerance and VIF. Based on earlier studies a threshold value of correlation above 0.7 is taken as an indication of multicollinearity. The bench mark value of less than 0.10 for tolerance and a VIF value of 10 and above is taken as a sign that there is multicollinearity problem.

The descriptive statistics for the pre-IFRS adoption and post-IFRS adoption periods and pre-financial crisis and post financial crisis periods for all the companies were presented and analysed to find the difference in the test variables. It could also provide a basic description of the features of different variables and a summary of the variables.

After data validation the study analysed the impact of quality of financial reports on adoption of IFRS and the impact of financial crisis on the quality financial reports. Multivariate regression analysis is used to evaluate the change in accounting quality between pre and post-IFRS adoption periods and pre and post-financial crisis periods using the software STATA. Seven measures were used in the analysis, out of that five measures, variability of change in net income (CNI), mean ratio of variability of change in net income to variability of change in operating cash flow (CNI/CCF), Spearman's correlation of accruals (ACC) and cash flow (CF), frequency of small positive net income (SPOS) and frequency of large negative income (LNEG) are measures based on financial statement. Two value relevance measures based on market information, price model and return model

are also used in the study. The result from these models are used for interpreting the change in accounting quality of financial reports. The methodology followed in this research can thus present a better result from the study.

Table 3.1 Sample Industry Group Selection

Sl. No.	Industry group	Companies Listed in ASX	Companies listed in ASX with Financial reports for more than 14 years	Number of samples taken from each group
1	Automobiles	9	4	0
2	Banks	13	8	0
3	Capital goods	101	24	0
4	Commercial & Professional Services	70	30	18
5	Consumer Durables & Apparel	23	14	0
6	Consumer Services	51	20	0
7	Diversified Financials	120	59	31
8	Energy	264	91	46
9	Food & Staples Retailing	42	21	0
10	Health Care Equipment & and services	66	30	15
11	House hold and personal products	4	4	0
12	Insurance	14	5	0
13	Material	748	214	107
14	Media	34	22	0
15	Pharmaceuticals & Biotechnology	63	28	0
16	Real Estate	85	37	19
17	Retailing	41	14	0
18	Semiconductors & semi-conductor equipment	3	1	0
19	Software & Services	77	49	28
20	Technology Hardware & Equipment	28	16	0
21	Telecommunication Services	28	12	0
22	Transportation	24	9	0

23	Utilities	29	7	0
24	Not applicable	203	0	0
25	Class Pending	29	0	0
	TOTAL	2169	719	264

CHAPTER 4

Analysis of Impact of IFRS Adoption on Accounting Quality of Financial Reports.

4.1 Introduction

Financial reports published by companies are the only authoritative financial information about the company, available to external stakeholders like the present and prospective investors and creditors. Therefore, the published financial reports must provide the true and fair view of the financial position and performance of the companies. To make the financial report of companies more useful, reliable, and relevant, most of the countries developed their own accounting standards or adopted the accounting standards developed by IASB or other countries. The accounting standards are the authoritative standards for financial reporting that specify how transactions and other events are to be recognised, measured, presented, and disclosed in financial statements. The objective of these standards is to provide financial information to investors, lenders, creditors, contributors and others, which is useful in making decisions about providing resources to the entity (CPA 2018).

The tremendous developments that took place in the business environments towards the end of 20th century, like the globalisation, formation of World trade organisation, increase in bilateral agreements between countries and the use of computer and internet in the business, has increased international trade. This increased competition in all field of business and facilitated cross boarder investment and financing in capital market. To attract investor's world over companies has to provide useful, reliable, relevant and comparable financial information in their financial reports. This necessitated the development of an internationally accepted quality accounting standard to be used by companies in the preparation of their financial reports and lead to the development of IFRS by IASB. The primary objective of IFRS is to develop in the public interest, a single set of high quality, understandable, enforceable and globally accepted financial reporting standards based upon clearly articulated principles(Hines 2007a, IFRS 2013b, Deloitte 2016). Australia and

many other countries adopt IFRS from accounting period beginning on or after January 1 2005 expecting that they can improve the accounting quality of published financial reports of companies. But the acceptance of IFRS was shattered with financial crisis of 2008. Many economists alleged that one of the contributing factors for 2008 financial crisis is IFRS, especially the fair value accounting. This research, "Impact of adoption of International Financial Reporting Standards and effect of financial crisis on accounting quality of Australian listed companies" evaluates how the adoption of IFRS and the international financial crisis influenced the financial reporting quality of Australian listed companies. The study evaluated the financial reporting quality of Australian listed companies from two different perspectives. First, the influence of IFRS adoption on the accounting quality of financial reports was assessed; and second, whether the international financial crisis of 2008 affected the financial reporting quality of companies listed in the Australian Securities Exchange (ASX). The focus of this chapter is only on the adoption of IFRS on financial reporting quality.

The analysis was conducted in two steps. Firstly, financial information of all 264 samples companies taken together was analysed. Secondly, the sample companies were classified into seven different industry groups according to the Global Industry Classification Standard (GICS) and the impact of IFRS adoption on the quality of financial reports of companies in each group was analysed separately. The companies selected and the number of companies in each group is given in Table 3.1. Page 115.

4.2 All Listed Companies

This section of the study analyses the financial information of 264 companies listed in ASX for 8 years from 2002 to 2009. For the analysis of the impact of IFRS adoption, the data were classified into four years of the pre-adoption period, which were 2002 to 2005 and four years of the post-adoption period, which were 2006 to 2009. Before analysing the quality of financial reports, a normality test of the data was conducted. Afterwards, an analysis of the descriptive statistics of different variables related to the pre and post-adoption periods was made. Finally, multicollinearity of the data was verified.

4.2.1 Normality Test

All parametric tests, including multivariate regression analysis, can produce reliable and accurate result only if the population from which data are collected is normality distributed. Therefore, it is appropriate to check the normality of the data before proceeding to regression analysis. Normality can be tested numerically and graphically. Skewness and kurtosis are the two numerical methods and QQ plot is the graphical methods used here to test normality.

4.2.1.1 Skewness and Kurtosis

Skewness and kurtosis are the two measures used to see whether the observed values of data are normally distribution. Skewness explains whether the data are distributed symmetrically and kurtosis explains the peakedness of the distribution. The value of skewness and kurtosis can be positive or negative. If the value of skewness is positive, it signifies that the data points are to the left and the tail of the distribution is to right and the opposite if value is negative. Similarly, a positive value of kurtosis indicates that data points are peaked and if it negatives it shows that the data points are distributer in a flat formation. The increase in value of kurtosis increases the peakedness of the distribution and lesser the value shows flatter distribution. A perfectly normal distribution shows zero value for skewness and kurtosis. Based on the earlier studies made the value of skewness greater than 3 and kurtosis greater than 10 is taken as indication of non-normality (Rindskopf and Shiyko 2010, Kline 2015).

Table 4.1.1 below gives the value of skewness and kurtosis for 16 variables classified into test variables and control variables calculated using SPSS. The analysis showed that the value of skewness for all variables was below 3 and that of kurtosis below 10, demonstrating normality of population. Among the test variables, the value of skewness for CNI was -0.480 and that of kurtosis was 8.511. The value of skewness for CCF was 0.484 and the kurtosis value was 9.772. ACC showed -2.020 value for skewness and 9.827 for kurtosis. CF also had a negative value of -1.470 skewness and 8.429 kurtosis. P, which is the market price of shares, had a value of -0.137 and -0.531, respectively, for skewness and kurtosis. NIOP, another market-based variable, had a value of -1.994 for skewness and 8.749 for kurtosis. Among the test variables, BVEPS had the highest value of skewness,

which was 2.995, and that of kurtosis was 9.383. The values of skewness and kurtosis for NIPS were -0.077 and -1.048, respectively. RETURN, which was also a market-based variable, had a value of -2.262 for skewness and 9.339 for kurtosis.

The highest value of skewness among control variables are that of GROWTH with 2.609 and the lowest value of skewness is -0.607 which is for SIZE. The value of skewness is positive for all other variables. EISSUE has a value of 2.073, LEV 2.340, DISSUE 2.109, TURN 2.409 and CLOSE 0.464. The value of skewness for all the control variables are below 3 which is an indication of normality of data. Value of kurtosis for all control variables except CLOSE are positive. CLOSE has a negative kurtosis value of -0.650. In the control variables the highest kurtosis value is of LEV 9.513 and lowest is for SIZE 0.428. The kurtosis value for other variables are, GROWTH 9.420, EISSUE 4.776, DISSUE 6.343 and TURN 7.419. The results of kurtosis for different control variables are below 10 showings the normality of the population from which data is collected. The skewness and kurtosis for other variables used in the study POST, AUD, NUMEX, XLIST, SPOS and LNEG are not included as they are dummy variables. Thus, by analysing coefficients of skewness of different variables used in the study it is found that all are below 3 and value of kurtosis for all variables are below 10. Thus, it is concluded that the population from which data collected is normally distributed.

Table 4.1.1 Normality Test Value of Skewness and Kurtosis of All Listed Companies

Test variables	Skewness	Kurtosis
CNI	-.480	8.551
CCF	.484	9.772
ACC	-2.020	9.827
CF	-1.470	8.429
P	-.137	-.531
NIOP	-1.994	8.749
BVEPS	2.995	9.383
NIPS	-.077	-1.048
RETRN	-2.262	9.339
Control variables		
SIZE	-0.607	0.428
GROWTH	2.609	9.420
EISSUE	2.073	4.776
LEV	2.340	9.513
DISSUE	2.109	6.343
TURN	2.409	7.419
CLOSE	.464	-.650

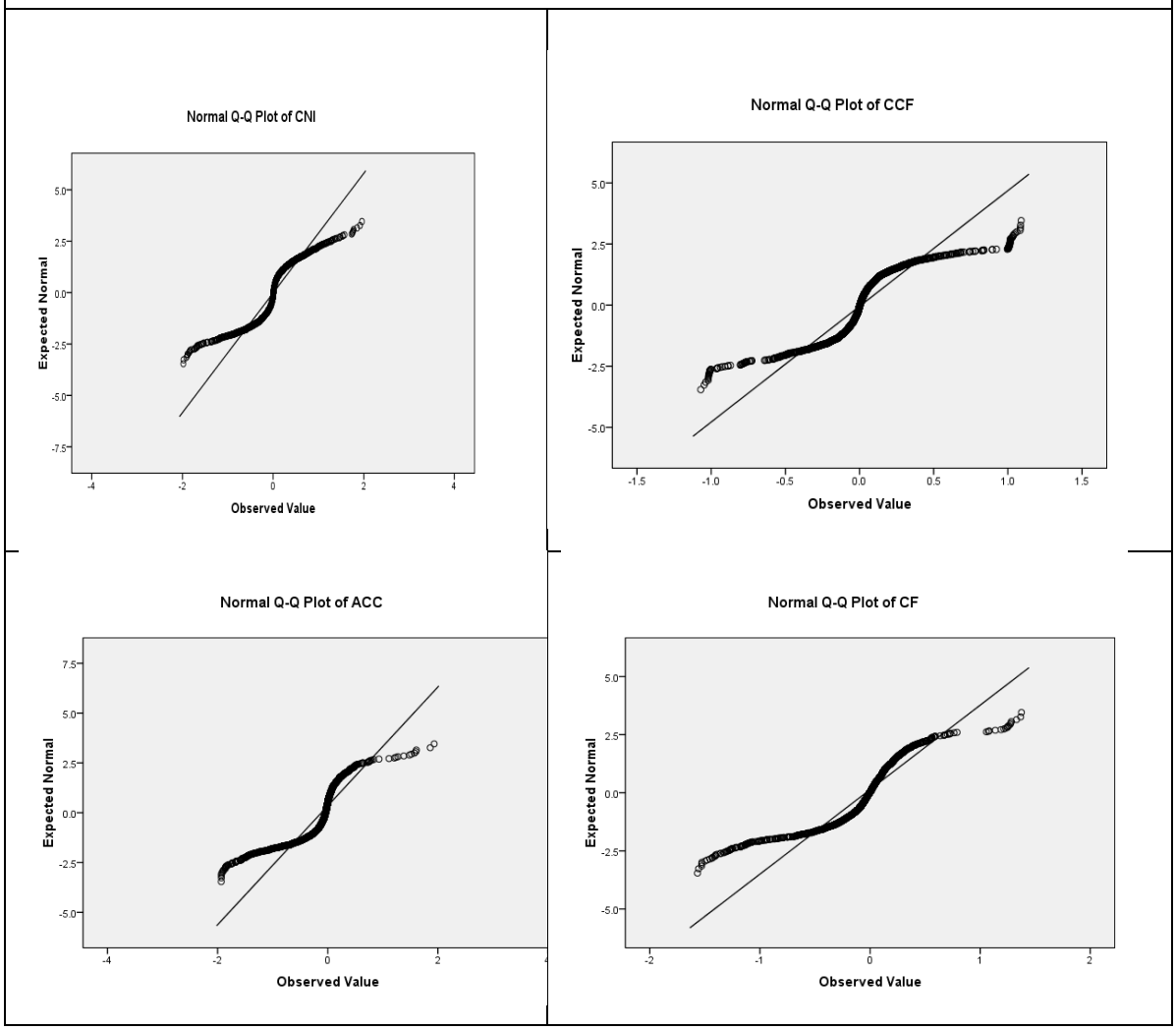
Note: - the statistics for the variables POST, AUD, NUMEX, XLIST, SPOS and LNEG is not included as they are dummy variables.

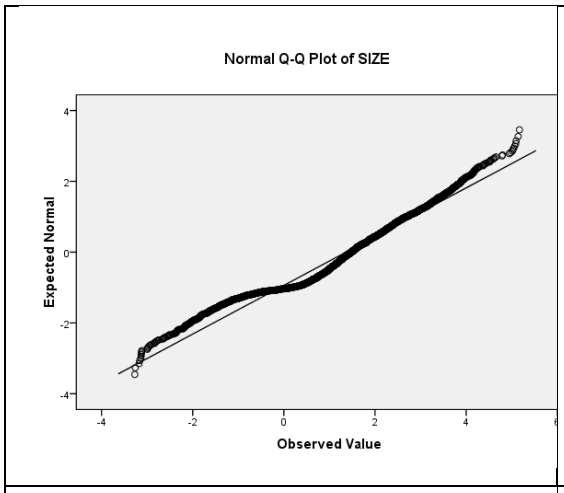
4.2.1.2 Q-Q Plot

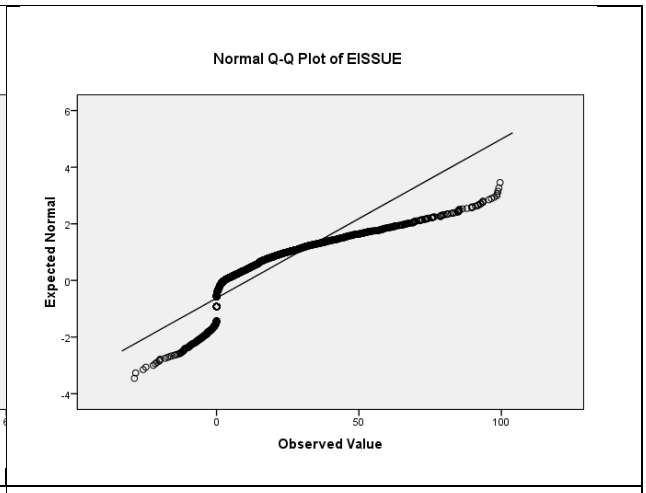
The graphical tool used to test the normality of distribution is Q-Q plot. The Q-Q plot for all the 16 variables are presented in figure 4.1 The graph shows that most of the data points

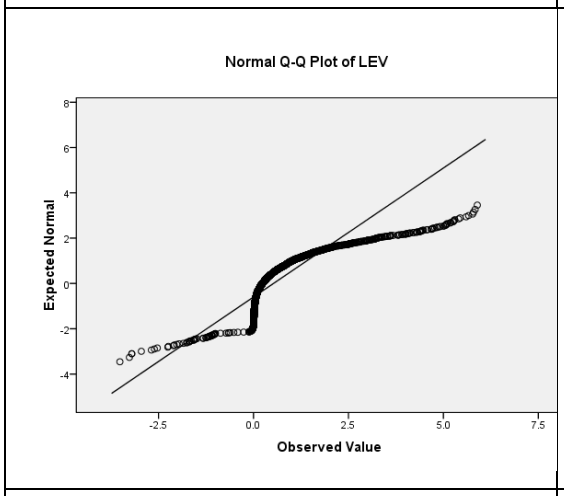
are positioned near the reference line and the population from which the data collected is approximately normal.

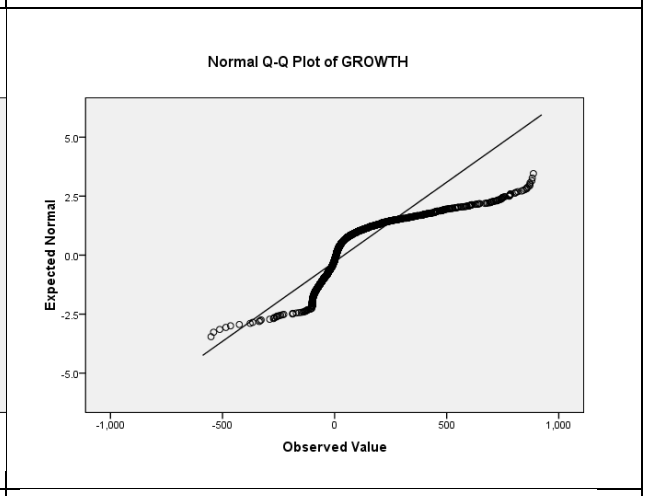
Figure 4.1.Q-Q Plots for Normality Test

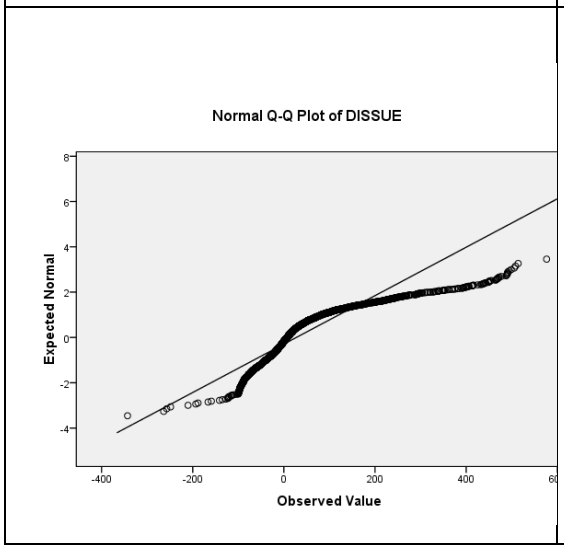


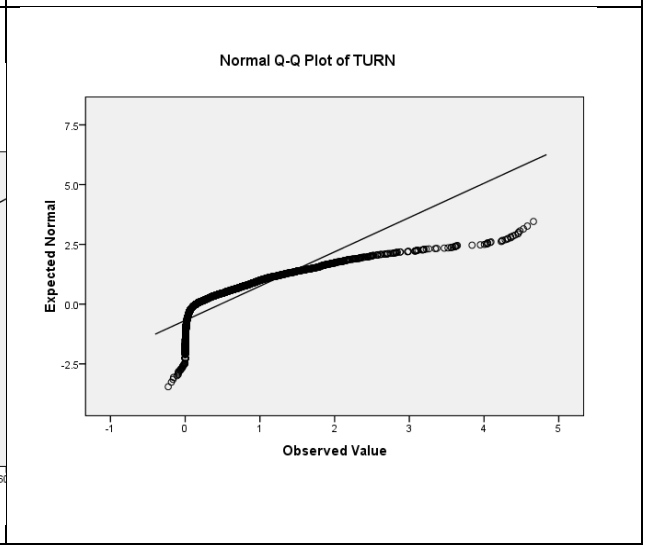

Normal Q-Q Plot of SIZE
Expected Normal
Observed Value

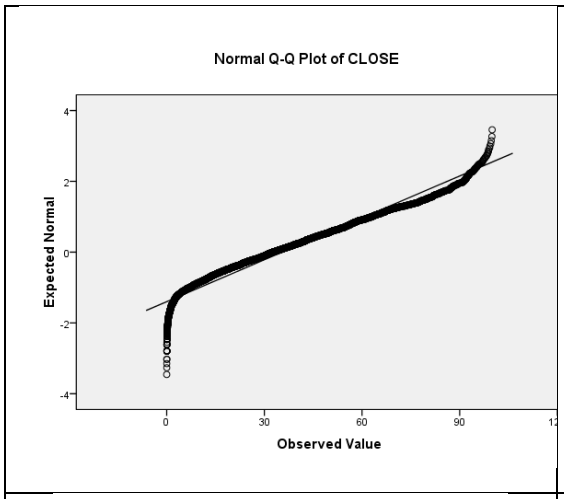

Normal Q-Q Plot of EISSUE
Expected Normal
Observed Value

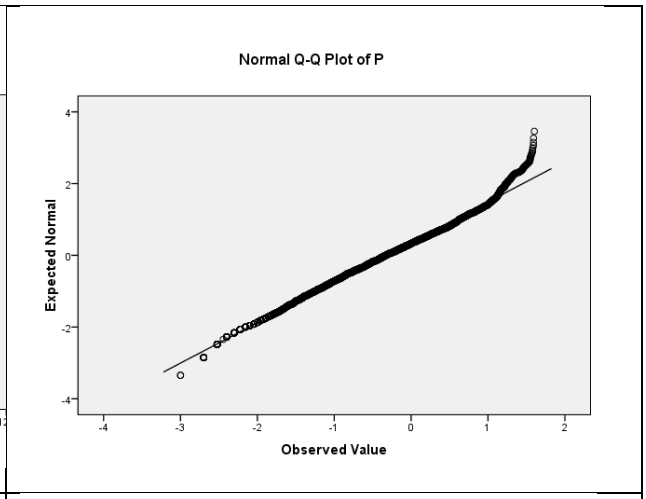

Normal Q-Q Plot of LEV
Expected Normal
Observed Value

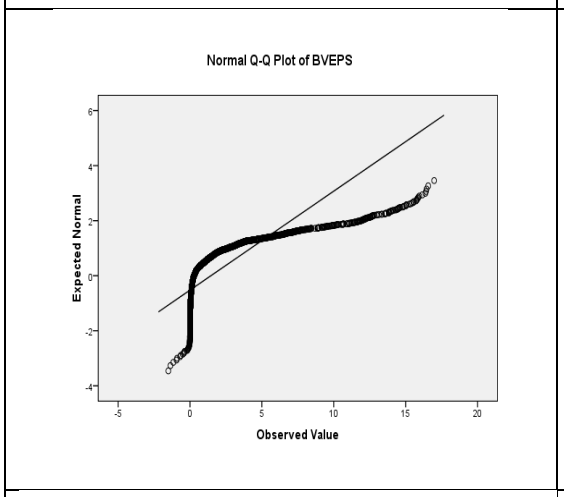

Normal Q-Q Plot of GROWTH
Expected Normal
Observed Value

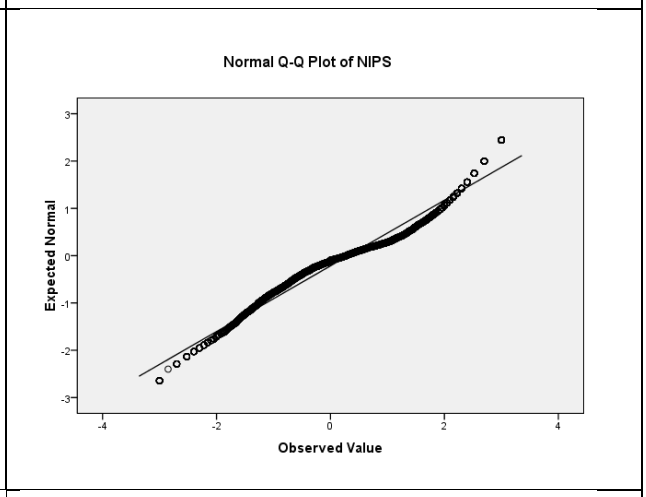

Normal Q-Q Plot of DISSUE
Expected Normal
Observed Value

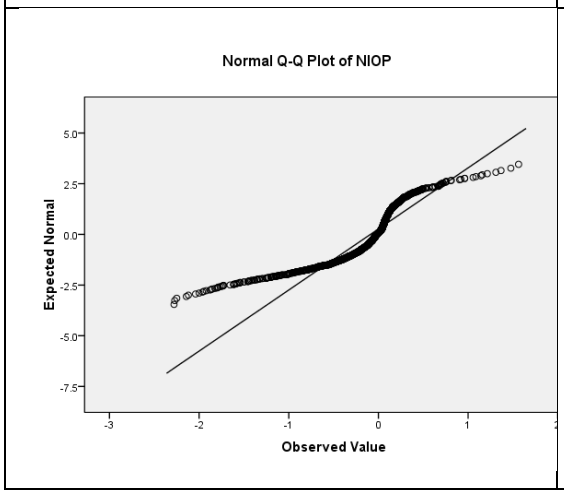

Normal Q-Q Plot of TURN
Expected Normal
Observed Value

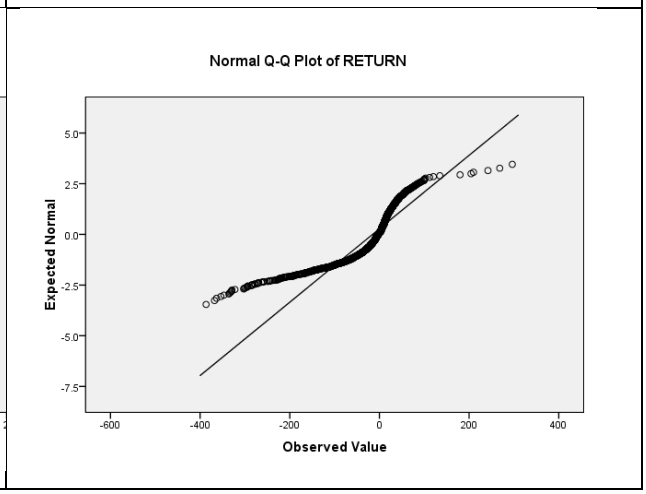

Normal Q-Q Plot of CLOSE
Expected Normal
Observed Value


Normal Q-Q Plot of P
Expected Normal
Observed Value


Normal Q-Q Plot of BVEPS
Expected Normal
Observed Value


Normal Q-Q Plot of NIPS
Expected Normal
Observed Value


Normal Q-Q Plot of NIOP
Expected Normal
Observed Value


Normal Q-Q Plot of RETURN
Expected Normal
Observed Value

4.2.1.3 Multicollinearity

Many of the independent variables in multiple regression model used in the analyses of accounting quality are dummy variables. This may lead to dummy trap due to multicollinearity among variables and can falsify the regression result. Therefore, a multicollinearity test of the variables is performed using correlation and tolerance and VIF.

4.2.1.3.1 Correlation

Based on the previous studies a target value of correlation above 0.7 is taken as an indication of multicollinearity (Pallant 2010). The threshold value of less than 0.10 for tolerance and a value of 10 and above for VIF is a sign that there is multicollinearity (Hair 2014).

The result of correlation test for multicollinearity, given in table 4.1.2, shows that the correlation among all variables are below 0.7. The highest value of correlation is between XLIST and NUMEX which is 0.685 and lowest is -0.004 between CCF and CLOSE. Based on the correlation result it is assumed that there is no multicollinearity between independent variables.

Table 4.1.2 Correlation test for multicollinearity

		CNI	SIZE	GROWTH	EISSUE	LEV	DISSUE	TURN	CF	AUD	NUMEX	XLIST	CLOSE	CCF	ACC	SPOS	LNEG	P	NIPS	BVEPS	NIOP	ETURN
CNI	Pearson Correlation	1																				
	Sig. (2-tailed)																					
SIZE	Pearson Correlation	0.026	1																			
	Sig. (2-tailed)	0.111																				
GROWTH	Pearson Correlation	0.007	-.082**	1																		
	Sig. (2-tailed)	0.681	0																			
EISSUE	Pearson Correlation	-0.032	-.165**	.102**	1																	
	Sig. (2-tailed)	0.054	0	0																		
LEV	Pearson Correlation	-0.016	.210**	-0.028	-.122**	1																
	Sig. (2-tailed)	0.338	0	0.094	0																	
DISSUE	Pearson Correlation	-.047**	-0.03	.140**	.062**	0.029	1															
	Sig. (2-tailed)	0.004	0.064	0	0	0.077																
TURN	Pearson Correlation	.034*	.228**	-.043**	-.194**	.363**	-.076**	1														
	Sig. (2-tailed)	0.041	0	0.008	0	0	0															

CF	Pearson Correlation	0.028	.229**	0.009	-.192**	.217**	0.017	.269**	1							
	Sig. (2-tailed)	0.094	0	0.579	0	0	0.309	0								
AUD	Pearson Correlation	-0.002	.317**	-.051**	-.095**	.108**	-0.028	.141**	.156**	1						
	Sig. (2-tailed)	0.913	0	0.002	0	0	0.094	0	0							
NUMEX	Pearson Correlation	0	-.144**	.054**	.117**	-.043**	.034*	-.102**	-.080**	.194**	1					
	Sig. (2-tailed)	0.971	0	0.001	0	0.009	0.038	0	0	0						
XLIST	Pearson Correlation	-0.015	-.064**	.033*	0.029	0.014	0.019	-.067**	-0.01	.242**	.685**	1				
	Sig. (2-tailed)	0.36	0	0.046	0.081	0.412	0.25	0	0.551	0	0					
CLOSE	Pearson Correlation	0.019	0	-0.025	-.101**	.059**	-0.007	.088**	.064**	-.154**	-.130**	-.132**	1			
	Sig. (2-tailed)	0.251	0.967	0.134	0	0	0.678	0	0	0	0	0				
CCF	Pearson Correlation	.213**	-0.016	.080**	-.043**	-0.013	0.017	.056**	.180**	-0.03	-0.002	-0.003	-0.004	1		
	Sig. (2-tailed)	0	0.339	0	0.009	0.447	0.298	0.001	0	0.065	0.9	0.872	0.82			
ACC	Pearson Correlation	.287**	.181**	0.002	-.067**	0.014	0.006	0.009	.113**	.093**	-.060**	0.001	0.023	-.162**	1	
	Sig. (2-tailed)	0	0	0.912	0	0.403	0.709	0.584	0	0	0	0.948	0.168	0		
SPOS	Pearson Correlation	0.004	.053**	-0.018	-.034*	.046**	0.004	-0.015	0.03	0.024	0	0.022	.035*	-0.021	.049**	1
	Sig. (2-tailed)	0.801	0.001	0.281	0.037	0.005	0.792	0.364	0.068	0.151	0.97	0.175	0.032	0.205	0.003	

LNEG	Pearson Correlation	-.174**	-.299**	0.023	.164**	-.143**	-0.004	-.183**	-.506**	-.197**	.098**	0.003	-.051**	-0.015	-.521**	-.093**	1				
	Sig. (2-tailed)	0	0	0.166	0	0	0.81	0	0	0	0	0.85	0.002	0.36	0	0					
P	Pearson Correlation	-0.015	.556**	-0.01	-.162**	.157**	0.008	.193**	.313**	.360**	-.076**	0.017	-.130**	-0.003	.167**	0.011	-.332**	1			
	Sig. (2-tailed)	0.361	0	0.539	0	0	0.63	0	0	0	0	0.316	0	0.859	0	0.5	0				
NIPS	Pearson Correlation	-.082**	-.263**	0.015	.203**	-.192**	0.03	-.332**	-.360**	-.148**	.151**	.057**	-.068**	-.040*	-.186**	-.183**	.376**	-.395**	1		
	Sig. (2-tailed)	0	0	0.348	0	0	0.065	0	0	0	0	0	0	0.014	0	0	0	0			
BVEPS	Pearson Correlation	-0.003	.429**	-.045**	-.116**	.131**	-0.03	-0.014	.183**	.227**	-.113**	-.039*	-.122**	-0.009	.110**	.068**	-.228**	.639**	-.158**	1	
	Sig. (2-tailed)	0.836	0	0.007	0	0	0.064	0.394	0	0	0	0.017	0	0.593	0	0	0	0	0		
NIOP	Pearson Correlation	.251**	.302**	.041*	-.170**	.077**	0.025	.160**	.338**	.134**	-.091**	-.040*	.043**	.039*	.538**	.062**	-.585**	.322**	-.400**	.160**	1
	Sig. (2-tailed)	0	0	0.013	0	0	0.134	0	0	0	0	0.015	0.009	0.017	0	0	0	0	0	0	
RETURN	Pearson Correlation	.220**	.283**	0.013	-.224**	.117**	-0.013	.172**	.573**	.166**	-.061**	-0.005	.046**	.041*	.568**	.037*	-.665**	.313**	-.368**	.195**	.607**	1
	Sig. (2-tailed)	0	0	0.418	0	0	0.434	0	0	0	0	0.775	0.005	0.013	0	0.026	0	0	0	0	0	

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

4.2.1.3.2 Tolerance and Variance Inflation Factor (VIF)

The second measure of multicollinearity is the value of tolerance and VIF. Table 4.1.3, collinearity statistics tolerance and VIF, depicts the result of tolerance and VIF which use CNI as dependent variable for regression. The coefficient of VIF for RETURN shows the highest value of 2.893 and naturally as tolerance is the reciprocal it shows the lowest value 0.346. The lowest value of VIF and the highest value of tolerance is that of DISSUE which is 1.039 and 0.963 respectively. The coefficient of all other variables is also more than 0.10 for tolerance and less than 10 for VIF. Thus, it is evident there is no multicollinearity between variables.

Table 4.1.3 Collinearity Statistics Coefficients Tolerance and VIF

Variables	Collinearity statistics	
	Tolerance	VIF
SIZE	.608	1.646
GROWTH	.949	1.054
EISSUE	.877	1.141
LEV	.816	1.225
DISSUE	.963	1.039
TURN	.717	1.396
CF	.506	1.978
AUD	.755	1.325
NUMEX	.494	2.022
XLIST	.509	1.963
CLOSE	.912	1.097
CCF	.912	1.096
ACC	.492	2.031
SPOS	.936	1.068
LNEG	.435	2.296
P	.396	2.527
NIPS	.636	1.573

BVEPS	.531	1.884
NIOP	.496	2.016
RETURN	.346	2.893

a. Dependent Variable: CNI

4.2.2 Descriptive Statistics

Descriptive statistics portrays the basic features of different variables used and gives a description and summary of the values. The study used 21 variables taken from the financial information of 264 Australian listed companies to analyse the accounting quality. The descriptive statistics of these variables were calculated separately for the pre-IFRS adoption and post-IFRS adoption periods to evaluate the change in the basic features of these variables between the periods. Table 4.2. presents the descriptive statistics separately for pre-adoption and post-adoption periods classified into test variables and control variables.

4.2.2.1 Analysis of Mean of Test Variables Pre and Post-IFRS Periods

The values of mean, median and standard deviation for different variables relating to pre-IFRS period and post-IFRS period and it probability value are given in table 4.2. below. Comparing the mean value of test variables for pre-IFRS and post-IFRS periods, shows that, variables CF, CCF ACC, SPOS and NIPS are not showing statistically significant difference between the two periods. In the remaining test variables LENG, P, NIOP, BVEPS and RETURN shows statistically significant difference, at 0.01 significance level, CNI has statistical significance at 0.05 level and CF is statistically significant at 0.10 level. In the test variables CNI, variability of change in annual net income scaled by total assets, CCF, variance in annual net operating cash flow scaled by total assets, ACC, accruals, denoted by earning or net income less cash flow from operating activity and CF, cash flow from operating activities scaled by total assets are interrelated. If there is an increase in net income usually it will reflect in an increase in cash flow from operation and vice versa. Cash flow and accruals are inversely related. An increase in cash flow naturally reduces the accruals and vice versa. The mean value of CNI in pre-adoption period is 0.015 and post-adoption period -0.017, a decrease of 0.032. This demonstrates variation in the net

income is lower in the post-adoption period and can be a sign of earning management. The pre-adoption period mean value of CF is 0.014 and post-adoption period value is 0.012; there is a small decrease 0.002 which is not statistically significant. It shows that the there is no much change in cash flow between the two periods. The decrease in CF may be because of the decrease in CNI. For ACC, pre-adoption period mean value is -0.049 and post-adoption period value is -0.033, the value improved by 0. 012 which is not statistically significant at 0.05 significance level. The mean value of CCF is -0.116 in pre-adaption period and -0.104 in post-adoption period, there is an improvement of 0.012 which is also not statistically significant. Due to the interrelation between these variables it is quite natural that these variables have shown a similar pattern of change in the value of mean.

SPOS, measured by small positive operating savings is an indicator variable, which equals 1, if annual net income scaled by total assets is between 0.00 and 0.01, and zero otherwise. The value of mean in pre-adoption period is 0.016 and that of post-adoption period is 0.017 the difference is not statistically significant denoting that the frequency of reporting small positive income has not changed after adoption of IFRS. LNEG is another indicator variable which equals 1 for observations in which annual net income scaled by total assets is less than -0.20 and zero otherwise. Higher frequency is a sign that company is reporting large losses as and when they arise which is usually considered as a sign of good accounting practice. The mean value of LNEG in pre-adoption period is 0.307 and post-adoption period value is 0.234. The decrease 0.073 is statistically significant at 0.01 significance level. Lower frequency of reporting large negative income in post-adoption period indicates that companies may not be reporting large losses as and when they arise in the post-adoption period as compared to pre-adoption period and is a sign of bad accounting practice.

The variables P, NIPS, BVEPS, NIOP and RETURN are variables indicating the performance of companies and are interrelated and out of that P, NIOP and RETURN are market-based measures. P is the market price per share 6 months after end of fiscal year. The mean values of P in the pre-adoption and post-adoption periods were -0.232 and -0.188 respectively. There is an improvement in the share price in the post-adoption period which is statistically significant at 0.01 level. NIPS represents net income after tax per share

generated by the company in each financial year. The value of NIPS in pre-adoption period is 0.289 and that of post-adoption period is 0.311. There is an increase in the profit after tax generated in post-adoption period which is not statistically significant. The mean value of BVEPS, measured by book value of equity per share, increased to 1.550 in post-adoption period from 1.185 in pre-adoption period. There is an increase of 0.365 with p-value 0.000, which is statistically significant at 0.01 level. This specifies a significant increase in the net worth of the company in the post-adoption period. Even if there is a significant increase in book value of shares there is no significant improvement in the net income generated by companies, that may be the reason for not increasing P, the share price. NIOP is the earnings per share scaled by beginning of the year market price. The mean of NIOP in the pre-adoption period is -0.102 and for the post-adoption period, it is -0.047. The mean value of NIOP also have a statistically significant improvement. RETURN; annual stock return in the fiscal year, is an indication of the return received by stock holders by investing in the share of the company. The pre-adoption mean value of stock return is -19.934 and post-adoption value improved to -13.025. The improvement in value is statistically significant. From the analysis above it is clear that P, NIPS, BVEPS, NIOP and RETURN has improved in the post-adoption period, even if all except NIPS are not statistically significant. Usually when there is an increase in the net income of the company, it will increase net worth of the company, and return to shareholders. If the net income, net worth and return of the company increase it will increase the market price and net income over market price also. Therefore, it is quite natural that all these variables have shown similar trend in there change between pre and post-adoption periods.

4.2.2.2 Analysis of Mean of Control Variables Pre and Post-IFRS Periods

Among the control variables, AUD, NUMEX, and XLIST are the dummy variables and the value of mean standard deviation and median of these variables are same in both pre-adoption and post-adoption periods. The statistical significance of the difference in value between the two periods of these variables are not calculated. For the remaining variables, SIZE, LEV, TURN and CLOSE, there is statistically significant difference in the mean value between periods. SIZE, denoted by natural logarithm of end of the year market value of equity, has a mean value of 1.166 in pre-adoption period and 1.453 in the post-adoption

period. The p-value is 0.000, demonstrating statistically significant change in the market value of equity at 1% significance level. This is in line with the improvement in the market price of shares in the post–adoption period. LEV, end of the year total liability divided by end of the year equity book value denotes the leverage of the company, which explains how far the companies are depending on creditors fund to finance their projects. The mean value LEV is 0.505 in pre-adoption period and 0.565 in the post-adoption period with p-value 0.0512. Even though the value is slightly above 0.05, it can be considered as statistically significant at 95 percent confidence interval. This is a sign that the company is using creditors fund more than depending on shareholders' fund. TURN measured by, sales divided by total assets, shows the turnover of the companies. Pre-adoption mean value of TURN is 0.525 and in post-adoption period the mean value is 0.469. The change in value is 0.56 with p-value 0.002, which is statistically significant at 0.01 significance level. This shows that the sale of the companies has marked a reduction in post-adoption period. But the reduction in turnover has not affected the market value or book value of shares. This may be because of the improvement in NIPS and RETURN. CLOSE is the percentage of closely held shares of firm as reported by world scope, has reduced significantly in post-adoption period. The value in pre-adoption period is 35.80%, and in post-adoption period it is 33.02%, with p-value is 0.0002. The decrease, 2.78% is statistically significant at 1% significance level. This indicates that the shares of listed companies are more widely spread and that the public are more attracted towards investing in Australian companies. This can be a reason for the improvement in the market price of shares.

The remaining control variables are GROWTH, EISSUE and DISSUE. GROWTH is the percentage change in sale from year to year. It shows the increase or decrease in current year sales compared to previous year. Even if the post-adoption sale reduced to 55.715 from 56.304 in pre-adoption period it is not statistically significant. *EISSUE*; percentage change in common stock shows the increase or decrease in the issue of equity capital by companies. The mean value of *EISSUE* is 12.101 in pre-adoption period and 12.079 in the post-adoption period. The difference is only 0.022% and it is not statistically significant as the *p*-value is 0.9512. *DISSUE*; percentage change in total liability, indicates the dependence of the company on debt financing. Mean value of *DISSUE* in the pre-adoption period is 33.916 and post-adoption period it is 33.627 with a *p*-value of 0.9512, which is

not statistically significant. The result of the variables EISSUE and DISSUE is shows that the companies have not made much change in their capital structure during these periods.

4.2.2.3. Analysis of Standard Deviations of Pre and Post-IFRS Periods

The standard deviation explains the dispersion of the data set from the mean. Here an analysis of the standard deviation of all the test and control variables except the dummy variables in the pre-adoption and post-adoption period is made. Out of the 21 variables, 10 variables have statistically significant dispersion between the two periods. Among the control variables the dispersion of five variables are not statistically significant. The standard deviation of CCF which is a test variable in pre-adoption period is 0.334 and in post-adoption period it is 0.332. F-value for variance ratio test is 0.900. For ACC pre-IFRS adoption Standard deviation is 0.276 and in post-adoption period it is 0.277 and F-value for variance ratio test is 0.937. Pre-IFRS adoption standard deviation for SPOS is 0.126 and 0.130 in post-adoption period with F-value of 0.386. NIPS has a pre-adoption standard deviation of 1.381 and post-adoption standard deviation of 1.367 and F-value 0.735. The standard deviation for RETURN is 58.292 in the pre-adoption period and 57.889 for the post-adoption period with F-value 0.822. Among control variables dispersion of 3 variables are not statistically significant. For EISSUE, standard deviations are 18.541 and 18.009, respectively, for pre and post-adoption periods and F-value is 0.344. The standard deviation for LEV in the pre-adoption period is 0.871 and for the post-adoption periods, it is 0.893 and the F-value is 0.407. Finally, for CLOSE the pre-adoption standard deviation is 24.658 and for post-adoption period it is 24.188 with F-value 0.532. For all these variables the dispersion of data from mean is not statistically significant, meaning that the there is no difference in the spread of the data. This indicates that there is no much change in the fundamental financial characters of the company between the periods.

The difference in the standard deviation between pre and post-IFRS adoption periods of 6 test variables and 4 control variables are statistically significant. Among all these only one variable P shows statistically significant difference at 95% confidence level. Standard deviation of P is 0.763 in pre-adoption period and 0.818 in post-adoption period, with F-value is 0.025. All the remaining variables are statistically significant at 0.01 significance level. CNI has a standard deviation of 0.356 in pre-adoption period and 0.319 post-adoption

period. The difference is statistically significant with F-value 0.000. CF has a pre-adoption standard deviation of 0.236 and post-adoption value of 0.207 and F-value is 0.000. The standard deviation of LNEG is 0.462 in the pre-adoption period and 0.424 in the post-adoption period with F-value 0.005. The value of standard deviation for NIOP reduced from 0.330 in pre-adoption period to 0.263 in the post-adoption period, which is statistically significant as the F-value is 0.000. The standard deviation of BVEPS is 2.198 in the pre-adoption period and 2.908 in post-adoption. The difference is statistically significant as the F-value is 0.000.

SIZE, GROWTH, DISSUE and TURN are the control variables with statistically significant difference in the value of standard deviation between the periods at 0.01 significance level. For SIZE the Standard deviation for pre-IFRS adoption period is 1.259 and in post-IFRS adoption period it is 1.490 and F-value is 0.000. It denotes an increase in variation in the market value of the companies in the post-IFRS adoption period. The standard deviations for GROWTH were 171.348 and 153.853, respectively, in pre and post-adoption periods; the decrease in dispersion is statistically significant as the F-value is 0.000. This is a sign of stable sales growth in post-IFRS adoption period compared to pre-IFRS adoption period. DISSUE the standard deviation reduced from 106.250 in pre-adoption period to 96.142 in post-IFRS adoption period, the F-value 0.001 shows the statistical significance of decrease. The reduction in value of DISSUE denoting a stable capital structure in post-IFRS adoption periods. Finally, the standard deviation of TURN for pre-IFRS adoption period is 0.776 and for post-IFRS adoption period it is 0.656. The difference is statistically significant as the F-value is 0.000. The decrease in standard deviation of TURN is in line with the decrease in value of GROWTH suggesting that there is no much difference in the operating features of the company.

Table 4.2. Descriptive Statistics Pre and Post IFRS

Test variables	Pre-IFRS Mean	Post-IFRS Mean	p-value	Pre-IFRS SD	Post-IFRS SD	F-value	Pre-IFRS Median	Post -IFRS Median
CNI	0.015	-0.017	0.021**	0.356	0.319	0.000***	0.011	0.004
CF	0.014	0.012	0.8090	0.236	0.207	0.000***	0.006	0.002
CCF	-0.116	-0.104	0.3672	0.334	0.332	0.900	-0.047	0.030
ACC	-0.049	-0.033	0.0665	0.276	0.277	0.937	-0.020	-0.007
SPOS	0.016	0.017	0.8528	0.126	0.130	0.386	0	0
LNEG	0.307	0.234	0.0000***	0.462	0.424	0.005***	0	0
P	-0.232	-0.188	0.0062***	0.763	0.818	0.025**	-0.264	-0.192
NIOP	-0.102	-0.047	0.0000***	0.330	0.263	0.000***	-0.037	-0.010
BVEPS	1.185	1.550	0.0000***	2.198	2.908	0.000***	0.253	0.323
NIPS	0.289	0.311	0.6455	1.381	1.367	0.735	0.299	0.266
RETURN	-19.94	-13.02	0.0009***	58.889	57.889	0.0.822	-6.645	-1.935
Control variables								
SIZE	1.166	1.453	0.000***	1.259	1.490	0.000***	1.180	1.604
GROWTH	56.304	55.715	0.9564	171.348	153.850	0.001***	9.265	14.223
EISSUE	12.101	12.079	0.9765	18.541	18.009	0.344	5.040	5.735
LEV	0.505	0.565	0.0512*	0.871	0.893	0.407	0.199	0.248
DISSUE	33.916	33.627	0.9512	106.250	96.142	0.001***	7.130	11.421
TURN	0.525	0.469	0.0020***	0.776	0.656	0.000***	0.141	0.143
AUD	0.504	0.504	----	0.500	0.500	----	1	1
NUMEX	2.208	2.208	----	0.787	0.787	----	2	2
XLIST	0.331	0.331	-----	0.471	0.471	----	0	0
CLOSE	35.80	33.016	0.0002***	24.658	24.188	0.532	33.100	30.58

Note: To compare the mean value of pre-IFRS and post-IFRS periods, two sample t-test is used and F-ratio test is used for comparison of standard deviation between these two time periods. The symbols *, **,.*** indicate the statistical significance of the difference between pre-IFRS and post-IFRS at 0.10, 0.05, and 0.01, respectively

4.3 Analysis of Accounting Quality

A comparison of the accounting quality of financial reports of Australian listed companies between pre-IFRS adoption period and post-IFRS adoption period for all 264 listed companies together and also for seven industrial sectors selected for the study is presented below. Generally, it reveals that the adoption of IFRS has not significantly improved the accounting quality of financial reports of Australian listed companies

4.3.1 Accounting Quality of 264 Listed Companies

Australian listed companies mandatorily adopted IFRS from the financial period beginning on or after 1st January 2005. In this section of the study, the accounting quality of selected Australian listed companies for pre and post-IFRS period was compared using three accounting quality measures, namely earning management, timely loss recognition, and value relevance.

4.3.1.1 Earning Management

The first measure used to study the impact IFRS adoption on accounting quality of financial report is earning management. Earning management is a deliberate and purposeful changes made to accounting numbers to achieve better economic performances. Earning management is manipulation of accounts by using acceptable accounting rules to convey a desires result (Cudia and Dela Cruz 2018). Earning management through manipulation of accounts reduces the quality of financial statement of companies (Mohseni-Cheraghlou 2016). Earning management has two manifestations, earning smoothing and managing earnings towards positive target.

4.3.1.1.1 Earning Smoothing

Potential investors generally prefer to invest in companies which shows a stable earning pattern. Earning smoothing will help companies to show a smooth earning stream when there are peaks and drops in earnings. If a firm smooth the earnings by opportunistically managing earnings, all else equal, the earning variability will be lower. (Lang 2006,

Ahmed, Neel, and Wang 2013). Variability of change in net Income (CNI), ratio of variability of change in net income to variability of change in cash flow (CNI/CCF) and Spearman's correlation rho between ACC and CF are the three metrics used to assess earning smoothing.

4.3.1.1.1.1 Variability of Change in Net Income (CNI)

Variability of change in net income is expected to be less if earnings are managed. The fluctuations in annual net income measured by variability change in net income (CNI) is taken as our first measure for earning smoothing. As CNI is affected by many factors other than IFRS the study is not taking the CNI directly. Instead based on earlier studies (Barth 2007, Liu et al. 2011, Chua, Cheong, and Gould 2012, Ahmed, Neel, and Wang 2013, Apergis 2015, Ebaid 2016, Kouki 2018, Othman and Zeghal 2006, Paananen and Henghsiu 2009) a regression is run with CNI as dependent variable and a number other control independent variables, as in equation -1a (refer chapter 3 on methodology). The residue generated from the above regression equation, CNI is the measure used to evaluate variability of change in net income. The residue from the regression for pre-adoption period and post-adoption period are calculated and compared using paired student's independent t-test. The hypotheses developed for the paired t-test are:

Ho: $\mu 1 \neq \mu 2$ (paired population mean of CNI for pre-adoption period and post-adoption period are not equal)

H1: $\mu 1 = \mu 2$ (paired population mean of CNI for pre-adoption period and post-adoption period are equal)

Table 4.3.1 displays the result of earning management measure of accounting quality. The mean of the CNI of pre-adoption period is 0.015 and in the post-adoption period the value is -0.017, a decrease of 0.032. The probability value of the paired student's independent t-test is 0.000, suggesting that the decrease is statistically significant at 0.01 significance level. The null hypothesis that the change in net income of pre-adoption and post-adoption period are not equal is accepted. This suggests a significant decrease in the variability of change in net income in post-IFRS adoption period compared to pre-IFRS adoption period. But the decrease in earning variability can be due to change in cash flow or by use of

accrual to smooth earning which can be explained only on the basis of the next two earning smoothing measures, ratio of variability of change in net income to variability of change in cash flow and correlation between accrual and cash flow from operation.

4.3.1.1.1.2 Ratio of Variability of Change in Net Income to Variability of Change in Cash Flow (CNI/CCF)

The second measure of earning smoothing is the ratio of variability of change in net income to variability of change in cash flow (CNI/CCF). This measure is used to substantiate the result of the earlier measure CNI. If accruals are used to manage earnings variability of change in net income should be lower than variability of operating cash flow (Barth 2007). A lower ratio proposes that it may be the use of accruals to manage earnings and not a higher variability of cash flow that drive earning variability (Gassen and Sellhorn 2006, Othman and Zeghal 2006, Barth 2007, Chen 2011b, Chua, Cheong, and Gould 2012, Adibah Wan Ismail et al. 2013, Cudia and Dela Cruz 2018). The ratio is calculated using CNI the residuals generated from the regression equation-1 and CCF the residual generated from regression of CCF as dependent variable and other independent control variables as in equation-2a (refer chapter on methodology). CNI and CCF are calculated separately for pre-adoption and post-adoption periods and ratio between them are arrived. The mean of the ratio of the residuals for pre and post-IFRS adoption period are then calculated and compared using paired student's independent t-test. To conduct the t-test the hypothesis developed are:

Ho: $\mu 1 \neq \mu 2$ (paired population mean of the ratio of CNI and CCF for pre-adoption period and post-adoption period are not equal).

H1: $\mu 1 = \mu 2$ (paired population mean of the ratio of CNI and CCF for pre-adoption period and post-adoption period are equal)

The value of the mean for the ratio CNI/CCF of each period and the result of paired student's independent t-test can be seen in Table 4.3.1 below. Mean of the ratio is 0.670 in the pre-adoption period and 0.434 in the post-adoption period. The ratio is lower in post-adoption period compared to pre-adoption period. There is a decrease of 0.236, with p-value 0.680, suggesting that the decrease is not statistically significant. Therefore, the null

hypothesis is rejected which means that ratio of CNI/CCF are equal. There is small decrease in the ratio of CNI/CCF for post-IFRS adoption period compared to pre-IFRS adoption period. A lower ratio explains that change in net income is lower than change on cash flow but the change is not statistically significant. There is no indication for use of accrual to smooth earnings. Therefore, the decrease in CNI registered in post-IFRS adoption cannot be due to the use of accrual to smooth earning but can be due to change in cash flow between the periods. The adoption of IFRS has not improved the quality of financial report. Thus, the use of AASB was equally good in protecting the interest of stakeholders against earning smoothing.

4.3.1.1.1.3 Correlation Between Accrual (ACC) and Cash Flow from Operation (CF)

Another earning smoothing measure used in the study is the correlation between Accrual (ACC) and cash flow from operation (CF). When companies engage in earning smoothing, in times of poor cash flow, companies use accruals to smooth cash flow variability (Chua, Cheong, and Gould 2012). Naturally there is negative correlation between *ACC* and *CF*, but prior studies claim that all else remains the same, large magnitude of negative correlation between *ACC* and *CF* is a sign of earning smoothing (Yetman 2003, Lang 2006, Barth 2007, Paananen and Henghsiu 2009, Huifa et al. 2010, Liu et al. 2011, Chua, Cheong, and Gould 2012, Taylor et al. 2008, Ahmed, Neel, and Wang 2013). *ACC* and *CF* are influenced by many other factors therefore, in the regression of *ACC* and *CF* a number of independent control variables are included as explained in the methodology (see equation 3a and 3b chapter 4 methodology). The residual generated from equation 3a is taken as *ACC* and the residual from equation 3b is taken as *CF*. Spearman's correlation rho of ACC and CF for pre-IFRS adoption period and post-IFRS adoption period are calculated separately and compared using z-value. The Spearman's correlation in the pre-adoption period shows a value of 0.588, while that of post-adoption period is 0.547(see table 4.3.1). There is a reduction in the value of correlation by 0.041. The z- value calculated using the correlation and the number of observations of the two periods gives positive value of 1.39, with p-value 0.165. The z-score is between ± 1.96 and p-value above 0.05 so that the difference is not statistically significant. The insignificant increase in the negative correlation in post-IFRS adoption period is not a clear evidence for use of accrual to smooth

earning in post-IFRS adoption period. This result corresponds the earlier measure of ratio of CNI/CCF that there is no indication of use of accrual to smooth earnings

The CNI has marked a reduction in the post-adoption period suggesting that the earning smoothing has increased in post-IFRS adoption period. But the result of both the supporting measures of CNI, ratio of CNI to CCF and the Spearman's correlation between ACC and CF are not give any evidence of use of accrual to manage earning indicating that the adoption of IFRS has not made any significant change in earning smoothing and accounting quality of financial reports. The change in CNI can be due to change in cash flow. This may be because the Australian Accounting Standard Board (AASB) standards, which Australian companies were using before IFRS, are of good quality and Australia regulatory bodies are monitor and regulating the financial report of listed companies in order to protect the interest of investors.

4.3.1.1.2 Managing Earnings Towards Positive Target

Every firms like to have a smooth earning stream every year. Fluctuations in earnings from year to year increases the risk of investors and effects the market price of company shares. Managers usually prefer to have a small positive net income in their financial report rather than showing net loss. Managing earnings towards positive target is another way of earning management and frequency of reporting small positive net income, SPOS, is the measure used for its assessment.

4.3.1.1.2.1. Small Positive Net Income (SPOS)

The usual outcome of earning management using discretionary accrual is high frequency small positive net income (SPOS). Based on the earlier studies frequency of small positive earning is used to measure earning management (Barth 2007, Yetman 2003, Paananen and Henghsiu 2009, Morais and Curto 2008, Liu et al. 2011, Chalmers 2007, Chua, Cheong, and Gould 2012, Othman and Zeghal 2006, Adibah Wan Ismail et al. 2013). The frequency of small positive earnings is measured using logit regression run with SPOS as dependent variable and POST and control variables as independent variables as in equation-4 (refer chapter-3 on methodology). The study uses logit regression as SPOS and POST are dummy variables and dependent variable SPOS is dichotomous variable. The coefficient of POST

is used to interpret the frequency of SPOS in post-adoption period. A positive coefficient of POST indicates incremental frequency of small positive income and a negative value is a sign of less frequency of small positive income. The coefficient of POST shows a negative value of -0.223 with p-value 0.507, (See Table 4.3.1), indicating that the frequency of reporting small positive net income has decreased in the post-adoption period, which is not statistically significant. A negative value of POST is a sign of reduction in managing earnings towards positive target and quality accounting quality. Thus, managing earnings towards positive earning is lower in post-adoption period than in the pre-adoption period but, there is no statistically significant decrease. The finding suggests that accounting quality of financial report is slightly better in post-adoption period compared to pre-adoption period, but the improvement in quality is not significant enough to suggest an enhancement in accounting quality.

The findings in earning smoothing, the first measure of earning management, suggests that there is a reduction in variability of change in net income and it is significant. This indicates that there is an increase in earning smoothing and reduction in accounting quality in the post-IFRS adoption period. But the other two earning management measures are not supporting the above finding. The ratio of variability of CNI/CCF and correlation between ACC and CF indicates that there is no evidence for use of accruals to manage earnings. Thus even if there is decrease in variability of change in net income there is no evidence for the use of accruals to manage earning. SPOS also supports the findings of earning smoothing. It shows that there is a small reduction in the frequency of reporting small positive net income, which is not significant, suggesting that there is no proof for managing earning towards positive target. Thus it can be concluded that there is no change in earning management and accounting quality after adoption of IFRS.

Table 4.3.1 Results of Earning Management 264 Listed Companies Pre and Post IFRS				
Earning Management	Prediction	Pre-IFRS adoption	Post-IFRS adoption	Significance
Variability of CNI	POST IFRS > PRE IFRS	0.015	-0.017	0.000***
Ratio of Variability of CNI over CCF	POST IFRS > PRE IFRS	0.67	0.434	0.68
Correlation of ACC and CF	POST IFRS > PRE IFRS	0.588	0.547	1.390 (*z-value*) 0.165 (p-value)
Small Positive Net Income		-0.223		*P-value* 0.507
*$p < .10$; **$p < .05$; ***$p < .01$.				

4.3.1.2 Timely Loss Recognition

Recognition of loss as and when they arise is another important sign of quality accounting. A quality financial report must recognise losses as and when it occurs rather than deferring it to a future period. Based on earlier studies, the frequency of reporting large negative income (LNEG) is the manifestation of timely loss recognition (Ahmed, Neel, and Wang 2013, Dobre, Brad, and Ciobanu 2015, Lang, Raedy, and Yetman 2003, Barth 2007, Ball, Kothari, and Robin 2000).

4.3.1.2.1 Frequency of Recognising Large Losses (LNEG)

LNEG is a dummy variable that is one if the value of net income scaled by total assets is less than - 0.20 and zero otherwise. A logistic regress is run with large negative net income (LNEG) as dependent variable and POST and other control variables as independent variables as in equation-5 (refer Chapter-3 Methodology). The study also uses logit

regression as LNEG and POST are dummy variables and the coefficient of POST will be interpreted. A positive value of POST can be interpreted as incremental frequency of large negative income and negative value is a sign of less occurrence of large negative income. The coefficient of POST in the logit regression shows a negative value of -0.270 and p-value 0.027. The frequency of reporting large losses has reduced and the decline is statistically significant at 95 percent confidence interval (See Table 4.3.2). Thus, firms are not reporting large negative income as and when they arise, the frequency of reporting large losses are significantly lower after adoption of IFRS. The significant decrease in reporting large negative income in post-IFRS adoption period suggests that IFRS adoption has not improved the quality of financial reports.

Table 4.3.2 Results of Timely Loss Recognition 264 Listed Companies Pre and Post IFRS

Timely Loss Recognition	Prediction	Coefficient POST	Significance
Large negative net income	+	-0.270	0.027 **

*p < .10; **p < .05. ***p < .01.

4.3.1.3. Market Based Accounting Quality Measures- Value Relevance

Based on the stock market information of the listed companies two sets of analysis are made to evaluate the value relevance of the financial information of companies and through that the accounting quality. Two value relevance models price model and return model are used to evaluate the explanatory power of market information and book value.

4.3.1.3.1 Value Relevance – Price Model

Based on the prior studies, first the value relevance of market price per share (P) on net income per share (NIPS) and book value of equity per share (BVEPS) is assessed (Paananen and Henghsiu 2009, Ahmed 2016, Apergis 2015). The value relevance of stock

price is evaluated by interpreting adjusted R^2 from the regression of P on NIPS and BVEPS, by pooling observations for pre-adoption and post-adoption period. To make stock price, P, unaffected by company and year fixed effect, a two-stage regression technique is used. First stock price P is regressed with year and company fixed effect. The residual generated from the regression is taken as P. Then, separate regression is run for each period with P as dependent variable and NIPS and BVEPS as independent variable as in prior studies (Barth 2007, Perotti and Wagenhofer 2014, Chua, Cheong, and Gould 2012, Chen 2011b, Collins, Maydew, and Weiss 1997b, Kouki 2018). The adjusted R^2 from this regression describes the explanatory power of net income per share and the book value of equity on market price of company shares. Higher R^2 is an indication of higher explanatory power and value relevance and thus a higher quality financial report (Leuz and Verrecchia 2000, Apergis 2015, Lang 2006, Barth 2007). The result (see table 4.3.3) shows that value of adjusted R^2 is 0.517 in the pre-adoption period and value of adjusted R^2 is 0.476 in post-adoption period. The decrease in the value of adjusted R^2 is 4.13 percentage. The goodness of fit of the equation represented by R^2 decreased in post-adoption period. The value relevance of P on NIPS and BVEPS has reduced. This is a clear sign of decrease in the explanatory power of market price on net income and book value per share, which can be interpreted as the decrease in the value relevance and accounting quality of financial report.

4.3.1.3.2 Value Relevance – Return Model

The second value relevance measure is the explanatory power of NIOP on RETURN. Here also as in the first value relevance metrics, the residual generated from the regression of NIOP with year and company fixed effect is taken as NIOP. Afterwards, separate regression is run for pre-adoption and post-adoption period with dependent variable NIOP and independent variable RETURN, as in earlier studies (Chua, Cheong, and Gould 2012, Barth 2007, Chen 2011b, Paananen and Henghsiu 2009, Kouki 2018, Collins, Maydew, and Weiss 1997b). The resulting adjusted R^2 for each period are interpreted to evaluate the explanatory power and the value relevance of NIOP. Higher the adjusted R^2 better the explanatory power and value relevance (Ball, Kothari, and Robin 2000, Chua, Cheong, and Gould 2012, Ahmed, Neel, and Wang 2013). Adjusted R^2 is 0.304 in pre-IFRS adoption period and 0.284 in post-IFRS adoption period (see Table 4.3.3). The adjusted R^2 decreased

by 2%, which is a sign of reduction in the explanatory power and value relevance. This is an indication that the return on investment received by investors and the net income generated by the companies are not matching which is not a sign of accounting quality.

Table 4.3.3 Results of Value Relevance 264 Listed Companies Pre and Post IFRS

Value Relevance	Prediction	Pre-IFRS R^2	Post-IFRS R^2	Difference in R^2
Price model	POST IFRS > PRE IFRS	0.517	0.476	-0.041
Return model	POST IFRS > PRE IFRS	0.304	0.284	-.02

The analysis of impact of accounting quality of all the 264 listed companies made above using the three accounting quality measures earning management, timely loss recognition and value relevance suggests that the adoption of IFRS has not improved accounting quality of financial statements. The earning smoothing measured by CNI marked a decrease in variability change in net income giving a sign of reduction in accounting quality. But the two measures ratio of CNI/CCF and correlation between ACC and CF used to verify whether the change in CNI is due to use of accruals to manage earnings or increase in cash flow is not giving evidence of use of accruals to manage earnings. SPOS the frequency of reporting small positive net income suggests that there is no sign of change in frequency of SPOS and earning management. Thus booth the earning management measures, earning smoothing and managing earnings towards positive target is not giving any sign of change in accounting quality of Australian listed companies. LNEG frequency of reporting large negative net income also make no significant change in frequency between the periods suggesting no change in accounting quality. Finally, both the value relevance measures are in line with the findings of earning management and timely loss recognition that there is no considerable change in value relevance and accounting quality between periods. The adoption of IFRS cannot make any change in accounting quality of

Australian listed companies. This can be because of the association between IASB and AASB. Australian standard setting body AASB was a part of IASB which developed IFRS from the very beginning and this association and experience of working together would have influenced AASB standards, making it as good as IFRS. Australia also have a very good regulatory system that monitor and control the activities of listed companies. These can be the reason for not having any change in accounting quality after adoption of IFRS.

4.3.2. Commercial and Professional Service

The development of market economy in the last two decades has increased the competition in the market. This forced many organisations to reduce the cost of their operation. The firms which do not have resources and expertise in different areas of their operations and management started to rely on commercial and professional service firms for different services, so that they can save money and can concentrate on their core business activities. Commercial and professional service industries are one which provide support services to businesses. According to GICS the industries included in this sector are commercial services and supplies and professional services. Commercial services and supplies include commercial printing, environmental and facilities services, waste management, pollution control services, water treatment supplies, equipment and industrial maintenance, securities and alarm services and office services etc. Professional services include human resource and professional services and research and consulting services (S&P 2016). The commercial and professional services sector are businesses which provide customised business-to-business services, which include services of accountants, solicitors, lawyers, architects, advertising firms, engineers, financial advisors, management consultants, contract cleaning services etc.(Sylva 2015). The professional service sector has an important role in the Australian economy both in terms of employment and output. According to the Reserve Bank of Australia the service sector has grown strongly in the past many years, increasing the output from 60% in 1960's to 80% in 2000'S (Lewis 2010). This part of the study analyses the impact of adoption of IFRS on commercial and professional services industry.

There are 70 commercial and professional service industries listed in ASX. Out of that only 30 companies are listed before 2002, so that only for these companies, the full year

financial reports from year 2001 to 2015 is available. The study has taken the financial report of 18 companies from this group for the analysis. The data collected were classified into the pre-IFRS adoption period, which included years 2002, 2003, 2004, and 2005, and the post-IFRS adoption period, which were 2006, 2007, 2008, and 2009. A detailed analysis of the impact of IFRS adoption on the quality of financial reports of commercial and professional service companies is explained below.

4.3.2.1. Analysis of Accounting Quality of Commercial and Professional Service Sector

The analysis of accounting quality is done in three different viewpoints, earning management, timely loss recognition and value relevance based on the previous studies(Barth 2007, Chua, Cheong, and Gould 2012, Dimitropoulos et al. 2013, Soderstrom and Sun 2007, Paananen and Henghsiu 2009, Morais and Curto 2008, Yetman 2003). Earning management is evaluated in two dimensions which are, earning smoothing and managing earnings towards positive earnings. The metrics used to measure earning smoothing are, Variability of change in net income (CNI), ratio of CNI to variability of change in cash (CCF) and correlation between accruals (ACC) and cash flow (CF). Frequency of reporting small positive net income (SPOS) is used to measure managing earnings towards positive earnings. To know whether the firms are recognising losses in a timely manner, frequency of reporting large negative income (LNEG) is the metric used. Accounting quality is also assessed by comparing market-based information of companies with book values. For that value relevance of market price per share (P) is compared with accounting information, net income of equity per share (NIPS) and book value of equity per share (BVEPS). Value relevance of accounting information is also evaluated using net income over price (NIOP) and return received from shares (RETURN). The Accounting quality of commercial and professional services companies are thus evaluated using seven measures. Five of them are founded on financial accounting information of the company and two are market bases measures.

4.3.2.1.1 Variability of Change in Net Income (CNI)

Based on previous studies variability of change in net income (CNI) is the first metric used to evaluate earning smoothing. A comparison of CNI of the pre and post-IFRS adoption

period is made using paired *t*-test. The value of CNI in pre-IFRS adoption period is 0.044 and it is 0.004 in post-IFRS adoption period. The p-value is 0.016 signifying that the reduction in value is statistically significant at 95 percent confidence level (Table 4.4.1). A reduction in CNI is a sign of increase in earning smoothing in post-IFRS adoption period compared to pre-IFRS adoption period. Thus, the decrease in variability of change in net income which can be a sign of earning smoothing and reduction in accounting quality of financial report after adoption of IFRS.

4.3.2.1.2 Ratio of Variability of Change in Net Income to Variability of Change in Cash Flow (CNI/CCF)

The second earning smoothing metric is the ratio of Variability of change in net income to variability of change in cash flow assets (Chua, Cheong, and Gould 2012, Barth 2007, Paananen and Henghsiu 2009, Othman and Zeghal 2006, Liu et al. 2011, Apergis 2015). Table 5.4.1 shows that the ratio CNI to CCF, is lower in post-IFRS adoption period compared to pre-IFRS adoption period, but the decrease is not statistically significant. The ratio of CNI to CCF in pre-IFRS adoption period is 2.262 and that of post-IFRS adoption period it is 0.658 but the decrease is not statistically significant as the t-statistic is 0.532. (see table 4.4.1). The decrease in value from above two to below one shows that the variability of change in operating cash flow is above variability of change in net income in the post-IFRS adoption period, but the decrease in value is not significant. This suggest that the smoother earning stream in post-IFRS adoption period cannot be due to use of accruals to manage earning.

4.3.2.1.3 Spearman's Correlation Between Accrual (ACC) and Cash Flow (CF)

The correlation between accrual (ACC) and cash flow (CF) is our third measure of accounting quality (Chua, Cheong, and Gould 2012, Gassen and Sellhorn 2006, Barth 2007, Cudia and Dela Cruz 2018, Adibah Wan Ismail et al. 2013, Othman and Zeghal 2006, Chen 2011b). Table 4.4.1 shows that the pre-IFRS adoption correlation is -0.021 and correlation for post-IFRS adoption period is -0.040. The value is more negative in post-IFRS adoption period. The significance of the difference in the value of correlation coefficient is evaluated using fisher's *r* to *z* transformation. The z-value is 0.11 which is between ± 1.96 and p -value 0.912 suggesting that the difference is not statistically

significant. This result is also in line with the earlier two measures which suggest that there is no change in earning smoothing after adoption of IFRS. All the three measures of earning smoothing suggest that even if there is a reduction in frequency of change in net income, the other two measures indicated no significant evidence to prove the use of accruals to manage earning. Thus there is no confirmation for increase in earning smoothing activity after the adoption of IFRS and as such there is no significant improvement in the accounting quality.

4.3.2.1.4 Frequency of Reporting Small Positive Net Income (SPOS)

Managing earning towards positive target is measured using the frequency of reporting small positive net income (SPOS). To know the difference in the frequency of reporting small positive net income between pre-IFRS adoption and post-IFRS adoption period a logit regression with SPOS as dependent variables and POST and other control variables as independent variables are made. From the regression, coefficient of POST is used to interpret frequency of reporting small positive income. The coefficient of POST is -0.006 which is not significant as the probability value is -0.679 (Table 4.4.1). The negative value of POST specifies a lower frequency in reporting small positive net income after adoption of IFRS which is a sign of improvement in accounting quality. But the improvement is not statistically significant. The IFRS adoption has not made any significant change in reporting small positive net income and no difference in managing earnings towards positive target and accounting quality.

All the four measures of earning management discussed above, consistently shows that there is no significant improvement in accounting quality after adoption of IFRS for commercial and professional service firms in Australia.

Table 4.4.1 Results of Earning Management Commercial and Professional Service Pre and Post IFRS

Earning Management	Prediction	Pre-IFRS adoption	Post-IFRS adoption	Significance
Variability of CNI	POST IFRS > PRE IFRS	0.044	0.0045	0.016**
Ratio of Variability of CNI over CCF	POST IFRS > PRE IFRS	2.262	0.658	0.532
Correlation of ACC and CF	POST IFRS > PRE IFRS	-0.021	0	0.11 (*z-value*) P-value 0.912
Small Positive Net Income	-	-0.006		-0.679

*p < .10; **p < .05. ***p < .01.

4.3.2.1.5 Frequency of Large Negative Net Income (LNEG)

The other criteria used to measure accounting quality is whether the firms are recognising large losses in a timely manner. Frequency of reporting large negative net income (LNEG) is taken as the measure to see whether firms are reporting large losses as and when they arise. A higher frequency of LNEG is a sign of timely loss recognition and accounting quality (Yetman 2003, Lang 2006, Soderstrom and Sun 2007, Barth, Landsman et al. 2008, Paananen and Henghsiu 2009, Yi Lin, Chee Seng et al. 2012). To know the difference in frequency of reporting large negative income between periods, a logit regression is run with LNEG as dependent variable and POST and control variables as independent. The coefficient of POST from the regression is taken and interpreted. The value of POST from the regression is 0.042 with a p-value of 0.127 (see table 4.4.2). A positive value of POST denotes a higher probability in reporting large losses and is a sign of increase in accounting quality and the increase in reporting large losses is not statistically significant. This

measure also articulates that there is no significant increase in reporting large losses after adoption IFRS and thus no change in timely loss recognition and accounting quality.

Table 4.4.2 Results of Timely Loss Recognition Commercial and Professional Services Sector Companies Pre and Post IFRS

Timely Loss Recognition	Prediction	Coefficient POST	Significance
Large negative net income	+	0.042	0.127

*p < .10; **p < .05. ***p < .01

4.3.2.1.6 Value Relevance - Price Model

The study uses two market bases measures in analysing value relevance of accounting information which is another measure of accounting quality. The first one is price model which evaluates the value relevance of market price of shares (P) to net income per share (NIPS) and book value of equity per share (BVEPS) (Barth 2007, Perotti and Wagenhofer 2014, Chua, Cheong, and Gould 2012, Chen 2011a, Collins, Maydew, and Weiss 1997b, Kouki 2018, Chen 2011b). A regression is run with P as dependent variable and NIPS and BVEPS as independent variable for both pre-IFRS adoption period and post-IFRS adoption period. P is the residual generated from the regression of P for time and company fixed effect. Adjusted R^2 of the two periods are compared and interpreted to evaluate the value relevance. Table 4.4.3 shows that the adjusted R^2 value increased from 27.9 percent in pre-IFRS adoption period to 40.1 percent in post-IFRS adoption period. This signifies that the value relevance of book values and market values increased in post-IFRS adoption period and it is a sign of improvement in the quality of financial report of commercial and professional services companies.

4.3.2.1.7 Value Relevance – Return Model

In return model net income per share over price per share (NIOP) is regressed with return per share (RETURN) (Chua, Cheong, and Gould 2012, Barth 2007, Chen 2011b, Paananen

and Henghsiu 2009, Kouki 2018, Collins, Maydew, and Weiss 1997b). As in earlier value relevance model NIOP is regressed for time and company fixed effect and the predicted residual is taken as NIOP. The value of adjusted R^2 from the regression is used for interpretation value relevance of NIOP and RETURN. Table 4.4.3 shows that adjusted R^2 in post-IFRS adoption period reduced to 43% from 49.7% in pre-IFRS adoption period. There was a reduction of 6.7%. The result of return modes conflicted with that of price model, showing that the value relevance of return to net income over price reduced, indicating reduction in value relevance and accounting quality. This may be because the company is following a dividend policy in the post-IFRS adoption period in anticipation of future fund requirements or economic recession.

Table 4.4.3 Results of Value Relevance Commercial and Professional Services Industry Sector Companies Pre and Post IFRS

Value Relevance	Prediction	Pre-IFRS R^2	Post-IFRS R^2	Difference in R^2
Price model	POST IFRS > PRE IFRS	0.279	0.401	0.122
Return model	POST IFRS > PRE IFRS	0.497	0.430	-0.067

The result of analysis is not giving a concrete evidence for the improvement in accounting quality after adoption of IFRS. Overall result of the accounting quality measures except the value relevance price model is against the expectation that adoption of IFRS will improve the accounting quality of financial reports. Earning management metric shows that the smooth earning stream increased after adoption of IFRS but the other two measures ratio of CNI/ CCF and correlation between ACC and CF cannot support the increase, as there is no significant sign of use of accrual to manage earning. Metric SPOS record a small reduction in the reporting small positive net income which is insignificant suggesting no change in managing earnings towards positive target. But the timely loss recognition

measured by LNEG shows insignificant improvement in recognising losses on a timely manner which is not giving a clear evidence for improvement in accounting quality. Regarding value relevance, when price model shows significant improvement in explanatory power of market price to net income per share and book value, return model demonstrations a significant decrease in value relevance.

4.3.3 Diversified Financials

The industries included in diversified financial are consumer finances like, personal credits, credit cards, lease financing, mortgage lending, capital markets like corporate lending, investment banking, asset management and custody banks which includes mutual funds, investment management services, investment banks and brokerage, diversified capital markets etc. (S&P 2016). In this section of the study, an analysis of the effect of IFRS adoption on quality of financial reports of Australian listed diversified financial companies are analysed. There are 120 derivative financial companies listed in ASX, out of that 58 companies are listed before 2001. Financial information of 31 diversified financial companies which have financial report of full twelve months from 2001 onwards are used in the analysis.

4.3.3.1 Analysis of Accounting Quality Diversified Financials

Accounting quality of the financial reports of Australian listed diversified financials companies are evaluated by using three measures. Two of these measures, earning management and timely loss recognition are based on the information from the published financial reports and one, value relevance is founded on market information. Earning management has two manifestations, earning smoothing and managing earning towards positive target. To measure earning smoothing the metric used are variability of change in net income (CNI), ratio of variability change in net income to change in cash flow (CNI/CCF), correlation between accruals (ACC) and cash flow (CF). Frequency of small positive net income (SPOS), is the measure for managing earning towards positive target. To evaluate timely loss recognition frequency of large negative net income (LNEG) is the measure used. Value relevance, the market information-based metrics describes the explanatory power of accounting information and market information. Two models are

used to assess value relevance. Price model which provides the explanatory power of market price per share (P) to net income per share (NIPS) and book value per share (BVEPS) and return model which describes the explanatory power of net income over price (NIOP) and return per share (RETURN). All together seven measures are used to evaluate the impact of adoption of IFRS on accounting quality of financial reports of listed companies.

4.3.3.1.1 Variability of Change in Net Income (CNI)

To evaluate the impact of IFRS adoption on the accounting quality of financial reports of derivative financials companies, variability of change in net income CNI of pre-IFRS adoption period and post- IFRS adoption period is measured and compared. Earlier studies suggest that a higher variability of change in net income can be expected if earnings are not managed and it is a sign of quality accounting (Barth 2007, Liu et al. 2011, Chua, Cheong, and Gould 2012, Ahmed, Neel, and Wang 2013, Apergis 2015, Ebaid 2016, Kouki 2018, Othman and Zeghal 2006, Paananen and Henghsiu 2009). The value of CNI in pre-IFRS adoption period is 0.036 and in post-IFRS adoption period, it is -0.024, with p-value 0.000 (see table 4.5.1). The decrease of 0.060 is statistically significant at a significance level of 0.01. A lower frequency denotes a lower variability of change in net income and marks an increase in earning smoothing and low quality financial report after adoption of IFRS. This result is consistent with result shown for samples from all the Australian listed companies taken together and for commercial and professional service companies.

4.3.3.1.2 Ratio of Variability Change in Net Income to Change in Cash Flow (CNI/CCF)

The change in net income may cause either due to use of accrual to manage earning or because of the change in cash flow. If accrual is used to manage earnings, change in net income should be lower than change cash flow and then the ratio of CNI/CCF will be low (Chua, Cheong, and Gould 2012). A higher ratio proposes that change in net income is higher compared to change in cash flow and it may be because of the smooth cash flow not the use of accrual to manage earnings, which caused change in net income and is a sign of quality accounting. Table 4.5.1 displays the value of the ratio of CNI/CCF in the pre-IFRS adoption period as 2.274 and post-IFRS adoption period value -0.935, a decrease of 3.209

with p-value 0.022 which is statistically significant at 95 percent confidence intervals. It shows that the lower CNI registered in the earlier metrics indicating smooth earning stream is not because of smooth cash flow, but due to use of accrual to manage earnings. This suggest a decrease in accounting quality in the post-IFRS period IFRS.

4.3.3.1.3 Correlation Between Accruals (ACC) and Cash Flow (CF)

Naturally there is an inverse relation between accruals (ACC) and cash flow (CF). An increase in accruals reduces cash flow and a reduction in accruals can create higher cash flow. Therefore, logically the correlation between accruals and cash flow will be negative. Even though there can be a negative correlation between ACC and CF, prior studies claim that a higher magnitude of negative correlation between these two variables is a sign of earning management (Yetman 2003, Lang 2006, Barth 2007, Paananen and Henghsiu 2009, Huifa et al. 2010, Liu et al. 2011, Chua, Cheong, and Gould 2012, Taylor et al. 2008, Ahmed, Neel, and Wang 2013). Table 4.5.1 below shows the correlation between ACC and CF which is -0.122 in pre-IFRS adoption period and 0.269 in post-IFRS adoption period registering a reduction in negative correlation. By using fisher's *r to z* transformation, the z value is -3.1. Based on Cramer (1987), the z-value is outside ± 1.96 and p-value 0.001 so that the difference between two correlation coefficient is statistically significant. The statistically significant reduction in negative correlation between the periods, shows that there is no evidence for use of accrual in for earning smoothing in the post-IFRS adoption period.

The earning smoothing measure CNI shows that there is statistically significant reduction in the frequency of change in net income. The ratio of CNI/CCF shows a lower coefficient of ratio in post-IFRS adoption period and supports earlier finding that the lower CNI is not due to lower cash flow but due to use of accrual to manage earning. The correlation between ACC and CF shows a decrease in negative correlation, suggesting that there is no evidence for the use of accruals to manage earnings. Thus, based on CNI and the ratio of CNI/CCF, it can be concluded that the reduction in CNI in post-IFRS adoption period can be due to the use of accrual to manage earning and that there is reduction in accounting quality.

4.3.3.1.4 Frequency of Small Positive Net Income (SPOS)

Management of every entity prefer a positive operating result rather than a negative outcome. This may tempt many entities to report small positive net income rather than reporting a loss. Earlier studies stated that a higher frequency of SPOS can be a sign of managing earning towards positive target (Yetman 2003, Chalmers 2007, Barth, Landsman et al. 2008, Morais and Curto 2008, Paananen and Henghsiu 2009, Liu, Yao et al. 2011). The study uses logistic regression with SPOS as dependent variable and POST and control variables as independent variable and the coefficient of POST is interpreted to know the change in frequency of SPOS between pre-IFRS and post-IFRS periods. The study is using logit regression as SPOS is a dichotomous dummy variable. Table 4.5.1 shows the coefficient of POST is -1.032 with a probability value of 0.198 signifying that there is a reduction in the frequency of reporting SPOS, indicating an improvement in accounting quality but it is not statistically significant.

Table 4.5.1 Results of Earning Management Diversified Financials Sector Companies Pre and Post IFRS

Earning Management	Prediction	Pre-IFRS adoption	Post-IFRS adoption	Significance
Variability of CNI	POST IFRS > PRE IFRS	0.036	-0.024	0.000***
Ratio of Variability of CNI over CCF	POST IFRS > PRE IFRS	2.247	-0.935	0.022**
Correlation of ACC and CF	POST IFRS > PRE IFRS	-0.122	0.269	-3.10 (*z-value*) p-value 0.002***
Small Positive Net Income	-		-1.032	0.198

*p < .10; **p < .05. ***p < .01.

The first two earning smoothing measures clearly indicates an increase in earning management and reduction in accounting quality. Correlation between ACC and CF specifies that there is no evidence to suggest the use of accrual to manage earnings. The frequency of small positive net income measured by SPOS indicates an insignificant reduction in frequency of reporting small earnings. Thus it cannot be concluded that earning management has increased and accounting quality reduced after adoption of IFRS.

4.3.3.1.5 Frequency of Large Negative Net Income (LNEG)

Timely loss recognition is the next criteria used to evaluate change in accounting quality between pre-IFRS adoption period and post-IFRS adoption period. Frequency of reporting large losses are the metric used to assess timely loss recognition. The prior studies bring that a higher frequency of reporting large negative income (LNEG) is a sign of quality accounting (Yetman 2003, Lang 2006, Soderstrom and Sun 2007, Barth, Landsman et al. 2008, Paananen and Henghsiu 2009, Yi Lin, Chee Seng et al. 2012). To measure frequency of reporting large negative income the study is using logistic regression with LNEG as dependent variable and POST and control variables as independent. LNEG is interpreted using the coefficient of the variable POST. Table 4.5.2 below gives the value of POST as 1.185 and the p-value 0.076. The positive value of POST suggests an increase in reporting large losses but the p-value is above 0.50 indicating it is not statistically significant at 95 percentage confidence intervals. There is an increase in the frequency of reporting large losses after adoption of IFRS which is not statistically significant. Thus, the adoption of IFRS by diversified financial companies has not made a substantial increase in timely loss recognition and accounting quality of financial reports after adoption of IFRS.

Table 4.5.2 Results of Timely Loss Recognition in Diversified Financials Sector Companies Pre and Post IFRS

Timely Loss Recognition	Prediction	Coefficient POST	Significance
Large negative net income	+	1.185	0.076* (p>z)
*p < .10; **p < .05. ***p < .01.			

4.3.3.1.6 Value Relevance - Price Model

An evaluation of the explanatory power of market price per share (P) on the net income per share (NIPS) and book value of equity per share (BVEPS) is measured in the price model of value relevance, Based on earlier studies, P is the predicted residual from the regression of market price per share on year and company fixed effect (Barth 2007, Perotti and Wagenhofer 2014, Chua, Cheong, and Gould 2012, Chen 2011b, Collins, Maydew, and Weiss 1997b, Kouki 2018). Adjusted R^2 from the regression of P on NIPS and BVEPS are then interpreted. Adjusted R^2 from the price model as shown in table 4.5.3 for pre-IFRS adoption period is 0.519 and post-IFRS adoption period it is 0.561. The variation is only 4.2%. The explanatory power of market price to net income per share and book value of equity per share has improved after the adoption of IFRS which is not very substantial.

4.3.3.1.7 Value Relevance - Return Model

The value relevance of accounting numbers to market information is also evaluated through return model. Return model evaluates the explanatory power of net income over price per share (NIOP) to return per share (RETURN). In this model also NIOP is the predicted residual from the regression of NIOP to time and company fixed effect and uses adjusted R^2 from the regress NIOP on RETURN to assess the explanatory power of return model. Adjusted R^2 of return model for pre-IFRS adoption period is 0.247 and in post-IFRS adoption period, it is 0.507 (see Table 4.5.3). The increase is of 26 percentages which can be considered as statistically significant. The explanatory power of NIOP to RETURN has improved considerably and as such the quality of financial reporting quality also marks an improvement after adoption of IFRS

Table 4.5.3 Results of Value Relevance in Diversified Financials Sector Companies Pre and Post IFRS

Value Relevance	Prediction	Pre-IFRS R^2	Post-IFRS R^2	Difference in R^2
Price model	POST IFRS > PRE IFRS	0.519	0.561	0.042
Return model	POST IFRS > PRE IFRS	0.247	0.507	0.26

Based on the analysis of the result of companies in diversified financials industry group, there is no clear evidence to establish an improvement in the accounting quality of the financial report. When the first two measures of earning smoothing CNI and ratio of CNI/CCF, shows a reduction in variability of change in net income and evidence of use of accrual to smooth earning the other measures of earning smoothing, correlation between ACC and CF, is not supporting the use of accrual to smooth earnings. SPOS shows insignificant reduction in reporting small positive income which is a sign of decrease of earning management. Thus there is no evidence of improvement in earning management after adoption of IFRS. Timely loss recognition measured by LNEG, and price model of value relevance reports insignificant improvement in financial reporting quality. But return model clearly give evidence for a substantial improvement in value relevance and accounting quality of financial reports after adoption of IFRS. Thus even if there is no evidence for improvement of earning management, timely loss recognition and value relevance price model after adoption of IFRS the value relevance return model marked an improvement in the explanatory power of NIOP over RETURN. Insignificant improvement in timely loss recognition and substantial improvement in value relevance return model can be due to the use of fair value measurement model of measuring financial assets introduced by IFRS after the financial crisis, the application of which is more relevant in the valuation of financial assets of diversified financials industries.

4.3.4. Energy

Energy sector includes a number of industries which are involved in production and supply of energy, like oil and gas, electric power, nuclear power, coal, renewable energy etc. Energy is the life blood of every economy and inadequate supply of energy will affect the economic development of the country (Parker 2003). Australia is the one among the largest producers of coal and natural gas in the world and coal was one of the major sources of energy until recently. But due to environmental issues and the global warming there is a shift of energy source from fossil fuels to renewable energy. According to GICS industry classification energy industry group includes oil and gas related industries and coal and consumable fuels (S&P 2016). There are 264 energy companies listed in ASX and out the that only 92 companies are listed before 2001. From the 92 company's 50 percent, that is, 46 companies which have published financial reports from 2001 onwards are used for the study.

4.3.4.1 Analysis of Accounting Quality Energy Sector

In line with the earlier studies, in energy industry also, the quality of financial reports is evaluated using the three accounting quality criteria, earning management, timely loss recognition and value relevance (Chen 2011b, Collins, Maydew, and Weiss 1997a, Chan, Hsu, and Lee 2015, Lang, Raedy, and Yetman 2003, Kouki 2018, Lin, Riccardi, and Wang 2012, Lang 2006, Paananen and Henghsiu 2009, Chua, Cheong, and Gould 2012, Barth 2007). On basis of these accounting quality criteria, the change in accounting quality of financial reports of pre-IFRS adoption and post-IFRS adoption period is assessed using seven measures. A detailed discussion of these measures is given in methodology chapter. The measures variability of change in net income (CNI), mean ratio of variability of change in net income to variability of change in operating cash flow (CNI/CCF), Spearman's correlation of accruals (ACC) and cash flow (CF) and frequency of small positive operating savings (SPOS) are used to evaluate earning management. Frequency of large negative net income (LNEG) is used to measure timely loss recognition. The value relevance of accounting numbers and market information is assessed using price model and return model.

4.3.4.1.1 Frequency Variability of Change in Net Income (CNI)

The CNI is used to measure whether the adoption of IFRS has reduced managing earnings through earning smoothing. Earlier studies consider that a higher frequency as a sign that these companies are not engaged in earning smoothing and so that there is no earning management in the companies (Narayanan 2014, Barth 2007, Chua, Cheong, and Gould 2012, Ahmed, Neel, and Wang 2013, Lang 2006, Adibah Wan Ismail et al. 2013, Lang, Raedy, and Yetman 2003, Chen 2011b). Table 4.6.1 below shows that the value of CNI in the pre-IFRS adoption period as 0.016 and it is -0.052 in post-IFRS adoption period. On the comparison of the two values using paired t-test, the p-value is 0.003, indicating the decrease in value 0.068 is statistically significant at 0.01 significance level. This suggests that there is a decrease in the frequency of variability of change in net income and may be an evidence of earning smoothing.

4.3.4.1.2 Ratio of Variability of Change in Net Income (CNI) to Variability of Change in Operating Cash Flow (CCF)

This measure ratio of CNI/CCF help to know whether the change in the value of CNI registered in the previous measure is owing to the use of accrual to smooth earnings. Prior studies describes a lower ratio as an indication of use of accruals to smooth earnings (Barth, Landsman et al. 2008, Chen 2011, Yi Lin, Chee Seng et al. 2012, Adibah Wan Ismail, Anuar Kamarudin et al. 2013, Cudia and Dela Cruz 2018). The value of ratio of CNI/CCF in pre-IFRS adoption period is 0.799 and in post-IFRS adoption period, it is 4.937 and p-value is 0.392 (see table 4.6.1). Based on these values it can be interpreted that there is an increase in the ratio which is not statistically significant and as such there is no sign that the energy companies are using accruals for earning smoothing activities.

4.3.4.1.3 Correlation between ACC and CF

Correlation between ACC and CF is another measure used to validate whether the change in frequency of CNI is due to earning smoothing using accruals. Following earlier studies a large magnitude of negative correlation between ACC and CF is taken as a sign of earning smoothing using accruals (Yetman 2003, Barth 2007, Chua, Cheong, and Gould 2012, Lang, Raedy, and Yetman 2003, Paananen and Henghsiu 2009, Liu et al. 2011, Huifa et al. 2010). The value of correlation as shown in table 4.6.1, for pre-IFRS adoption period is

0.248 and for post-IFRS adoption period is 0.032. Comparing the two-correlation value using fisher's r to z transformation the z-value is 2.104 which is above ± 1.96 and p-value 0.035, which means the decrease is statistically significant. Here there is decrease in positive correlation, so it can be concluded that there is sign of using accruals to smooth earning.

The first measure earning smoothing marked, a decrease in CNI after adoption of IFRS. The ratio of CNI/CCF shows that there is no statistically significant proof for use of accrual to manage earnings. The correlation between ACC and CF is supporting the result of CNI in that the energy companies have used accruals to manage earning. Therefore, the decrease in the frequency of CNI after adoption of IFRS in energy sector can be due to earning smoothing not because the change in cash flow and there is an increase in earning smoothing and reduction in accounting quality in the post-IFRS adoption period.

4.3.4.1.4 Frequency of Reporting Small Positive Net Income (SPOS)

SPOS is the next measure of earning management. A lower frequency of SPOS is taken as a sign of not managing earnings and quality financial reporting. In this measure, based on earlier researches, a logistic regression is used as SPOS is a dichotomous dummy variable (Barth 2007, Yetman 2003, Paananen and Henghsiu 2009, Morais and Curto 2008, Liu et al. 2011, Chalmers 2007). In the regression dependent variable is taken as SPOS and POST and control variables are independent variable (Chua, Cheong, and Gould 2012). The coefficient of POST from the regression is used to interpret the result. Table 4.6.1 shows the value of POST as 0.007 and p-value as 0.636. the positive value marks an increase in frequency of reporting small positive net income, which is not statistically significant meaning that there is no remarkable change in earning management and accounting quality of financial report after adoption of IFRS.

Table 4.6.1 Results of Earning Management Energy Sector Companies Pre and Post IFRS

Earning Management	Prediction	Pre-IFRS adoption	Post-IFRS adoption	Significance
Variability of CNI	POST IFRS > PRE IFRS	0.016	-0.052	0.003***
Ratio of Variability of CNI over CCF	POST IFRS > PRE IFRS	0.799	4.935	0.392
Correlation of ACC and CF	POST IFRS > PRE IFRS	0.248	0.032	2.104 (*z-value*) P-value 0.035**
Small Positive Net Income	-		0.007	0.636

*p < .10; **p < .05. ***p < .01.

4.3.4.1.5 Frequency of Large Negative Net Income (LNEG)

Timely loss recognition is another accounting quality measure of financial reports. A quality financial report will account for large losses when it occurs without deferring it to future periods. Higher frequency of reporting large loss is taken as a sign of timely loss recognition and quality accounting practice (Ahmed, Neel, and Wang 2013, Dobre, Brad, and Ciobanu 2015, Lang, Raedy, and Yetman 2003, Barth 2007). As explained early in methodology sections here also the study uses logistic regression with LNEG, as dependent variable and POST and other control variables as independent variables. The coefficient of POST is used to interpret the change in frequency of LNEG after the adoption of IFRS. The coefficient of LNEG is -0.062 with a probability value of 0.473 (table 4.6.2). The negative value signifies a reduction in frequency of large loss in post-IFRS adoption period and p-value, which is above 0.05 significance level, indicates that reduction in value is not statistically significant. The result of LNEG complements the earlier measure SPOS even though they are moving in opposite direction. A positive value of SPOS indicates that frequency of reporting small positive income increases after adoption of IFRS and a negative value of LNEG suggests a decrease in reporting large losses after adoption of IFRS. Both results are not statistically significant and indicates that there is no substantial change in managing earning towards positive target and timely loss recognition after IFRS adoption.

Table 4.6.2 Results of Timely Loss Recognition Energy Sector Companies Pre and Post IFRS

Timely Loss Recognition	Prediction	Coefficient POST	Significance
Large negative net income	+	-0.062	0.473
*p <10; **p < .05. ***p < .01.			

4.3.4.1.6 Value Relevance-Price Model

The value relevance measures describe the explanatory power of accounting information and market information. The price model explains how far the accounting information on a company's net income per share (NIPS) and book value of equity per share (BVEPS) are reflected in determining the market price shares (P). Following earlier studies to get better result first P is regressed for time and company fixed effect. The predicted residual, P, is then regressed with independent variables on NIPS and BVEPS. This process will be done for both pre-IFRS adoption period and post-IFRS adoption period. The adjusted R^2 from this regression is used to interpret the explanatory power of the information. The adjusted R^2 for price model as shown in table 4.6.3 is 0.536 for pre-IFRS adoption period and 0.492 for post-IFRS adoption period. There is a reduction of 4.4% in adjusted R^2 in post-IFRS adoption period indicating that the explanatory power of P to NIPS and BVEPS reduced but the reduction is not substantial to indicate a change in value relevance after IFRS adoption.

4.3.4.1.7 Value Relevance -Return Model

Return model describes the explanatory power of net income scaled by market price (NIOP) and return per share (RETURN). For better result following earlier studies NIOP is first regressed for time and company fixed effect and then the residual is regressed on RETURN (Chua, Cheong, and Gould 2012, Barth 2007, Chen 2011b, Paananen and Henghsiu 2009, Kouki 2018, Collins, Maydew, and Weiss 1997b). Adjusted R^2 from the regression run separately for pre-IFRS and post-IFRS adoption are then taken and interpreted to assess the value relevance. The value of adjusted R^2 for pre-IFRS adoption period is 0.252 and post-IFRS adoption period value of R^2 is 0.171(see table 4.6.3) There

is a reduction of 8.1% in the value of adjusted R^2 shows that the explanatory power of NIOP to RETURN has reduced in post-IFRS adoption period.

Table 4.6.3 Results of Value Relevance Energy Sector Companies Pre and Post IFRS

Value Relevance	Prediction	Pre-IFRS R^2	Post-IFRS R^2	Difference in R^2
Price model	POST IFRS > PRE IFRS	0.536	0.492	-0.044
Return model	POST IFRS > PRE IFRS	0.252	0.171	-0.081

The above discussion analysed the impact of mandatory IFRS adoption on financial reporting quality of energy companies from three border accounting quality measures, earning management, timely loss recognition and value relevance. Overall, the result suggests that there is change in accounting quality between pre-IFRS adoption period and post-IFRS adoption periods. The first measure CNI shows that there is a decrease in the variability of change in net income indicating an increase in earning smoothing. On the other hand, the ratio of CNI/CCF shows an insignificant increase in ratio which means that there is no clear evidence for use of accrual to manage earning. The correlation between ACC and CF shows a reduction in the correlation and a sign of use of accrual to manage earning. Therefore, decrease in CNI can be taken as a sign of earning smoothing. SPOS registered an increase in reporting small positive net income even if it is not significant. Thus, there is an increase in the earning management between pre-IFRS adoption period and post-IFRS adoption period. The frequency of timely loss recognition denoted by LNEG also supported the finding of SPOS display a reduction in frequency which is not significant. Finally, the two value relevance measures price modal and return model both registered a reduction in the explanatory power of book value and market value after adoption of IFRS. The overall result of energy sector showed an increase in earning management, decrease in timely loss recognition, and reduction in value relevance and

indicated a reduction in financial reporting quality in the post-IFRS adoption period. This can be because of the impact of the reduction in demand and price in energy sector witness in the recent years.

4.3.5 Health Care Equipment and Supplies

Medical practitioners are using a wide variety of technologies and equipment's in diagnosing, treating and assessing their patients and therefore health care is more advanced, more effective and in many cases costlier, contributing billions of dollars to the economy (Ong 2002). The health care equipment and supply industries include, manufacturers of health care equipment and devices and manufacturers of health care supplies and medical products (S&P 2016). In Australia there are 66 companies in Health care equipment and supply companies listed in Australian securities exchange. Out of that only 28 companies are listed before 2001. From the population of 28 companies' financial information of 15 companies are collected and analysed to evaluate the impact of adoption of IFRS on quality of financial reports. Based on the earlies researches accounting quality measure earning management is assessed using four metrics variability of CNI, ratio of CNI/CCF, correlation between ACC and CF and frequency of SPOS and timely loss recognition is reviewed by means of frequency of LNEG. To assess the value relevance two models price model and return model are used. Price model checks the explanatory power of P on NIPS and BVEPS. Return model evaluates the explanatory power of NIOP and RETURN.

4.3.5.1 Earning Management

The result of the first measure relating to earning management indicates that there is a reduction in change in net income, CNI, in the post-IFRS adoption period. The value of CNI in pre-IFRS adoption period is 0.013 reduced to -0.036 in post-adoption period. But the decrease is not statistically significant as the p-value is 0.238. (Table 4.7.1) This suggests that there is no substantial decrease in frequency of variability of CNI and earning smoothing. The second findings the ratio of CNI/CCF shows a reduction in value after adoption of IFRS, which is not statistically insignificant. The result reported in table 4.7.1 gives the ratio for pre-IFRS adoption period -0.595 and for post-IFRS adoption period it is -0.710. The reported p-value 0.932 shows that the difference is not statistically significant.

A lower ratio indicates that there is no significant evidence for the use of accrual to manage earnings and supports the finding of the first measure. Correlation between ACC and CF is the next measure of earning management. Table 4.7.1 shows the result of correlation is -0.495 in pre-IFRS adoption period and a coefficient of 0.222 in post-IFRS adoption period. The z-score is -4.105 with a p-value of 0.000. A negative z-value above ±1,96 and p-value of 0.000 indicates correlation is less negative in post-IFRS adoption period and suggests that the difference in correlation is significant. The result of correlation supporting the earlier two measures that there is no evidence of use accrual to smooth earning. Thus, all the three measures of earning smoothing taken together supports the findings that there is no change in earning smoothing after IFRS adoption. The adoption of IFRS has not made any change in earning smoothing and quality of financial report.

Managing earnings towards positive target is another criterion on which the study evaluates earning management. Frequency of reporting small positive operating savings (SPOS) is the metric used for that. As explained earlier, to measure frequency of reporting positive operating savings, SPOS is regressed on POST and control variables and coefficient of POST is used to assess the frequency of SPOS. Table 4.7.1 below reports a value of -0.077 for POST meaning there is a decreasing in reporting small operating savings in post-IFRS adoption period. But the value is not statistically significant as the p-value is 0.228. This corresponds with the earlier findings that even if there is a small reduction in frequency of reporting SPOS, it is not significant, as such there is no variation in earning management and accounting quality after adoption of IFRS in health care supplies and equipment industry.

Table 4.7.1 Results of Earning Management Health Care and Services Sector Companies Pre and Post IFRS

Earning Management	Prediction	Pre-IFRS adoption	Post-IFRS adoption	Significance
Variability of CNI	POST IFRS > PRE IFRS	0.013	-0.036	0.238
Ratio of Variability of CNI /CCF	POST IFRS > PRE IFRS	-0.595	-0.710	0.932
Correlation of ACC and CF	POST IFRS > PRE IFRS	-0.495	0.222	-4.105 (*z-value*) P-value 0.000
Small Positive Net Income		-0.077		*P-value* 0.228

*p < .10; **p < .05. ***p < .01.

4.3.5.2 Timely Loss Recognition

Timely loss recognition is the next criteria used to measure accounting quality and frequency of reporting large negative net income, LNEG, is the metric used for its evaluation. Based on earlier studies, LENG is regressed with POST and control variables and the coefficient of POST is interpreted to evaluate frequency of LNEG. The value of POST is -0.788 with a p-value of 0.369(see table 4.7.2). The negative value of LNEG implies a decrease in frequency of LNEG which not statistically significant. Thus, even if there is a reduction in the frequency of reporting large losses, as it is insignificant, it cannot be taken as a decrease in accounting quality in health care supplies and equipment industry after adoption of IFRS.

Table 4.7.2 Results of Timely Loss Recognition Health Care and Services Sector Companies Pre and Post IFRS			
Timely Loss Recognition	Prediction	Coefficient POST	Significance P-value
Large negative net income	+	-0.788	0.369
*p < .10; **p < .05. ***p < .01.			

4.3.5.3 Value Relevance

To evaluate the explanatory power of book value and market value two value relevance measures, price model and return model are used. Price model evaluates the explanatory power of P on NIPS and BVEPS and return model explanatory power of NIOP and RETURN. Both these models interpret the value relevance based on the adjusted R^2 from the regression of market-based information and book value. The result of these two models are showing contradicting evidence. The value of adjusted R^2 for price model in pre-IFRS adoption period is 0.512 and adjusted R^2 value in post-IFRS adoption period is 0.760 (see table 4.7.3). There is a substantial increase, 24.8 percentage, which suggests a raise in value relevance in post-IFRS adoption period. Contrary to this result, return model register a decrease of 17.4 percentage, from 0.584 in pre-IFRS adoption period to 0.410 in the post-adoption period. Return model explains that the value relevance has reduced after adoption of IFRS.

Table 4.7.3 Results of Value Relevance Health Care and Services Sector Companies Pre and Post IFRS

Value Relevance	Prediction	Pre-IFRS R^2	Post-IFRS R^2	Difference in R^2
Price model	**POST IFRS > PRE IFRS**	**0.512**	0.76	0.248
Return model	POST IFRS > PRE IFRS	0.584	0.41	-0.174

The result of the three criteria used to analysis accounting quality of health care equipment and supplies industry are not showing consistent result. Earning smoothing measures and timely loss recognition, shows a decrease in accounting quality in post-IFRS adoption period which is insignificant. But when the price model shows a material increase in value relevance and accounting quality, return model shows a decrease in explanatory power of financial report and accounting quality. All the accounting quality measures except value relevance price model shows a reduction or no significant change in accounting quality against the expectation. The increase in value relevance in price model can be the increase in investors' interest in this sector because of the importance and growth potential of medical sector. Overall there is no significant increase in accounting quality of health care and services sector companies' financial report after adoption of IFRS.

4.3.6 Material Sector

The industries included in the material sectors as per GICS classification are chemicals, construction materials, containers and packaging, metals and mining, paper and forest products (S&P 2016). This sector includes the metals and mining industries which have an important role to play in Australian economy. It is a primary industry sector and involves heavy capital investment. There are 214 companies listed before 2002 in Australian securities exchange. A sample of 107 companies which have 14 years published financial reports are selected and the impact of adoption of IFRS on the financial reporting quality

of materiel sector are evaluated based on these company's information. The change in quality of financial records of material industry is evaluated using earning management, timely loss recognition and value relevance as in the earlier industries.

4.3.6.1 Earning Management

Earning management is assessed by earning smoothing and timely loss recognition. Table 5.8.1 below shows the result of earning management classified into earning smoothing and managing earning to positive target. The result of analysis of the four earning management measures are presented in Table 4.8.1. The value of CNI in pre-IFRS adoption period was -0.006 and the value in post-IFRS adoption period was -0.016. There was a small decrease that was not statistically significant as the p-value was 0.375. The reduction in CNI suggested a decrease in variability of change in net income and increase in earning smoothing. However, it was not statistically significant to determine a remarkable difference in the accounting quality of financial reports between the pre-IFRS adoption period and post-IFRS adoption period.

The result of the second earning smoothing measure, is the ratio of CNI /CCF is lower in post-IFRS adoption period compared to pre-IFRS adoption period. The value in pre-IFRS adoption period is 0.363 and for post-IFRS adoption period it is -1.768 with p-value 0.522. (see table 4.8.1). The decrease indicates that the variability of change in net income is lower than change in cash flow. But as the decrease is not statistically significant we cannot conclude that there is evidence of use of accruals to manage earning and as such there is no change in earning management after adoption of IFRS by material industries. This supports the result of the first measure CNI.

The third measure used is correlation between ACC and CF. Table 4.8.1 shows that the correlation is 0.050 in pre-IFRS adoption period and 0.355 in post-IFRS adoption period. A comparison of the correlation result using fisher's r to z transformation gives a z score of -4.67 and a p-value of 0.000. The value of z-score is more than ±1.96 and p-value 0.000 indicates the increase in correlation is statistically significant. Considering the earlier two measures and increase in positive correlation suggests that there is no evidence of change in CNI and use of accrual to smooth earnings and so no change in earning smoothing between pre-IFRS adoption period and post-IFRS adoption period.

4.3.6.2 Managing Earning Towards Positive Target

Frequency of small positive net income (SPOS) is the measure used to evaluate managing earnings towards positive target. This measure uses logistic regress with SPOS as dependent variable and POST and control variables as independent variables and the coefficient of POST is used to interpret the result. The coefficient of POST is -0.002 with a *p*-value of 0.883 (see table 4.8.1). A negative value of SPOS suggests that frequency of reporting small positive net income decreased in the post-IFRS adoption period and there is a reduction in managing earning towards positive target and improvement in accounting quality after adoption of IFRS which is not statistically significant as p-value is more than 0.05. The result of all the four earning management measures consistently indicate that there is no significant change in accounting quality after adoption of IFRS.

Table 4.8.1 Results of Earning Management Material Sector Companies Pre and Post IFRS

Earning Management	Prediction	Pre-IFRS adoption	Post-IFRS adoption	Significance
Variability of CNI	POST IFRS > PRE IFRS	-0.006	-0.016	0.375
Ratio of Variability of CNI over CCF	POST IFRS > PRE IFRS	0.363	-1.768	0.522
Correlation of ACC and CF	POST IFRS > PRE IFRS	0.050	0.355	-4.675 (*z-value*) P-value 0.000***
Small Positive Net Income	-	0.002		*P-value* 0.833

*p < .10; **p < .05; ***p < .01.

4.3.6.3 Timely Loss Recognition

Frequency of reporting large losses (LNEG) is the measure used to evaluate timely loss recognition. This measure also uses logistic regress with LNEG as dependent variable and POST and control variables as independent variables and uses the coefficient of POST to interpret the result. Table 4.8.2 gives the value of POST as -0.079 and p-value 0.141. The negative value of POST indicates a decrease in frequency of reporting large negative net income in post-IFRS adoption period and denotes a reduction in the accounting quality of

financial reports. But as the decrease is not statistically significant it cannot be concluded that there is a decline in accounting quality. This result is also supporting the earlier result in that there is no significant change in timely loss recognition and accounting quality in post-IFRS adoption period.

Table 4.8.2 Results of Timely Loss Recognition Material Sector Companies Pre and Post IFRS

Timely Loss Recognition	Prediction	Coefficient of POST	Significance P-value
Large negative net income	+	-0.079	0.141
*p < .10; **p < .05; ***p < .01.			

4.3.6.4 Value Relevance - Price Model

The value relevance models evaluate the explanatory power of financial reporting information with market-based information of the companies. The price model, the first value relevance measure uses the adjusted R^2 from the regress of the residual from the regression of market price for time and company fixed effect, P, on net income per share (NIPS) and book value of equity per share (BVEPS). According to table 4.8.3 the adjusted R^2 for pre-IFRS adoption period is 0.485 and the value for post-IFRS adoption period 0.479 the decrease 0.6 percentage indicates a reduction in the explanatory power of book value and market value. The reduction in adjusted R^2 is nominal, suggesting that the decrease in accounting quality is not significant.

4.3.6.5 Value Relevance – Return Model

The return model asses the explanatory power of book value, net income over market price (NIOP), and return per share (RETURN). Here also for better result, residual NIOP from the regression of NIOP for time and company fixed effect is regressed with RETURN and R^2 is used to evaluate value relevance. Adjusted R^2 for pre-IFRS adoption period is 0.253 and for post-IFRS adoption period it is 0.275 (see table 4.8.3). There is an increase of 2.2%,

specifying a growth in the explanatory power and accounting quality. The 2.2 percentage reduction in R^2 cannot be considered as a significant reduction in explanatory power and accounting quality. Both the value relevance measures agree that the value relevance of book value and market information reduced after IFRS adoption. But the decrease cannot be taken as significant suggesting that there is no evidence of change in accounting quality of financial reports after IFRS adoption.

Table 4.8.3 Results of Value Relevance Material Sector Companies Pre and Post IFRS

Value Relevance	Prediction	Pre-IFRS R^2	Post-IFRS R^2	Difference in R^2
Price model	POST IFRS > PRE IFRS	0.485	0.479	-0.06
Return model	POST IFRS > PRE IFRS	0.253	0.275	0.022

The result of all the measures used to evaluate financial reporting quality of material industry suggests a reduction in the accounting quality of financial reports in the post-IFRS adoption period. But none of these measures register a statistically significant decrease in accounting quality after adoption of IFRS. Therefore, it can be concluded that the adoption of IFRS has made any significant change in the accounting quality of material industries.

4.3.7 Real Estate Sector

Real estate industry has very important role in the economic activity of every country. It helps in providing infrastructure facility needed for the economic development and have a positive impact in the economic development of the country. The real estate industry is included as one of the industry group for analysing the financial reporting quality of Australian listed companies because of the particular impact of IFRS on this industry. The adoption of IFRS has great influence on financial reporting system of real estate companies especially in the investment property measurement choice of fair value model or historical cost model (Chen 2011a). The real estate industries include real estate investment trusts

and real estate management and development companies (S&P 2016). There are 37 real estate companies listed in ASX with more than 14 years' financial reports, out of that samples of 19 companies are selected and financial data of these companies are collected for analysis. The different measures used to analyse accounting quality are on CNI, ratio of CNI/CCF, correlation between ACC and CF and SPOS to assess earning management, LNEG to measure timely loss recognition and price model and return model to evaluate value relevance. All the manifestations of accounting quality, except the value relevance of NIOP and RETURN shows that there is no substantial improvement in accounting quality after adoption of IFRS. A detailed discussion of different accounting quality metrics is given below.1

4.3.7.1. Variability of Change in Net Income (CNI)

The value of CNI of each period and the result of paired t-test is shown in table 4.9.1 below. The result shows a significant difference between the pre-IFRS adoption period and post-IFRS adoption period. The value of mean of the CNI of pre-adoption period is 0.008 and in the post-adoption period it is -.017, a decrease of 0.025. The p-value of the paired student's independent *t*-test is 0.252, signifying the decrease not statistically significant (see table-4.9.1). This suggests that the variability of change in net income reduced in post-adoption period compared to pre-adoption period indicating that earning smoothing behaviour has increased after adoption of IFRS but the change is not statistically significant and so IFRS adoption has not made any significant variation in earning smoothing.

4.3.7.2 The Ratio of Variability of Change in Net Income to Variability of Change in Cash Flow from Operation CNI/CCF

The ratio of CNI/CCF, is the second measure of earning smoothing. This will help us to see whether the CNI is reflected in a similar way in change in CCF also. If a company manage earnings using accruals the variability of change in net income should be lower than variability of operating cash flow. A lower ratio proposes that it may be the use of accruals to manage earnings and not a higher variability of cash flow that drive earning variability (Ahmed, Neel, and Wang 2013, Leuz and Verrecchia 2000, Lang 2006, Barth 2007, Chua, Cheong, and Gould 2012).

The value of the mean of the ratio CNI and CCF of each period and the result of paired student's independent t-test can be seen in Table 4.9.1 below. Mean of the ratio is 1.031 in the pre-adoption period and -9.219 in the post-adoption period and the p-value is 0.320. The ratio is higher in the pre-IFRS adoption period as compared to post-IFRS adoption period, but the difference is not statistically significant. There is no significant change in the ratio between the two periods in both measure CNI and ratio CNI/CCF. This suggests that difference in variability of change in net income is the result of difference in cash flow variability and the adoption of IFRS has not improved the variability of change in net income and the quality of financial report.

4.3.7.3 Correlation Between Accrual (ACC) and Cash Flow (CF)

Another earning smoothing measure used in the study is the correlation between ACC and CF. When companies engage in earning smoothing, in times of poor cash flow, companies use accruals to smooth cash flow variability (Chua, Cheong, and Gould 2012). Large magnitude of negative correlation between ACC and CF is a sign of earning smoothing. (Ahmed, Neel, and Wang 2013, Barth 2007, Leuz and Verrecchia 2000, Lang 2006, Lang 2003, Chua, Cheong, and Gould 2012). The Spearman's correlation in the pre-adoption period shows a value of 0.611 while that of post-adoption period shows a value of 0.160 (See Table 4.9.1). The z- value calculated using the correlation coefficient and the number of observations of the two periods is 3.315, with a p-value of 0.001, The value of z-score above ±1.96 and p-value less than 0.05 indicating that there is a decrease in positive correlation between the periods which is statistically significant. The correlation suggests that there is indication of the use of accrual to manage earnings and a reduction in accounting quality but, the variability of change in net income is not significant proposing that there is no sign of earning smoothing in post-IFRS adoption period.

The first two measures of earning smoothing, CNI, ratio of CNI to CCF shows no significant change in quality of earning smoothing. But, the Spearman's correlation between ACC and CF are not showing the same outcome. There is a decrease in the magnitude of positive correlation between ACC and CF but, as CNI is not marking a significant change between periods it can be concluded that there is no significant change in earning smoothing.

4.3.7.4 Frequency of Small Positive Earning (SPOS)

Managing earning towards positive target is another way of earning management. Frequency of small positive earning is used to measure earning management. The usual outcome of earning management using discretionary accrual is high frequency small positive net income *(SPOS)* (Ahmed, Neel, and Wang 2013, Barth 2007, Leuz and Verrecchia 2000, Lang 2006, Lang 2003, Chua, Cheong, and Gould 2012). The coefficient of POST shows a positive value of 0 .023 and p-value 0.715, (See Table 4.9.1) indicating that the frequency of reporting small positive net income has increased in the post-IFRS adoption period but the increase is not statistically significant. Thus, managing earnings towards positive target is higher in post-adoption period than in the pre-adoption period but it is not significant enough to conclude that there is reduction in accounting quality. This corroborate the earlier finding that the companies are not engaging in earning management and the accounting quality of financial report has not changed after adoption of IFRS.

Table 4.9.1 Results of Earning Management Real Estate Sector Companies Pre and Post IFRS

Earning Management	Prediction	Pre-IFRS adoption	Post-IFRS adoption	Significance
Variability of CNI	POST IFRS > PRE IFRS	0.008	-0.017	0.252
Ratio of Variability of CNI over CCF	POST IFRS > PRE IFRS	1.031	-9.219	0.32
Correlation of ACC and CF	POST IFRS > PRE IFRS	0.611	0.16	3.315 (*z-Value*) P-value 0.001
Small Positive Net Income		0.023		*P-value* 0.715

*p < .10; **p < .05; ***p < .01.

4.3.7.5 Frequency of Reporting Large Negative Net Income (LNEG)

Recognition loss as and when they arise is another important sign of quality accounting. Based on the earlier studies, frequency of reporting large negative income (LNEG) is the manifestation of timely loss recognition. (Ball, Kothari, and Robin 2000, Leuz and Verrecchia 2000, Barth 2007, Chua, Cheong, and Gould 2012). The coefficient of POST in the logit regression shows a positive value of 0.001 and p-value 0.984. Negative coefficient of LNEG suggests a reduction in the frequency of reporting large negative net income which is not statistically significant (See Table 4.9.2). Thus, even if the firm is reporting large negative income as and when they arise, the frequency of reporting is not significantly higher after adoption of IFRS. The result shows an insignificant increase in reporting large negative income in post-adoption period which cannot be interpreted as a betterment in the accounting quality after adoption of IFRS.

Table 4.9.2 Results of Timely Loss Recognition Real Estate Sector Companies Pre and Post IFRS

Timely Loss Recognition	Prediction	Coefficient of POST	Significance
Large negative net income	+	0.001	P-value: 0.984

*p < .10; **p < .05; ***p < .01.

4.3.7.6 Value Relevance-Price Model

Based on the stock market information of the listed companies two sets of analysis are made to evaluate the value relevance of the financial information of companies and through that the accounting quality. As explained earlier P is regressed first for time and company fixed effect and then a second regression is run taking residual from the first regression as dependent variable and NIPS and BVEPS as independent. To evaluate the value relevance separate regression of P on NIPS and BVEPS, for pre-adoption and post-adoption period, is run and R^2 from this regression is used to describes the explanatory power. Higher R^2 is an indication of higher explanatory power and value relevance and thus a higher quality financial report (Ahmed, Neel, and Wang 2013, Barth 2007, Leuz and Verrecchia 2000, Lang 2006, Lang 2003, Chua, Cheong, and Gould 2012). The result shows R^2 value of 0.568 in the pre-adoption period and R^2 value of 0.394 in post-adoption period (see table

4.9.3). The decrease in the value of R^2 is 17.4 percentage. The value relevance represented by R^2 decreased in post-adoption period. This is a clear sign of decrease in value relevance of price on net income and book value per share, which can be interpreted as the decrease in the explanatory power and quality of financial report.

4.3.7.7 Value Relevance-Return Model

The second value relevance measure is the explanatory power of NIOP on RETURN. A regression is run with NIOP as dependent variable and RETURN as independent variable, separately for pre-adoption and post-adoption period and the resulting R^2 will be interpreted to see the explanatory power and the value relevance. Higher the R^2, better the explanatory power and value relevance (Chua, Cheong, and Gould 2012, Ball, Kothari, and Robin 2000, Barth 2007, Ahmed, Neel, and Wang 2013). The R^2 is 0.326 in pre-adoption period and a value of 0.409 in the post-adoption period (see table 4.9.3). The R^2 increased by 8.3 percentage, which is a sign of improvement in the explanatory power and value relevance. Showing an improvement in accounting quality in post-adoption period.

Table 4.9.3 Results of Value Relevance Real Estate Sector Companies Pre and Post IFRS

Value Relevance	Prediction	Pre-IFRS R^2	Post-IFRS R^2	Difference in R^2
Price model	POST IFRS > PRE IFRS	0.568	0.394	-0.174
Return model	POST IFRS > PRE IFRS	0.326	0.409	0.083

Based on the above analysis, the result on the impact of adoption of IFRS on quality of financial report by real estate companies, suggests that the adoption of IFRS has not improved the financial reporting quality of these companies. All the measures of earning smoothing shows that there is no significant improvement in earning smoothing and accounting quality after adoption of IFRS. Managing earnings towards positive earnings the second element of earning management, measured by SPOS, shows statistically insignificant higher frequency in post-adoption period, which is an indication that IFRS adoption has not improved the accounting quality. Timely loss recognition, measured by LNEG, indicates an enhancement in the frequency of reporting large losses after adoption

of IFRS. But, the increase in frequency of LNEG is not statistically significant and as such a substantial improvement in accounting quality cannot be reported. The value relevance measures, price model which evaluates explanatory power of P on NIPS and BVEPS and return model which shows the explanatory power of NIOP on RETURN shows contradicting result. The regression of P on NIPS and BVEPS shows that the value relevance of financial report has not improved after adoption of IFRS. While the regression of NIOP on RETURN shows that the value relevance of has increased and as such accounting quality of financial report has enhanced after adoption of IFRS. The increase in value relevance return model in post-IFRS period can be due to the boom in the real estate sector witness in the pre financial crisis years of 2006 and 2007, which are included in post-IFRS periods when the profits and return in the sector increased.

4.3.8 Software and Services

The technical advancement in the form of computers and wide spread use of computers in almost every business task, has made tremendous improvement in the method of business operations. The advent of internet and the rapid increase in the data processing speed simplified many physical business tasks easier. The use of computers enabled the businesses in using different computer software and services that can help in simplifying their day to day tasks and increase the efficiency. The wide spread use of computer software in all paces of business activities lead to the development of software and services industry in every part of the world including Australia. The software and service sector includes developing and marketing internet software & services, IT services, software development and production etc. (S&P 2016). There were 77 software and services companies listed in the Australian Stock Exchange. Out of that, 49 companies were registered before 2001 and out of that, the financial information of 28 companies was collected and evaluated to assess the impact of IFRS adoption on the software and services sector. Following the method in previous research studies, the accounting quality of the software and services industry was also evaluated using seven measures divided into three elements of accounting quality, namely earning management, timely loss recognition, and value relevance.

4.3.8.1 Variability of Change in Net Income (CNI)

Earning management is assessed using earning smoothing and timely loss recognition. The first measure used to evaluate earning smoothing is CNI. Table 4.10.1 below gives a pre-IFRS period value of 0.062 and post- IFRS adoption period value 0.043. There is a small decrease in value which is not statistically signifying as the p-value is 0.321. The insignificant decreases reported suggests that there is no considerable change in earning stream and accounting quality after adoption of IFRS by software and services industry in Australia.

4.3.8.2 Ratio of Variability of Change in Net Income to Variability of Change in Cash Flow (CNI/CCF)

Ratio of CNI/CCF is the second earning smoothing measure used to support the findings in the CNI. Table 4.10.1 shows a pre-IFRS adoption period ratio of -2.483 and post-IFRS adoption period ratio of 2.474. On comparison of two ratios using student's t-test the p-value is 0.255 suggesting that the difference is not statistically significance. The result indicates that there is no evidence for the use of accrual to smooth earning as such there is no evidence of earning management. This measure supports the earlier measure that there is no evidence of use of accrual to smooth earning stream and so cannot suggest that the accounting quality reduced after IFRS adoption.

4.3.8.3 Correlation Between ACC and CF

The result of the correlation between ACC and CF increased to 0.346 in post-IFRS adoption period from 0.147 in pre-IFRS adoption period. Comparing the value of two correlation using fisher's r to z transformation, the z-value is -1.58 which is between ±1.96 and p-value is 0.115 suggesting that the difference is not statistically significant (see table 4.10.1). There is an increase in the positive correlation between the two periods, which corresponds with the earlier two measures of earning smoothing, proposing that there is no evidence for the use of accrual to smooth earning stream.

The result of the first earning smoothing measure CNI suggests that there is no significant evidence for variability of change in net income. Ratio of CNI/ CCF and correlation between ACC and CF used to corroborate CNI also suggests that, there is no sufficient

evidence for use of accruals to smooth earning stream and there is no change in quality of financial reports between pre-IFRS and post-IFRS adoption period.

4.3.8.4 Frequency of Reporting Small Positive Operating Savings (SPOS)

SPOS is the next metric used to assess whether software and services industry is managing earning towards positive target. The coefficient of POST from the logistic regression of SPOS on POST and control variables is used to interpret whether firms are managing earnings towards positive target. Table 4.10.1 shows a negative value of -0.027 for SPOS, with p-value 0.348 indicating a reduction in the frequency of reporting small positive income which is a sign of decrease in managing earning which is not statistically significant.

All the four earning management metrics discussed above suggests that there is small variation in earning management between pre-IFRS and post-IFRS adoption periods and it is not statistically significant. Thus, there is no substantial evidence for change in earning management and quality of financial reporting between two periods.

Table 4.10.1 Results of Earning Management Software and Services Pre and Post IFRS

Earning Management	Prediction	Pre-IFRS adoption	Post-IFRS adoption	Significance
Variability of CNI	POST IFRS > PRE IFRS	0.062	0.043	0.321
Ratio of Variability of CNI over CCF	POST IFRS > PRE IFRS	-2.483	2.474	0.255
Correlation of ACC and CF	POST IFRS > PRE IFRS	0.147	0.346	-1.580 (z-value) P-value: 0.115
Small Positive Net Income	-	-0.027		P-value: 0.348

*p < .10; **p < .05; ***p < .01.

4.3.8.5 Timely Loss Recognition

Frequency of reporting large negative net income (LNEG) is the measure used to evaluate timely loss recognition. LNEG is assessed using the coefficient of POST from the logistic regression of LENG as dependent variable and POST and control variable as independent. Table 4.10.2 shows a coefficient of - 0.055 for POST with a p-value of 0.555. Negative coefficient of LNEG specifying that there is a decrease in reporting large negative net income which is not statistically significant. Decrease in LNEG is a sign that the frequency of reporting large negative net income reduced in the post-adoption period, suggesting that the firms are not reporting large losses in a timely manner. But as the difference is not statistically significant to conclude that there is a reduction in timely loss recognition and quality of financial reporting in the post-IFRS adoption period.

Table 4.10.2 Results of Timely Loss Recognition Metrics Software and Services Pre and Post IFRS

Timely Loss Recognition	Prediction	Coefficient of POST	Significance P-value
Large negative net income	+	-0.055	0.555

*p < .10; **p < .05; ***p < .01.

4.3.8.6 Value Relevance - Price Model

The value relevance measure uses price model and return model to explain the association between market information and book information. Price model regress P for time and company fixed effect first and then the residual is taken as dependent variable and regressed with NIPS and BVEPS as independent variable. The adjusted R^2 from this regression is interpreted for value relevance. The result of value relevance models is reported in Table 4.10.3. Adjusted R^2 for price model in pre-IFRS adoption period is 0.284 and in post-IFRS adoption period it is 0.487. There is an increase of 20.3 percent indicating an improvement in value relevance of accounting information and as such there is an increase in quality of financial reporting after adoption of IFRS.

4.3.8.7 Value Relevance- Return Model

Return model of value relevance which explains the explanatory power NIOP to RETURN also uses the adjusted R^2 from the regression of NIPO with RETURN to interpret the explanatory power of accounting data and market information. The value of adjusted R^2 of return model increased from 0.232 in pre-IFRS adoption period to 0.278 in post-IFRS adoption period increase is 4.6 percentage (see table 4.10.3). The increase in the adjusted R^2 indicates an improvement in the value relevance and accounting quality after adoption of IFRS.

Table 4.10.3 Results of Value Relevance Metrics Software and Services Pre and Post IFRS

Value Relevance	Prediction	Pre-IFRS R^2	Post-IFRS R^2	Difference in R^2
Price model	POST IFRS > PRE IFRS	0.284	0.487	0.203
Return model	POST IFRS > PRE IFRS	0.232	0.278	0.046

Overall, result of all the three metrics of accounting quality are not showing consistent result. The result of first two measures, earning management and timely loss recognition suggests that there is no significant difference in accounting quality between pre-IFRS adoption and post-IFRS adoption period. But in contradiction to the first two measures, both the value relevance model demonstrates an increase in the value relevance of accounting information after the adoption of IFRS. This may be because software and services sector is a fast developing industry and the use of the fair value accounting and the external economic factors would have made the published financial information more value relevant.

4.4 Impact of IFRS Adoption on Each Quality Measures on Different Industry Sectors

The earning management, timely loss recognition and value relevance are the three measures used to analyses the accounting quality. In this section the impact of IFRS adoption on each accounting quality measures for different industrial sectors selected for the study is analysed. Earning management, the first metrics has two dimensions, one earning smoothing which is evaluated using CNI, ratio of CNI/CCF and correlation between ACC and CF and the second is managing earning towards positive target which is measured using SPOS. Timely loss recognition is evaluated using LNEG and price model and return model are used to evaluate value relevance. To evaluate the impact of adoption of IFRS on accounting quality a comparative result of all the 264 companies taken together and seven group of companies are made using all these accounting quality metric. In the following section the impact of IFRS adoption on each accounting quality measures of all Australian listed companies and each industrial sector are analysed.

4.4.1 Earning Smoothing

Earning smoothing is measured comparing CNI of per and post- IFRS period and supported by the ratio of CNI to CCF and correlation between ACC and CF.

4.4.1.1 Variability of Change in Net Income (CNI)

Comparative result of the first measure earning smoothing shows that there is no significant difference in earning smoothing and accounting quality of financial reports of any of the group of companies analysed. The first measure of earning smoothing is variability of change in net income, CNI. Table 4.11.1 shows the comparative result of CNI of all the group of companies. Adoption of IFRS is expected to increase accounting quality demonstrating an increase in CNI in the post-IFRS adoption period. But the comparative analysis shows that for all the 264 companies taken together, commercial and professional services, diversified financial and energy sector shows a statistically significant reduction in CNI and in the case of health care equipment and services, materials, real estate and software and services sector marked an insignificant reduction in CNI and accounting quality. Thus the reduction in CNI in all sectors, even if some are not significant, suggest

that the variability of change in net income reduced in the post-IFRS adoption period compared to pre-IFRS adoption period. Whether the reduction in CNI is a sign of earning smoothing can be confirmed only after considering the result of the two other measures ratio of CNI/CCF and correlation between ACC and CF, used to corroborate the variation in CNI

Table 4.11.1 Variability of CNI (IFRS Period)

Prediction POST-IFRS > PRE-IFRS

Industry sector	Pre-IFRS	Post-IFRS	Significance
All 264 companies	0.015	-0.017	0.000***
Commercial and professional service	0.044	0.005	0.016**
Diversified Financials	0.036	-0.024	0.000***
Energy	0.016	-0.052	0.003**
Health care and services	0.013	-0.036	0.238
Material	-0.006	-0.016	0.375
Real estate	0.008	-0.017	0.252
Software and services	0.062	0.043	0.321

*p < .10; **p < .05; ***p < .01.

4.4.1.2 Ratio of CNI/CCF

The second earning smoothing measure ratio of CNI/CCF is used to corroborate the finding in the CNI. If ratio is higher it is considered as a proof that there is no evidence for use of accruals to manage earnings. The result of ratio of CNI/CCF in Table 4.11.2 for all sectors except diversified financial indicates that there is no statistically significant change in the ratio between two periods, suggesting that there is no proof of use of accruals to manage earnings and earning smoothing. In the case of diversified financial sector, it shows a significant reduction in the ratio indicating the use of accrual to manage earning. The decrease in CNI and the decrease in ratio of CNI/CCF is an indication of reduction in variability of change in net income and use of accrual to manage earning which can be a sign of reduction in accounting quality in diversified financial sector.

Table 4.11.2 Ratio of CNI/CCF (IFRS Period) Prediction POST-IFRS > PRE-IFRS			
Industry sector	Pre-IFRS	Post- IFRS	Significance
All 264 companies	0.67	0.434	0.68
Commercial and professional service	2.262	0.658	0.533
Diversified Financials	2.247	-0.935	0.022**
Energy	0.799	4.935	0.392
Health care and services	-0.595	-0.71	0.932
Material	0.363	-1.762	0.522
Real estate	1.031	-9.219	0.32
Software and services	-2.483	2.474	0.255
*p < .10; **p < .05; ***p < .01.			

4.4.1.3 Correlation Between ACC and CF

Correlation between ACC and CF is another measurer used to support the variability of change in net income. Based on the earlier studies it is assumed that an increase in negative correlation is a sign of use of accrual to manage earning. The comparative result in table 4.11.3 shows that increase in negative correlation can be seen only in two sectors, commercial and professional services and real estate sector. Among these two the increase in negative correlation of commercial and professional services is not statistically significant and in real estate sector shows only a reduction in positive correlation without marking a negative correlation. Moreover, the CNI of real estate sector shows an insignificant reduction indicating no material change in variability of change in net income and accounting quality. Therefore, the correlation of ACC and CF also is not supporting that adoption of IFRS has improved earning smoothing and accounting quality. It can be concluded that even if the CNI shows that the adoption of IFRS has reduced variability of change in net income the other two measures, ratio of CNI/CCF and correlation of ACC to CF, are not giving any evidence for the use of accruals to manage earnings as such it is can be the change in cash flow that caused change in CNI. There is no significant evidence for reduction in earning smoothing behaviour in the financial reports of Australian listed

companies after adoption of IFRS, suggesting improvement in accounting quality. The only exception seen is the diversified financial which shows a statistically significant reduction in CNI and ratio of CNI to CF indicates the use of accrual to manage earnings. This can be because of the large quantity of financial assets held by these companies and the use of fair value model in measuring financial assets by this sector.

Table 4.11.3 Correlation Between ACC and CF (IFRS period)

Prediction POST-IFRS > PRE-IFRS				
Industry sector	Pre-IFRS	Post-IFRS	Z-value	p-value
All 264 companies	0.588	0.547	1.39	0.165
Commercial and professional service	-0.021	-0.04	0.11	0.912
Diversified Financials	-0.122	0.269	-3,10.	0.002***
Energy	0.248	0.032	2.104	0.035**
Health care and services	-492	222	-4.105	0.000***
Material	0.05	0.355	-4.675	0.000***
Real estate	0.611	0.16	3.315	0.001***
Software and services	0.147	0.346	-1.58	0.115

*p < .10; **p < .05; ***p < .01.

4.4.2 Managing Earning Towards Positive Target

SPOS, frequency of reporting small positive operating savings, is used to measure managing earnings towards positive target. SPOS is interpreted using coefficient of POST from the regression of SPOS on POST and other control variables. A positive coefficient of POST is taken as indication of increase in frequency of reporting small operating savings and is a sign of managing earnings towards positive target and earning management. The table 4.11.4 gives the comparative result of the coefficient of POST. Only energy and real estate sector shows a positive value indicating an increase in SPOS suggesting managing

earnings towards positive target and reduction in accounting quality. The p-value suggests that the increase is not statistically significant in both the cases. Even though there is positive and negative value for POST indicating increase and reduction in the frequency of reporting small positive savings among different sectors it is not statistically significant in any of the sectors. There is no change in the frequency of reporting small positive operating savings in post-IFRS period in any sector. The adoption of IFRS has not made any change in earning management behaviour of Australian listed companies and as such no indication of change in accounting quality. Both the measures used to evaluate earning management, earning smoothing and managing earning towards positive target, indicates that there is no difference in earning management behaviour and accounting quality between pre and post-IFRS adoption period.

Table 4.11.4 Frequency of Small Positive Net Income (SPOS) (IFRS Period)

Prediction Negative Value in POST-IFRS Period

Industry sector	**Coefficient of POST**	**p-value**
All 264 companies	-0.223	0.507
Commercial and professional service	-0.006	0.679
Diversified Financials	-1.032	0.198
Energy	0.007	0.636
Health care and services	-0.077	0.228
Material	-0.002	0.833
Real estate	0.023	0.715
Software and services	-0.027	0.348

*p < .10; **p < .05; ***p < .01.

4.4.3 Timely Loss Recognition

Frequency of reporting large negative operating savings, LNEG, is the metric used to evaluate timely loss recognition. LNEG is interpreted using the coefficient of POST from the regression of LNEG on POST and other control variables. A positive coefficient of POST is taken as an increase in reporting large negative savings in post-IFRS adoption period and is taken as an indication of recognition of large losses in a timely manner and increase in accounting quality. The comparative value of LNEG presented in table 4.11.5 shows that the value of POST for the sample of all the 264 companies shows a negative value of -0.270 and it is significant at 0.05 confidence interval indicating a decrease in reporting large losses in a timely manner in post-IFRS adoption period and a decrease in accounting quality which is against our prediction that adoption IFRS increases accounting quality. Diversified financial is the only sector that marked an increase in reporting large losses and accounting quality, but it is not statistically significant at 95 percent confidence interval. All the other sectors reported insignificant change in reporting large negative net income. These results suggest that there is no significant improvement in timely loss recognition and improvement in accounting quality in the post-IFRS adoption period. The impact of adoption of IFRS on accounting quality of Australian listed companies based on the two measures of accounting quality earning management and timely loss recognition made above specifies that there is no significant change in accounting quality after adoption of IFRS. Here also diversified financial shows a variation from other sectors which can the outcome of use of fair value measurement of financial assets held by these sector.

Table 4.11.5 Large Negative Net Income (LNEG) (IFRS period) Prediction Positive Value in POST-IFRS Period		
Industry sector	Coefficient of POST	p-value
All 264 companies	-0.27	0.027**
Commercial and professional service	0.042	0.125
Diversified Financials	1.185	0.076*
Energy	-0.062	0.473
Health care and services	-0.788	0.369
Material	-0.079	0.141
Real estate	0.001	0.984
Software and services	-0.055	0.555
*p < .10; **p < .05; ***p < .01.		

4.4.4 Value Relevance Price Model

Value relevance metric uses two models price model and return model to evaluate the explanatory power of accounting amount and market based values. Both the models of value relevance use adjusted R^2 from the regression to evaluate value relevance. In price model of value relevance, adjusted R^2 from the regression of market price per share on net income per share and book value of equity per shares is used to interpret the explanatory power of market and book value. The adjusted R^2 of different sectors given in table 4.11.6 shows a mixed result of value relevance price model. When all the 264 industries taken together, energy, and material sectors shows a reduction of less than 5% in the value of adjusted R^2, real estate sector marks a reduction of 17.4%, suggesting a significant reduction in value relevance. This can be the result of boom in the real estate sector witnessed in the pre-financial crisis periods 2006, 2007 followed by a depression in the post-financial crisis period some of which is included in post-IFRS period. The health care equipment and services and software and services sectors displayed an increase in R^2 value with 24.8% and 20.3%, respectively. Commercial and professional services sector marked an increase of 12.2% and for the energy sector, the increase was only 4.4%. The increase in adjusted R^2 and value relevance are mainly in the new and emerging service sectors like

software and services, commercial and professional services, diversified financial, health care equipment and services sector and the decrease in value relevance is registered in traditional sectors like materials, energy, real estate. The result in all industries taken together marked a decrease which can be the influence of traditional sectors as the samples size of material sector is the highest with 107 companies and energy with 46 companies in the total sample size of 264 companies.

Table 4.11.6 Value Relevance Price Model (IFRS Period) Prediction POST-IFRS Adjusted R^2 Value > PRE-IFRS Value

Industry sector	Adjusted R^2 Pre-IFRS	Adjusted R^2 Post IFRS	Change in value of adjusted R^2
All 264 companies	0.517	0.475	-0.042
Commercial and professional service	0.279	0.401	0.122
Diversified Financials	0.519	0.561	0.042
Energy	0.536	0.492	-0.044
Health care and services	0.512	0.76	0.248
Material	0.485	0.479	-0.006
Real estate	0.568	0.394	-0.174
Software and services	0.284	0.487	0.203

4.4.5. Value Relevance Return Model

As in price model value relevance return model also interprets the explanatory power of market information to that of book value taking the adjusted R^2 from the regress of net income over price, to that of return per share. The adjusted R^2 for pre and post-IFRS adoption period given in table 4.11.7 displays a mixed result. All 264 sample companies taken together marked a decrease of 2 percent, commercial and professional services decreased by 6.7 percent, in energy sector the adjusted R^2 marked a reduction of 8.1% and health care equipment and services sector shows the highest reduction in adjusted R^2 with 17.4%. Explanatory power of market and book information for diversified financial,

materials, real estate and software and services sector displays an increase. The dissimilar result displayed in different sectors is because value relevance is a quality measure which is influenced by many market related influences like the economic and financial environment, dividend policy, fund requirement of different sectors etc. But the result of all the 264 companies taken together indicates a reduction in value relevance in both value relevance models which is less than 5%. Thus it can be concluded that the adoption of IFRS has not made any significant difference in value relevance and accounting quality between pre and post-IFRS periods among Australian listed companies.

Table 4.11.7 Value Relevance Return Model (IFRS Period)
Prediction POST-IFRS Adjusted R^2 Value > PRE-IFRS Value

Industry sector	Adjusted R^2 Pre-IFRS	Adjusted R^2 Post IFRS	Change in value of adjusted R^2
All 264 companies	0.304	0.284	-0.02
Commercial and professional service	0.497	0.43	-0.067
Diversified Financials	0.247	0.507	0.26
Energy	0.252	0.171	-0.081
Health care equipment's and services	0.584	0.41	-0.174
Material	0.253	0.275	0.022
Real estate	0.326	0.409	0.083
Software and services	0.232	0.278	0.046

4.5. Findings Impact of IFRS Adoption on Accounting Quality of Listed Companies in Different Sectors

The basic objective of IFRS is to develop a high quality understandable and globally accept accounting standard the use of which can generate high quality, transparent and comparable financial statements. Therefore, it is expected that the adoption of IFRS by Australian listed

company can improve the quality of the published financial reports of Australian listed companies. The study analysed the accounting quality of published financial reports of Australian listed companies for pre and post-IFRS adoption periods, using three accounting quality metrics earning management, timely loss recognition and value relevance. First, accounting quality was analysed by taking all 264 sample companies together and also by dividing the sample companies into seven industry sectors based on GICS. The analysis of the result found that the adoption of IFRS had not made any improvement in earning management, timely loss recognition, and value relevance for the samples of 264 Australian listed companies. For different industrial sectors except of the diversified financial sector, the first two measures, earning smoothing and timely loss recognition, showed no significant difference between pre and post-IFRS periods. Nevertheless, the value relevance measures displayed different results for different sample groups. The diversified financial sector showed a reduction in earning smoothing, but no significant change in managing earning towards positive target, timely loss recognition, and value relevance price mode. The value relevance return model for diversified financial shows an improvement in value relevance. The mixed result shown by different sectors and for different quality measures are because the IFRS applicable for different sectors are different depending on the accounting policies followed and the nature of assets held. In service sector the amount of tangible assets and inventories held will be comparatively lower than a manufacturing and material sector. For diversified financial, the amount of financial assets held will be higher leading to application of fair value measurement of assets and its impact in their financial reports. Thus taking Australian listed companies as a whole it can be concluded that the adoption of IFRS has not made any significant change in accounting quality as expect based on the earlier researches.

4.6. Findings Impact of IFRS Adoption on Each Quality Measures

On analysis of the result considering each quality measures on all groups it was found that earning smoothing measures CNI, suggests that there is no significant difference in earning smoothing between pre and post-IFRS adoption period. Ratio of CNI/CCF and the correlation between ACC and CF used to substantiate the findings in CNI also shows that there is no evidence for the use of accrual to manage earning in the post-IFRS adoption

period. The results from the analysis of the first accounting quality measure earning smoothing suggest that the adoption of IFRS has not made any material improvement in accounting quality in any sample groups. It is expected that the adoption of IFRS can improve accounting quality by reducing earning management, increase timely loss recognition and increase value relevance of financial information. The findings of the study that there is no change in earning smoothing are against the expectation that IFRS adoption can reduce earning smoothing. The first three hypotheses that IFRS adoption can create higher CNI, higher ratio of CNI/CCF and small magnitude of negative correlation are rejected.

The second measure used to evaluate accounting quality, managing earnings towards positive target, measured by SPOS found that frequency of reporting small positive earning has not made any significant difference in the coefficient of POST in post-IFRS period compared to that of pre-IFRS period. The adoption of IFRS has not made any difference in the frequency of reporting small positive operating savings and as such the adoption of IFRS has not made any positive impact on managing earnings towards positive target and accounting quality in any sector. Earning management, the first accounting quality measure assessed using earning smoothing and managing earnings towards positive target, together concludes that there is no change in earning management between pre and post-IFRS adoption period and adoption of IFRS has not made any improvement in the accounting quality of Australian listed companies. Thus the hypothesis that the adoption of IFRS can reduce the frequency of reporting small losses and improve accounting quality is rejected.

Frequency of reporting large negative net income is another measure used to evaluate timely loss recognition. The coefficient of POST used to interpret LNEG for all sample groups suggests that there is no significant difference in frequency in post-IFRS period. Thus the study concludes that the adoption of IFRS by Australian listed companies has not made any impact in timely loss recognition behaviour and accounting quality of any sample group of Australian listed companies. The finding rejects the hypothesis that IFRS adoption can increase the frequency of reporting large losses.

A quality accounting improves the explanatory power of the financial information taken from the accounting records and capital market information of the companies. The study

used two measures, value relevance price model and value relevance return model to evaluate the difference in explanatory power between pre and post-IFRS adoption periods. It was found that the value relevance of all 264 sample companies taken together, under both the models reduced in the post-IFRS adoption period in comparison to that of pre-IFRS adoption period. But a mixed result was found among different industrial sectors and also in two value relevance models. As explained earlier value relevance is a market based measure which can be effected by different external factors like, economic, legal and political, effecting the individual companies and capital markets. Moreover the application of IFRS varies among sectors depending on the accounting policies and the composition of assets and liabilities held by the companies. The mixed result shown by different industrial sectors and between price and return models can be the outcome of these factors. The expectation that IFRS adoption can improve the value relevance of accounting information is not supported by the findings of the study.

The table 4.12 below gives a summary of the objective of the study relating to the IFRS adoption, hypothesis developed, accounting quality measures used in evaluating accounting quality and the findings. The result shows that there is no statistically significant change in in accounting quality for earning management and value relevance. But timely loss recognition shows a reduction in accounting quality. This is against the prediction that adoption of IFRS will improve accounting quality.

Table 4.12 Summary of Hypothesis Impact of IFRS on Accounting Quality					
Accounting quality indicators		Hypothesis	Measure	Result IFRS adoption	Finding
Earning management	Earning smoothing	*H1= Higher variability of change in net income leads to lower earning smoothing and higher quality financial report.*	Variability of Change in net income (CNI)	Statistically significant increase in CNI. Indication of improvement in accounting quality	No change in accounting quality between pre-IFRS period and post -IFRS period
		H2. Higher ratio of variability of the change in net income to the variability of change in operating cash flows leads to lower earning smoothing and better quality of financial report.	Ratio of Variability of change in net income to variability of change in cash flow (CNI/CCF)	No statistically significant Increase in ratio between CNI/CCF. No sign of use of accrual to manage earning	
		H3. Small magnitude of negative correlation between accruals and current period cash flow is a sign of lower	Correlation between accrual (ACC) and cash flow (CF)	A decrease in correlation between ACC and CF, which is not statistically significant. No sign of use of accrual to	

		earning smoothing and higher quality financial report.		manage earning	
	Managing earning towards positive target	*H4. Lower frequency positive net income is a sign of managing towards positive earning and lowers quality financial report.*	Frequency of reporting small positive operating savings (SPOS)	No statistically significant change in SPOS	
Timely loss recognition		*H5. Recognising large losses frequently is a sign of quality financial report.*	Frequency of reporting large negative income (LNEG)	Statistically significant reduction in LNEG	Reduction in accounting quality
Value relevance	Price model	*H6. High association of share price to equity book value of shares and net income per share is a sign of quality financial report.*	Explanatory power of market price per share (P) to book value of equity per share (BVEPS)and net income per share (NIPS)	Reduction in R^2 which is not substantial indicating a reduction in explanatory power	Reduction in accounting quality

	Return model	*H7: High association between net income per share scaled by share price to annual return per share is a sign of accounting quality.*	Explanatory power of net income per share divided by share price (NIOP) and shareholders' annual return RETURN)	Reduction in R^2 which is not substantial, indicating a reduction in explanatory power	Reduction in accounting quality

4.7 Summary

This chapter discussed the impact of mandatory adoption of IFRS on the accounting quality of Australian listed companies based on three accounting quality measures earning management, timely loss recognition and value relevance. The result indicates that there is no significant difference in accounting quality after adoption of IFRS. Before analysing the accounting quality normally test of the data using skewness, kurtosis and Q&Q plot is performed, and found that the population from which data collected is normally distributed. Then, multicollinearity test of the variables is made using correlation, tolerance and VIF found that there is no multicollinearity problem among variables. After words an analysis of descriptive statistic of pre-IFRS adoption period and post-IFRS adoption period are computed and a comparison between the mean and standard deviation of two periods indicates the difference in the value of variables used in the analysis.

The result of the analysis of accounting quality made for all the listed companies taken together and analysis of the seven group of industries individually is not giving a consistent result. Regarding earning management, result of all listed companies and each of the groups are consistently supports the finding that there is no significant change in accounting quality between pre-IFRS adoption period and post-IFRS adoption period. But regarding the other two measures timely loss recognition and value relevance even if the sample of all 264 samples together shows no improvement, in the individual sector there is no consistency in the findings in different groups. Thus, considering the listed companies as a

whole there is no reliable evidence to prove that the adoption of IFRS has improved the quality of financial reports of Australian listed companies. But the findings of different sectors differ in their findings. A detailed discussion of cause of our findings are discussed in the chapter on discussion of empirical result.

CHAPTER 5

Effect of Financial Crisis on Accounting Quality

5.1 Introduction

The financial crisis of 2008 was the worst financial crisis faced by world economy after the great depression of 1930's. It started in US banking sector when the real estate prices nosedived after its peak in 2007. The financial crisis first appeared as a difficulty in U.S. subprime mortgage market then intensified and then spread over to financial market and later it effected the real economy (Allen and Carletti 2010b). It caused unprecedented losses in financial industry especially banks which are significantly exposed to U.S. real estate industry(Beltratti, Spear, and Szabo 2013). The financial distress caused by the subprime mortgage market collapse in USA in August 2007, led to the bankruptcy of mortgage market, escalated and spread to the financial market first, extended rapidly in the world effecting global economic development and became the first global economic turmoil after one occurred during the Second World War (Menicucci and Paolucci 2016). The financial crisis ultimately effected governments, collapse of financial markets, bursting of the mortgage lending market, increases unemployment and effected all most all economies world over. It is estimated that the 2008 financial crisis has created an estimated wealth loss of 14 Trillian dollars (Allen and Carletti 2010b, Kothari and Lester 2012).

There are different observations on the factors that confluence the world financial crisis. Some analysists blame the relaxed credit policies of banks, many others emphases the use of fair value accounting(Mala and Chand 2012). According to Badertscher, Burks, and Easton (2012) it is the regulatory capital requirement of financial institutions coupled with the fair value accounting laid the foundation for financial crisis. Some other authors cited lax regulations on mortgage lending, growing housing bubbles, rise in collateralized debt obligations, management incentives and fair value accounting as the reason for financial crisis (Banziger 2008, Deloitte 2015b, Kothari and Lester 2012). Many other critics blame financial reporting especially the fair value accounting (FVA) measurement approach of measurement of financial instruments as the cause for financial crisis (Paolucci and

Menicucci 2016). It can be seen that all these factors have their roles in causing financial crisis or aggravating its impact on the different economies.

The banks regulatory capital requirement also known as capital adequacy or regulatory capital, require the banks and financial institutions to maintain certain percentage of risk weighted assets as capital. Many critics blame this rule and the fair value accounting for aggravating the recent financial crisis. Fair value accounting requires the banks to write down their assets to market price even though banks has no intention to sell it at this price (ABA 2008). This decreased the banks regulatory capital and forced them to act which led to further price decline and capital depletion restricting the ability to lend. Ultimately fair value measurement of assets is seen as causing negative impact on price of assets and contributed to the depth of financial crisis (Bengtsson 2013).

The U.S. Federal Reserve followed a low interest rate policy after tech bubble in 2000 and 9/11 attack of 2001 (Taylor et al. 2008). This economic reform led to lower interest rate, easy credit facilities and lower tax rate, led to significant economic growth in US. Low interest rate, easy credit facility and government encouragement persuaded many households to become homeowners. Everything went well until 2005-06 when the housing mortgage market bubbled and the house of cards started to crumble causing the house prices to fall and interest rates to increase. People could no longer pay their mortgage debt which affected the financial institutions first then it spread over to financial market world vide (Kothari and Lester 2012).

According to Bertomeu and Magee (2011) every periods of economic hardship usually are followed by accounting regulations and 2008 financial crisis is also not an exemption to this. Due to the allegation on the role of fair value accounting in financial crisis, there was great pressure on IFRS from financial institutions, regulators, governments and policy makers to review the application of fair value accounting. IASB and many regulatory bodies appointed experts to make studies and review the use of fair value accounting if necessary (Mala and Chand 2012). In May 2008 International Accounting Standards Board (IASB) appointed external experts advisory panel to review accounting issues evolving from the use of fair value accounting and to create a single standard that can be used where the existing standard require (Deloitte 2008).

The U.S. government advised Securities and Exchange Commission to make a study on the impact of use of fair value accounting and to suspend its use if necessary, but after the study, SEC recommended not to suspend its use but to improve its application (Mala and Chand 2012). Some European countries threatened to curve out from IFRS convergence unless changes are made in fair value accounting. China also found that companies are using fair value accounting to manage earning and asked listed companies to use them prudently. The Ministry of Finance (MoF) of the People's Republic of China also issued a new set of China's Accounting Standards (CASs) adapted from IFRS, which insisted on four forms of fair value adoption across the standards: mandatory adoption, requiring company to use FV, partially mandatory adoption allowing using FV measurement for some transactions, conditionally mandatory adoption which indicates that relevant assets or liabilities should be measured at FV when satisfying specified conditions and voluntary adoption allowing an enterprise to optionally use FV to measure some assets or transactions (Jason Zezhong Xiao 2017). The influence of different interest groups and the pressure from governments and regulators may prompt IASB to make unwarranted changes to IFRS which can affect the credibility quality and reliability of IFRS (Alali and Cao 2010).

FASB, made some changes by relaxing the application of standards on fair value measurement (FASB 2009). The change in the practice of fair value measurement increasingly relies on managerial assumptions in valuing assets, even when market price exist, is subject to much debate among regulators, bank executives and investors (Bushman and Landsman 2010). The supporters of these change argue that it gives more discretion in fair value measurement to mangers which conveys more relevant information. On the other hand, the critics argues that it gives great flexibility in fair value measurement which may be used by managers opportunistically which may affect the reliability of fair value (Fargher and Zhang 2014).

Over and above that usually many firms will involve in manipulation of accounts in bad periods. Changes in economic environment increases the tendency of firms to manage earnings (Filip and Raffournier 2014). According to Graham, Harvey, and Rajgopal (2005), firms boost earnings more when the economy is down. This chapter of the study analyses whether changes made in the IFRS due to the pressure of different interest groups following

the financial crisis of 2008 and the economic distress of 2008 financial crisis has affected the accounting quality of published financial reports. In the coming section an analysis of descriptive statistics of pre and post-financial crisis period is made, afterwards the impact of financial crisis on the accounting quality of published financial accounting quality of Australian listed companies are evaluated.

5.2 Descriptive Statistics Pre and Post Financial Crisis Period

Prior to the analysis of accounting quality using statistical tools, it was better to analyse the descriptive statistics of the data collected. Descriptive statistics gave a simple summary of the data and a description of the population from which the data were collected. To analyse the descriptive statistics, the data were classified into seven pre-financial crisis periods, which were years 2002, 2003, 2004, 2005, 2006, 2007, and 2008 and seven post-financial crisis periods, 2009, 2010, 20011, 2012, 2013, 2014, and 2015. Measures of central tendency, mean and median, and measure of variability standard deviation for the pre-financial crisis period and post-financial crisis period were calculated separately. Afterwards, the significance of the difference in the value of mean was made using the mean comparison test and the significance of difference in standard deviations of each variables between the periods was compared by using the two sample variance-comparison test. The difference was then analysed and interpreted.

5.2.1 Pre- and Post-Financial Crisis Periods Mean

Table 5.1 below gives the descriptive statistic of pre-financial crisis period and post-financial crisis period classified into test variables and control variables. Taking the mean value of test variables, there was a significant difference in the value of mean of the two periods for ACC, SPOS, P, NIOP, BVEPS, and NIPS. Among these variables the difference in mean of all variables except ACC and SPOS are statistically significant at 0.01 significance level and ACC and SPOS is significantly different at 95% confidence interval. ACC, represented by accruals, has a mean value of -0.104 in pre-financial period and -0.126 in post-financial crisis period showing significant decrease in accruals. This may be because of the decrease in credit transactions due to the change in business environment or it can also be a sign of income management, which is evaluated in the

accounting quality metric earning management. The pre-financial crisis mean of SPOS is 0.018 and in post-financial crisis period it is 0.031. It indicates that frequency of reporting small positive earnings has increased in post financial crisis period and can be a sign of reduction in accounting quality. The value of P (market price per share) in pre-financial crisis period is -0.200 and in post-financial period it reduced to -0.456 which is statistically significant at 99 percentage confidence intervals indicating that the market price of shares has reduced as a result of financial crisis. NIOP (net income divided by market price per share.) also marked a reduction in value, from -0.069 in pre-financial crisis period to -0.109 in post-financial crisis period, that is significant at a significance level of 0.01. Financial crisis affected companies and financial markets all over the world including Australia and it is quite natural to have a significant reduction in the market price per shares of listed companies in bad economic conditions like financial crisis. If the financial market is efficient normally a reduction in net income will reflect in the market price of shares also. Another variable BVEPS, book value of equity per share, marked an increase of 0.223 points from 1.335 in pre-financial crisis period to 1.558 in post-financial crisis period. A related variable NIPS, net income per share, also marked an increase from 0.276 in pre-financial crisis period to 0.350 in post -financial crisis period. Both variables are statistically significant at 1 percentage significance level. It is natural to have a corresponding increase in both variables as an increase in net income will obviously increase the BVEPS.

Among the remaining test variables, the difference in mean value of CNI, CF, CCF, LNEG and RETURN, is not statistically significant. The value of mean for CNI, frequency of change net income, is 0.0002 in pre-financial crisis period and 0.013 in post-financial crisis period with a p-value of 0.250. CF which is cash flow from operation is -0.041 and -0.034 in pre and post-financial crisis period respectively with probability value of 0.284. Change in cash flow, CCF, marked a small increase in post-financial period from 0.010 to 0.011 which is also not statistically significant as the p-value is 0.915. Variables CNI, CF and CCF are interrelated as all these variables, change in net income, cash flow from operation and change in cash flow, depends on net income. Therefore, it is quite natural that all these variables are showing a similar pattern of difference in value between pre and post financial crisis period.

Coming to control variables, AUD, NUMEX and XLIST are dummy variables and as such giving same value of mean in pre and post financial crisis period. Financial leverage represented by LEV, shows a value of 0.530 in pre-financial crisis period and 0.518 in post-financial crisis period with a p-value of 0.608 signifying hat there is no difference in financial leverage between two periods. SIZE, representing market value of equity has a mean value of 1.301 in pre-financial crisis period and 1.408 in post-financial crisis period. The increase in market value of equity is statistically significant as the probability value is 0.000. GROWTH, percentage change in sale decreased from 62.364 in pre-financial crisis period to 21.610 in post-financial crisis period. Probability value of 0.000 indicates a statistically significant decrease at 99 percentage confidence intervals, indicating a decrease in sales in post-financial crisis period which is normal in periods of economic hard ship. EISSUE, the percentage change in equity shares, decreased to 9.937 in post-financial crisis period from 12.528 in pre-financial crisis period which is statistically significant at 0.01 significance level as the p-value is 0.000. Change in total liability, DISSUE, also shows a decrease from 37.692 in pre-financial crisis period to 17.744 which is statistically significant at 0.01 significance level. The decrease in both EISSUE and DISSUE may be because of change in capital structure implemented by companies to suit the general economic environment after the financial crisis. TURN, sales scaled by total assets marked a decrease from 0.498 in pre-financial crisis period to 0.451 in post-financial crisis period, the decrease is statistically significant at 0.01 significance level. The decrease can be normally expected in periods of economic turmoil. Finally, percentage of closely held shares, CLOSE, increased from 34.510 to 36.628 in post financial crisis period. The increase is statistically significant as the probability value is 0.001. The financial crisis affected financial markets of every country which reduced public interest to invest in shares of listed companies. The reduction of public investments in listed companies may be the reason for increase in the proportion of closely held shares in listed companies.

5.2.2 Pre- and Post-Financial Crisis Periods Standard Deviation

Moving to standard deviation, out of the eleven test variables standard deviation of only two variables, CF and LNEG, are not statistically significant. Out of the remaining variables, two variables ACC and RETURN are statistically significant at 0.05 significance

level and all the remaining 7 variables are significant at 99 percentage confidence intervals. Change in net income, CNI, shows a statistically significant difference in the value of standard deviation. The pre-financial crisis standard deviation is 0.335 and post-financial standard deviation is 0.357 with a F-value of 0.007. The variability increase is statistically significant at 0.01 significance level. Increase in variability is a positive sign from accounting quality perspective. The variability of CF, representing cash flow, is 0.272 and 0.277 respectively in pre- and post-financial crisis period with a p-value of 0.480 indicting that variance is not statistically significant. The standard deviation of CCF, indicating change in cash flow, decreased from 0.220 in pre-financial crisis period to 0.202 in post-financial crisis which is statistically significant at 99 percent confidence interval. The variable accrual, measured by ACC, has a standard deviation of 0.325 in pre-financial crisis period which increased to 0.344 in post-financial crisis period, which is statistically significant. An increase in CF usually decrease ACC. Here, even if there is no significant variability for cash flow between the two periods variability of ACC increased significantly between periods. This may be due to the change in credit policies of the companies to accommodate the changes in business environment due to financial crisis or use of accrual to manage earnings. Standard deviation of small positive operating savings, SPOS, significantly increased from 0.134 to 0.173 in post-financial crisis period as the F-value is 0.000. This is a sign of more wide spread of small positive income which is a sign of accounting quality. The variability of large negative net income, LNEG, has a standard deviation of 0.443 in pre-financial crisis period and 0.434 in post-financial crisis period with a probability value of 0.310, signifying the difference is not statistically significant. The decrease LNEG supports the finding of the result of SPOS. The market price represented by P, net income scaled by market price, NIOP, book value of equity per share, BVEPS, net income per share, NIPS, are variables related to each other and all shows an increase in standard deviation between the two periods. The difference in standard deviation of all these variables are statistically significant at 0.01 significance level. Standard deviation of P is 0.785 in pre-financial crisis period and 0.965 in post-financial crisis period. For NIOP it is 0.298 and 0.363 respectively in pre-financial crisis period and post-financial crisis period. BVEPS has a standard deviation value of 2.499 and 3.017 for post-financial crisis period. For NIPS standard deviation is 1.384 and 1.494 respectively in

pre and post financial crisis period. The last test variable RETURN, return on investment, shows a decrease from 57.185 to 53.955 in post-financial crisis period, which is statistically significant at 95 percentage confidence intervals. If the financial market is efficient, the net income per share and return received from share influence the value of market price per equity share, net income over market price and book value of equity of a company. There for the similarity in the pattern of difference in standard deviations of these variables between both periods are natural.

There are ten control variables out of that standard deviation of three variables AUD, NUMEX and XLIST, are showing same mean and standard deviation for both pre and post financial crisis periods as they are dummy variables. In the remaining seven control variables, difference in standard deviation between pre and post financial crisis period of five control variables, SIZE, GROWTH, EISSUE, DISSUE and TURN are statistically significant at 0.01 significance level and only standard deviation of one variable, LEV, representing financial leverage is statistically significant at 95 percentage confidence interval. The standard deviation of SIZE increased from 1.381 in pre-financial crisis period and 1.516 in post-financial crisis period. The increase is statistically significant indicating that the market value of equity is widely fluctuating in post-financial crisis period which can be the impact of financial crisis. GROWTH, which is change in sale, shows a standard deviation of 167.951 and 124.80 respectively in pre and post financial crisis period. Decrease in the spread of sales in the post-financial period may be the result of economic depression evidenced in post-financial crisis period.

The variables EISSUE; percentage change in equity, DISSUE; percentage change in debt and LEV; leverage, are interrelated. The standard deviation EISSUE is 18.623 in pre-financial crisis period and 17.124 in post-financial crisis. The value of standard deviation for DISSUE are 103.339 and 82.432 respectively in pre and post-financial crisis period. Both variables have a p-value of 0.000 indicating the decrease is statistically significant at 0.01 significance level. For LEV having standard deviation of 0.853 and 0.899 in pre and post financial crisis period have a probability value of 0.026 demonstrating a statistically significant variation at 0.05 significance level. These three variables are related to one another. Normally a decrease in equity or an increase in debt increases the leverage. But

the variability of all these variables are reducing significantly. The financial crisis would have forced these companies to make changes in the capital structure by reducing debt financing made to adjust the changed business conditions after financial crisis. The standard deviation of TURN, representing turnover reduced from 0.723 to 0.667 which is statistically significant at 99 percentage confidence intervals. Normally the turnover of companies will decline in periods of economic recession which is evident from the reduction in variance and mean in post financial crisis period. The standard deviation of CLOSE, which is percentage of closely held shares increased to 26.173 in post-financial crisis period from 24.463 in pre-financial crisis period which is statistically significant. This increase in standard deviation and mean of CLOSE signifies an increase in closely held shares after financial crisis, which can be the impact of decrease of public interest in shares of listed companies due to the conditions in financial market after financial crisis.

Table 5.1 Descriptive Statistics Pre and Post Financial Crisis

Test variables	Pre-FC Mean	Post-FC Mean	p-value	Pre-FC SD	Post-FC SD	f-value	Pre-FC Median	Post -FC Median
CNI	0.0002	0.013	0.25	0.335	0.357	0.007***	0.009	0.005
CF	-0.041	-0.034	0.284	0.272	0.277	0.48	-0.013	0.005
CCF	0.01	0.011	0.915	0.22	0.202	0.000***	0.004	0.001
ACC	-0.104	-0.126	0.031**	0.325	0.344	0.017**	-0.033	-0.046
SPOS	0.018	0.031	0.011**	0.134	0.173	0.000***	0	0
LNEG	0.27	0.251	0.123	0.443	0.434	0.31	0	0
P	-0.2	-0.456	0.000***	0.785	0.965	0.000***	-0.222	-0.461
NIOP	-0.069	-0.109	0.000***	0.298	0.363	0.000***	-0.016	-0.017
BVEPS	1.335	1.558	0.000***	2.499	3.017	0.000***	0.288	0.255
NIPS	0.276	0.35	0.000***	1.384	1.494	0.001***	0.223	0.329

RETURN	-15.97	-4.937	0.519	57.185	53.955	0.013**	-3.415	-2.525
Control Variables								
SIZE	1.301	1.408	0	1.381	1.516	0.000***	1.401	1.534
GROWTH	62.364	21.61	0	167.951	124.8	0.000***	14.221	0.54
EISSUE	12.528	9.937	0	18.623	17.124	0.000***	5.781	1.244
LEV	0.53	0.518	0.608	0.853	0.899	0.026**	0.226	0.246
DISSUE	37.692	17.744	0	103.339	82.432	0.000***	11.967	2.224
TURN	0.498	0.451	0	0.723	0.667	0.000***	0.142	0.144
AUD	0.503	0.503	0.317	0.5	0.5	0.999	1	1
NUMEX	2.208	2.208	0.18	0.787	0.787	0.996	2	2
XLIST	0.333	0.333	0.157	472	0.472	0.972	0	0
CLOSE	34.51	36.628	0.001***	24.463	26.173	0.004***	31.875	33.92

Note: To compare the mean value of pre-IFRS and post-IFRS periods, two sample t-test is used and F-ratio test is used to comparison of standard deviation between these two time periods. The symbols *, **, *** indicate the statistical significance of the difference between pre-IFRS and post-IFRS at 0.10, 0.05, and 0.01, respectively

5.3 Influence of Financial Crisis on Quality of Financial Report

The fair value accounting (mark-to-market accounting) where assets and liabilities are measured and recognised at market value is considered by many authors as the main cause for international financial crisis of 2008 (Badertscher, Burks, and Easton 2012, Mala and Chand 2012, Banziger 2008, Kothari and Lester 2012). Many interest groups, governments and regulatory bodies pressurized IASB to make changes in IFRS which may affect the quality, reliability and credibility of IASB. Over and above that it is suspected that firms may also try to boost their earning through manipulation of accounts in periods of economic depression like financial crisis (Alali and Cao 2010). Australia has adopted IFRS from financial year beginning on or after January 2005 and Australian economy was also

affected by the financial crisis of 2008. This section of the study is evaluating whether the financial crisis has affected the quality of published financial reports of listed companies in Australia. The effect of financial crisis on accounting quality is analysed in two steps. First, the data of all 264 sample companies listed in ASX taken together were analysed and then the sample companies were classified into seven industry groups as per the GICS classification of equity shares and each industry groups are analysed separately. The accounting quality before and after the financial crisis was also compared and analysed. Additionally, the study analysed the impact of financial crisis on each metric used in the evaluation of the accounting quality.

5.3.1 Effect of Financial Crisis on Accounting Quality of All 264 Sample Listed Companies

Impact of financial crisis on accounting quality is analysed using earning management, timely loss recognition, and value relevance. Earning management is evaluated using earning smoothing and managing earnings towards positive target. Earning smoothing uses the metrics, variability of change in net income (CNI), ratio of variability of change in net income to change in cash flow (CNI/CCF), correlation between cash flow (CF) and accrual (ACC) and frequency of small positive net income, SPOS, is used to measurer managing earnings towards positive target. As explained in the earlier chapter, CNI, ratio of CVI/CCF and correlation between CF and ACC are focusing on residual generated from the multivariate regression and SPOS is interpreted using the coefficient of POST from the regression of SPOS as dependent variable and POST and other specific set of control variables as independent variables.

5.3.1.1 Earning Management

Table 5.2.1 presents comparative result of earning smoothing for pre-financial crisis period and post financial crisis period for all the listed companies. On comparison it shows that the value of CNI increased from 0.000 in the pre-financial crisis period to 0.014 in the post-financial crisis period and significant at 0.05 significance level. Based on prior research it is assumed that higher earning variability of change in net income is a sign of lesser earning smoothing and quality accounting (Chua, Cheong, and Gould 2012, Lang 2006, Barth 2007, Paananen and Henghsiu 2009, Ahmed, Neel, and Wang 2013). The increase in the

variability of change in net income suggests that earning smoothing behaviour has reduced in post-financial crisis period, and indicates that the quality of financial report improved in post-financial crisis period. The second measure ratio of CNI to CCF is used to support the findings in CNI. The result of the ratio of CNI to CCF shows a value of 0.255 in pre-financial crisis period and -0.570 in post-financial crisis period with a p-value of 0.451, indicating that the difference in the ratio is not statistically significant. The earlier studies suggest that a higher ratio is an indication that the variability of change in net income can be due to higher cash flow and there is no sign of use of accrual to smooth earnings(Lang 2006). The ratio of CNI/CCF here recorded a decrease from a positive value in pre-financial crisis period to a negative value in the post financial crisis period which is not statistically significant. This suggests that there is no evidence for use of accrual to smooth earnings in post-financial crisis period. This result is supporting the first finding that the increase in frequency of CNI can be due to change in cash flow and financial crisis has changed the financial reporting quality. The third measure correlation between CF and ACC has a value of 0.201 in pre-financial crisis period and is 0.293 in post-financial crisis period. The comparison of the correlation using fisher's r to z transformation gives a z-score value of -2.970 and a probability value of 0.003, indicates that the difference in correlation is statistically significant at 1 percentage level. It is a sign that the correlation between the variables is less negative in post-financial crisis period indicating that there is no sign for use of accrual to smooth earnings.

The coefficient of POST from the multivariate regression to measure frequency of small positive operating profit, SPOS, which is another measure used to measure managing earnings towards positive target increased by 0.016 in post-financial crisis period which is not statistically significant as the probability value is 0.213. This is a sign that frequency of reporting small positive net income increased insignificantly, specifying that earning smoothing increased immaterially in post-financial crisis period.

The first earning smoothing measure CNI indicates a decrease in earning smoothing and improvement in accounting quality but, the other measures ratio of CNI/CCF and correlation between ACC and CF are not giving any evidence for the use of accrual to manage earning. There is a small reduction in earning smoothing which is not statistically

significant to conclude an improvement in accounting quality in the post-financial crisis period. The measure for managing earnings towards positive target is also not indicating any statistically significant change in the frequency of SPOS between the periods. The financial crisis has not made any change in earning management and accounting quality of published financial statements.

Table 5.2.1 Results of Earning Management 264 Listed Companies, Pre and Post Financial Crisis

Earning Management	Prediction	Pre-FC	Post- FC	Significance
Variability of CNI	POST FC > PRE FC	0	0.014	0.001***
Ratio of Variability of CNI over CCF	POST FC > PRE FC	0.255	-0.57	0.451
Correlation of ACC and CF	POST FC > PRE FC	0.201	0.293	-2.970 (*z-value*) P-value 0.003***
Small Positive Net Income	-	0.016		0.213

*p < .10; **p < .05; ***p < .01.

5.3.2 Timely Loss Recognition

Frequency of reporting large negative net income, LNEG, is the measure used to evaluate timely loss recognition. A quality financial report recognises losses when it arises without deferring it to a future period. Prior studies suggested that an increase in the frequency of LNEG is a sign of timely loss recognition and quality financial report. Table 5.2.2 shows that the coefficient of POST from the multivariate regression of LNEG as dependent variable and POST and control variables as independent variables is 0.820 with a probability value of 0.005. This suggests that the frequency of reporting loss increased significantly in the post-financial crisis period, indicating an increase in financial report quality.

Table 5.2.2 Results of Timely Loss Recognition 264 Listed Companies Pre and Post Financial Crisis

Timely Loss Recognition	Prediction	Coefficient of POST	Significance
Large negative net income	+	0.82	0.005***
*p < .10; **p < .05; ***p < .01.			

5.3.3 Value Relevance

Value relevance measures are based on the market information relating to the listed companies. The study uses two measures, one price model which explains the explanatory power of market price to book value of equity and net income per share and the return model which gives the explanatory power of actual return received from investment in shares of the company and the net income over market price. Price model evaluates value relevance using the value of adjusted R^2 generated from the multivariate regression of market price P on net income per share (NIPS) and book value of shares, BVEPS. The result of price model in table 5.2.3 shows an adjusted R^2 value of 0.494 in pre-financial crisis period and 0.552 in post-financial crisis period. There is 5.8 percentage increase in the value of adjusted R^2 which is a sign of increase of value relevance in post-financial crisis period and improvement in quality of financial reports. On the other hand, the return model which regress net income over market price (NIOP) on return per share (RETURN) shows a decrease in value of adjusted R^2 from 0.260 in pre-financial crisis period to 0.200. Here there is a decrease in value relevance and accounting quality after financial crisis.

The result of all the accounting quality measures earning smoothing, managing earning towards positive target, timely loss recognition and value relevance price model shows an insignificant improvement in the accounting quality in post financial crisis period, while value relevance return model is not supporting this finding. The reduction in explanatory power of return and net income over market price may be the result of conservative dividend policy followed by listed companies in post-financial crisis period because of adverse economic conditions It is quite natural that in bad economic periods the

companies will retain its profit to increase the availability of fund to meet unforeseen contingencies which can reduce the value relevance of return model. It may not be the reflection of decrease in accounting quality. The result is against the expectation that the financial crisis may affect accounting quality of financial reports of listed companies adversely due to the changes made in IFRS and the pressure on IASB from different interest groups.

Table 5.2.3 Results of Value Relevance, 264 Listed Companies Pre and Post Financial Crisis

Value Relevance	Prediction	Pre-FC Adjusted R^2	Post-FC Adjusted R^2	Difference in R^2
Price model	POST FC > PRE FC	0.494	0.552	0.058
Return model	POST FC > PRE FC	0.26	0.2	-0.06

5.3.2 Commercial and Professional Services Sector

The importance of commercial and professional service industries is increasing in modern times as many organisations are outsourcing their subsidiary activates to commercial and professional service firms, so that they can concentrate to their core business. When there is an economic slowdown in the economy like financial crisis it will affect the performance of commercial and professional sector also which may pressurize the companies to show better result. In this section of the study an analysis of the effect of financial crisis on the quality of financial report of commercial and professional service firms are made using the accounting quality measures earning smoothing, timely loss recognition and value relevance.

5.3.2.1 Earning Management

Table 5.3.1 shows the values of the four-earning smoothing metric, frequency of CNI, ratio between CNI/CCF, correlation between CF and ACC and frequency of SPOS. The value of CNI in pre-financial crisis period 0.017 increased to 0.037 in post-financial crisis period and on comparing the values of CNI between the two-period using paired mean comparison

test the p-value is 0.204, signifying that the increase in value is not statistically significant. This is an evidence that financial crisis had not made any difference in the frequency of change in net income. The ratio of CNI/CCF has a value of 0.536 in pre-financial crisis period and it is 0.330 in post-financial crisis period. The probability value on comparison of pre and post financial crisis is 0.834 suggest that there is no statistically significant difference in the ratio of the two periods. Earlier studies suggest that a higher ratio is a sign that there is no evidence of use of accrual to manage earning. As there is no difference in the ratio between the two periods it is an indication that the financial crisis has not affected the accounting quality of financial reports. The third measure correlation between CF and ACC has a pre-financial crisis period value of -0.410 and a value of 0.113 in post-financial crisis period. The z-score on comparison of the correlation between the two period is -2.526 with a probability value of 0.012 indicating a statistically significant increase in correlation. There is a decrease in the negative correlation in the post-financial crisis period. This support the result of the earlier metric, ratio of CNI/CCF, suggesting that there is no sign of use of accrual to smooth earning in post-financial crisis period. The next earning smoothing measure frequency of small positive net income, SPOS, measured using coefficient of POST, increase by 0.033 in post-financial crisis period which is not statistically significant as the probability value is 0. 564. This is a sign of increase in reporting small positive net income which is not statistically significant. Considering all the four measures of earning smoothing it can be concluded that there is a small decrease in earning smoothing and increase in accounting quality. But it is not a significant increase and as such it cannot be concluded that accounting quality increased in post-financial crisis period.

Table 5.3.1 Results of Earning Management Commercial and Professional Services Sector Pre and Post Financial Crisis

Earning Management	Prediction	Pre-FC	Post- FC	Significance
Variability of CNI	POST FC > PRE FC	0.017	0.037	0.204
Ratio of Variability of CNI over CCF	POST FC > PRE FC	0.536	0.330	0.834
Correlation of ACC and CF	POST FC > PRE FC	-0.410	0.113	-2.526 (*z-value*) P-value 0.012**
Small Positive Net Income	-	0.033		0.564

*p < .10; **p < .05; ***p < .01.

5.3.2.2 Timely Loss Recognition

The frequency of reporting large negative net income used to evaluate the change in timely loss recognition is presented in table 5.3.2. The coefficient of POST in the regression of LNEG on POST and control variables used to evaluate LENG, gives a value of 1.574 with a probability value of 0.272. The increase in reporting large losses is not statistically significant in post-IFRS period. This measure also records an increase in frequency of timely loss recognition and a raise in accounting quality which is not material as there is no significant difference in the frequency of reporting small positive savings.

Table 5.3.2 Results of Timely Loss Recognition Commercial and Professional Services Sector Pre and Post Financial Crisis

Timely Loss Recognition	Prediction	Coefficient of POST	Significance
Large negative net income	+	1.574	0.272

*p < .10; **p < .05; ***p < .01.

5.3.2.3 Value Relevance

The table 5.3.3 shows the value of price model and return model used to measure the value relevance of accounting information of commercial and professional services sector. The regression of P, market price per share on net income per share, NIPS and book value of equity per share, BVEPS, gives an increase in adjusted R^2 value to 0.684 in the post-financial crisis period, from 0.437 in pre-financial crisis period. There is a substantial increase of 0. 237 in the value of adjusted R^2 indicating a rise in value relevance of accounting information and accounting quality. But, the return model shows a decrease in the adjusted R^2 from the regression of net income over price, NIOP, on return from equity share, RETURN. The value of adjusted R^2 is 0.276 in pre-financial crisis period and 0.093 in post-financial crisis period. There is a difference of 18.3 percentage specifying that the value relevance and accounting quality decreased in the post-financial crisis period.

Table 5.3.3 Results of Value Relevance Commercial and Professional Services Sector Pre and Post Financial Crisis

Value Relevance	Prediction	Pre-FC Adjusted R^2	Post-FC Adjusted R^2	Difference in R^2
Price model	POST FC > PRE FC	0.437	0.684	0.247
Return model	POST FC > PRE FC	0.276	0.093	-0.183

The analysis of the effect of financial crisis on accounting quality of commercial and professional service sector also follows the same pattern of result as shown in the analysis of result of all Australian listed companies. The earning smoothing measure shows an improvement in the accounting quality which is not statistically significant. The timely loss recognition shows an improvement in accounting quality which is not statistically significant. The price model shows an improvement in value relevance. Only return model shows a reduction in value relevance in post-financial crisis period. The improvement in accounting quality of companies in commercial and professional service sector even though it is not significant may be because of the boom in this sector witnessed in the post financial crisis period and the opposite result of return model can be the dividend policy followed by companies to retain fund for use in periods of economic depression.

5.3.3 Diversified Financials Sector

Diversified financial industry is much related to the financial market as such this industry can be one which can be affected most by financial crisis. The fair value accounting rule of measuring assets is applicable to most of the financial assets owned by diversified financial sector. As such the changes in fair value rule of measuring assets made by IASB can directly affect the quality of the financial reports. The result of the analysis of accounting quality in pre-and post-financial crisis period is analysed using the three

measures earning smoothing, timely loss recognition and value relevance as in the earlier two group of industries.

Financial Accounting Standard Board, FASB, made some changes by relaxing the application of standards on fair value measurement (FASB 2009). The change in the practice of fair value measurement increasingly relies on managerial assumptions in valuing assets, even when market price exist, is subject to much debate among regulators, bank executives and investors (Bushman and Landsman 2010). The supporters of these change argue that it gives more discretion in fair value measurement to mangers which conveys more relevant information and the critics argues that it gives great flexibility in fair value measurement which may be used by managers opportunistically which may affect the reliability of fair value (Fargher and Zhang 2014).

5.3.3.1 Earning Management

The result of earning smoothing is exhibited in table 5.4.1. Variability of change in net income (CNI) the first measure of earning smoothing records a value of 0.011 in pre-financial crisis period, increased to 0.017 in post-financial crisis period. The probability value of 0.499 indicates that the difference is not statistically significant. The second measure ratio of variability of change in net income to change in cash flow (CNI/CCF) gives a value of -0.945 in pre-financial crisis period to -0.747in post-financial crisis period. The probability value 0.904 indicates that the decrease in the ratio is not statistically significant. Coming to correlation between accrual and cash flow (ACC and CF) the post-financial crisis reduced to 0.234 in post-financial crisis period from 0.341 in pre-financial crisis period. The values of z-score on comparing the value of correlation between the two period is 1.208 with a probability value of 0.317. This shows an increase in the correlation in post-financial crisis period, but it is not statistically significant. The last criteria frequency of small positive net income (SPOS) records an increase of 0.050, with a probability of 0.317 indicating the difference is not statistically significant. All the four earning smoothing criteria shows insignificant variations in the value between pre-financial crisis and post -financial crisis period, as such it can be concluded that there is no change in the earning smoothing and financial crisis has not affected accounting quality.

Table 5.4.1 Results of Earning Management Diversified Financials Sector Pre and Post Financial Crisis

Earning Management	Prediction	Pre-FC	Post- FC	Significance
Variability of CNI	POST FC > PRE FC	0.011	0.017	0.499
Ratio of Variability of CNI over CCF	POST FC > PRE FC	-0.945	-0.747	0.904
Correlation of ACC and CF	POST FC > PRE FC	0.341	0.234	1.208 (*z-value*) P-value 0.227
Small Positive Net Income	-	0.050		0.317

*p < .10; **p < .05; ***p < .01.

5.3.3.2 Timely Loss Recognition

The frequency of reporting large negative net income (LNEG) is the measure for timely loss recognition. It is presumed that an increase in the frequency of reporting large negative net income is a sign of recognising losses as and when they arise and quality accounting. The coefficient of POST from the regression of LNEG as the dependent variable and POST and other selected control variables for diversified financial industry is shown in Table 5.4.2. The coefficient of POST is 0.201 with a probability value of 0.002, indicating an increase in reporting large negative net income in the post-financial crisis period, which is statistically significant. The result indicates an increase in the frequency of reporting large negative income and an improvement in accounting quality in the post-financial crisis period.

Table 5.4.2 Results of Timely Loss Recognition Diversified Financials Sector Pre and Post Financial Crisis

Timely Loss Recognition	Prediction	Coefficient of POST	Significance
Large negative net income	+	0.201	0.002

*p < .10; **p < .05; ***p < .01.

5.3.3.3 Value Relevance

Value relevance describes the explanatory power of accounting information and market data. Two models, price model and return model explains the value relevance based on the R^2 from the regression. Adjusted R^2 from the regression of P on NIPS and BVEPS used in price model is 0.523 in pre-financial crisis period and 0.677 in post-financial crisis period (see table 5.4.3). The increase of 15.4 percentage in adjusted R^2 denotes a substantial improvement in the explanatory power of accounting information. The return model regresses net income over market price (NIOP) on return on investment per share (RETURN). The adjusted R^2 of return model is 0.234 in pre-financial crisis period and 0.412 in post-financial crisis period. The increase 17.8 percentage shows a considerable improvement in the value relevance of accounting numbers and market information.

Table 5.4.3 Results of Value Relevance Diversified Financial Sector Pre and Post Financial Crisis

Value Relevance	Prediction	Pre-FC Adjusted R^2	Post-FC Adjusted R^2	Difference in R^2
Price model	POST FC > PRE FC	0.523	0.677	0.154
Return model	POST FC > PRE FC	0.234	0.412	0.178

The result of derivative financial industries shows that there is no significant change in earning management and accounting quality between the periods. But timely loss recognition and value relevance shows a significant improvement in the quality in post-financial crisis period. The close association of derivative financial sector to financial market can be one of the reasons for the improvement in accounting quality. Moreover, the fair value accounting model followed in IFRS 13 which defines fair value on the basis of an 'exit price' notion and uses a 'fair value hierarchy', make the valuation more market-based, rather than entity specific (Deloitte 2016).

5.3.4 Energy Sector

Energy sector is one of the industrial sectors intensely effected by the financial crisis. This sector has to face a tough financial environment after 2008 financial crisis due to weakening demand for energy and fall in cash flow due to price fall, effecting both supply and demand side of investment (IEA 2009). This section of the study evaluates whether the worsened economic condition in the industry, due to financial crisis has affected the financial reporting quality of listed energy companies in Australia. The effect of financial crisis on the quality of financial reporting is evaluated using the three criteria earning smoothing, timely loss recognition and value relevance as in the analysis of earlier industry sectors.

5.3.4.1 Earning Management

Table 5.5.1 gives the values of the four earning smoothing metrics. Variability of change in net income, CNI, has a value of -0.018 in pre-financial crisis period and -0.020 in post-financial crisis. The probability value on comparison of these values using paired mean comparison test is 0.869. There is a small decrease in the variability of change in net income which is not statistically significant, indicating that there is no difference in earning smoothing after the financial crisis. The second measure ratio of CNI to CCF also corroborates the result of the earlier measure CNI. The pre-financial crisis value of the ratio is 0.391 and the ratio for post-financial crisis period is-5.628. The p-value on comparison of ratio of CNI to CCF using paired mean comparison test is 0.658, suggesting that the difference is not statistically significant telling that there is no evidence of use of accrual

to smooth earning but may be the change in cash flow. Correlation between CF and ACC, the third earning smoothing measure has a value of 0.164 and 0.390 respectively for pre and post-financial crisis period. Comparing the correlation using z-score gives a value of -3.12 with a p-value of 0.002. The decrease in negative correlation supports the earlier finding that there is no evidence of use of accrual to smooth earnings. Finally, the frequency of reporting small positive net income, SPOS, which is interpreted using the coefficient of POST shows an increase of 0.016 which is not statistically significant as the probability value is 0.480. Based on the values of different earning smoothing measures it can be concluded that there is no significant difference in earning smoothing and accounting quality in post-financial crisis period.

Table 5.5.1 Results of Earning Management Energy Sector Pre and Post Financial Crisis

Earning Management	Prediction	Pre-FC	Post- FC	Significance
Variability of CNI	POST FC > PRE FC	-0.018	-0.02	0.869
Ratio of Variability of CNI over CCF	POST FC > PRE FC	0.391	-5.628	0.658
Correlation of ACC and CF	POST FC > PRE FC	0.164	0.39	-3.12(z-value) P-value 0.002
Small Positive Net Income	-		0.016	0.480

*p < .10; **p < .05; ***p < .01.

5.3.4.2 Timely Loss Recognition

Reporting losses in a timely manner is a sign of quality financial report. LNEG, frequency of reporting large losses is the measure used to evaluate timely loss recognition. LNEG is evaluated using coefficient of POST from the regression of LNEG on POST and control variables. Table 5.5.2 gives the coefficient of POST as 0.000 with a probability value of 0.998. This shows that there is no difference in frequency of reporting small positive net

income in post-financial crisis period meaning that there is no difference in timely loss recognition and accounting quality in energy sector.

Table 5.5.2 Results of Timely Loss Recognition Energy Sector Pre and Post Financial Crisis

Timely Loss Recognition	Prediction	Coefficient of POST	Significance
Large negative net income	+	0	0.998

*p < .10; **p < .05; ***p < .01.

5.3.4.3 Value Relevance

The energy sector also uses price model and return model to evaluate the explanatory power of accounting numbers and market information. The adjusted R^2 from the regression of the models used to interpret the change in value relevance of energy sector are given in table 5.5.3. The adjusted R^2 of price model in pre-financial crisis period is 0.529 and that of post-financial crisis period is 0.521. The decrease is only 0.8 percentage which cannot be considered as a material decrease in value relevance in post-financial crisis period. Return model shows an adjusted R^2value of 0.162 and 0.217 respectively for pre and post financial crisis period. There is an increase of 5.5 percentage in adjusted R^2 indicating an increase in value relevance and accounting quality.

Table 5.5.3 Results of Value Relevance Metrics, Energy Sector Pre and Post Financial Crisis

Value Relevance	Prediction	Pre-FC Adjusted R^2	Post-FC Adjusted R^2	Difference in R^2
Price model	POST FC > PRE FC	0.529	0.521	-0.008
Return model	POST FC > PRE FC	0.162	0.217	0.055

Energy industry is one of the sectors which affected very much due to the financial crisis because of the reduction in industrial activities and the fall in the price of petroleum products. But all the quality measures except value relevance return model marked difference in value which is not statistically significant. The increase in value relevance only in return model can be the outcome of the dividend policy followed by energy sector in view of the economic trend in the industry. All other quality measure is suggesting no significant change in the accounting qualities between pre and post financial crisis period in energy sector. This can be either because AASB standards are as good as IFRS or the regulatory system of Australia was very vigilant to in maintaining the quality of financial reports.

5.3.5 Health Care Equipment and Services Sector

The financial crisis has increased the people's sufferings from financial distress due to unemployment, lower home equity values and stock market values. This has affected the health care spending and investment, as such it effected the healthcare equipment's and service sector (Seligman 2008). Many authors are of the opinion that economic distress like financial crisis increases the tendency among firms to boost earning through manipulation of accounts, effecting the quality of financial reports (Filip and Raffournier 2014). As financial crisis has affected Australian economy the impact of this financial distress can have an impact on Australian health care equipment and services industry also. This section of the study evaluates the effect of financial crisis on the accounting quality of Australian health care equipment and service industry using the three criteria of accounting quality, namely earning management, timely loss recognition, and value relevance.

5.3.5.1 Earning Management

The result of the four earning management measures presented in table 5.6.1 below shows that there is no significant difference in earning management between two periods. The first measure variability of CNI shows a pre-financial crisis period value of- 0.024 and a value of -0.028 in post-financial crisis period. The probability value on comparison of CNI

for the two periods using paired mean comparison test is 0.173 indicating that the difference is not statistically significant. The value of ratio of CNI/CCF, increased from 0.341in pre-financial crisis period to 1.022 in post financial crisis period. The increase is not statistically significant as the p-value of paired mean comparison test is 0.344. This suggests that there is no significant evidence for the use of accrual to managing earning. Correlation between CF and ACC has a value 0.329 and 0.237 respectively in pre and post-financial crisis period. Comparing the Value of the correlation between the two periods using fisher's r to z transformation gives a z-value of 0.711 and a p-value of 0.477. Both these values indicate that the increase in negative correlation which can be an indication of use of accruals for smoothing earnings is not statistically significant. The last metric used to measure earning management, SPOS, gives a coefficient of -0.073 for the variable POST, with a p-value 0.166, suggesting an insignificant decrease in the frequency of reporting small positive operating savings in post-financial crisis period. This is a sign that there is a decrease in earning smoothing in post-financial crisis periods which cannot be considered as statistically significant.

Table 5.6.1 Results of Earning Management, Health Care Equipment's and Services Sector Pre and Post Financial Crisis

Earning Management	Prediction	Pre-FC	Post-FC	Significance
Variability of CNI	POST FC > PRE FC	-0.024	-0.028	0.173
Ratio of Variability of CNI over CCF	POST FC > PRE FC	0.341	1.022	0.344
Correlation of ACC and CF	POST FC > PRE FC	0.329	0.237	0.711 (z-value) P-value 0.477
Small Positive Net Income	-	-0.073		0.166

*p < .10; **p < .05; ***p < .01.

5.3.5.2 Timely Loss Recognition

Frequency of reporting large negative net income, LNEG, the measure used to evaluate timely loss recognition is interpreted using the coefficient of POST. Table 5.6.2 gives a value of 0.091 with a probability value of 0.298. This is a sign of increase in reporting large negative income and a sign of timely loss recognition and quality financial reporting. But the increase is not statistically significant. This measure also shows that there is no significant change in accounting quality in post-financial crisis period.

Table 5.6.2 Results of Timely Loss Recognition Metrics, Health Care Equipment's and Services Sector Pre and Post Financial Crisis

Timely Loss Recognition	Prediction	Coefficient of POST	Significance
Large negative net income	+	0.091	0.298

*p < .10; **p < .05; ***p < .01.

5.3.5.3 Value Relevance

Table 5.6.3 gives the value of both price model and return model of value relevance. The result of these measures is giving contradicting result. The price model gives a pre-financial crisis period adjusted R^2 value of 0.638 and a post-financial crisis period adjusted R^2 value of 0.796. There is an increase of 15.8 percentage increase in adjusted R^2 of price model, showing a material increase in the explanatory power and value relevance in post -financial crisis period. The result of return model is opposite to that of price model. It gives an adjusted R^2 value of 0.599 in pre-financial crisis, period which reduced to 0.251 in post-financial crisis period. There is a substantial decrease of 34.8 percentage in explanatory power and value relevance in post-financial crisis period.

Table 5.6.3 Results of Value Relevance Metrics, Health Care Equipment's and Services Sector Pre and Post Financial Crisis

Value Relevance	Prediction	Pre-FC Adjusted R^2	Post-FC Adjusted R^2	Difference in R^2
Price model	POST FC > PRE FC	0.638	0.796	0.158
Return model	POST FC > PRE FC	0.599	0.251	-0.348

Thus, on analysing the accounting quality of health care equipment and services sector shows a mixed result. When earning management, timely loss recognition shows that there is no significant change in accounting quality in the post-financial crisis period, the value relevance price model and return models are showing a diverse outcome. The price model indicates a material increase in value relevance and the return model suggests a substantial decrease in value relevance. The financial distress due to the financial crisis can affected health care equipment and services sector, but the efficient regulatory system in Australia and the quality of AASB standards can be the reason for maintaining the accounting quality of financial reports even in the post financial crisis period. The decrease in the value relevance return model can be the outcome of the precautions in fund management implemented by companies.

5.3.6 Material Sector

The Australian material sector which includes minerals and other resources sector is export oriented and much of these exports are to Asian countries. The fall in the Gross Domestic Products (GDP) of these Asian countries due to financial crisis has reduced the demand for these resources leading to fall in price, increase in cost of operation and reduces access of these companies to financial market (AUparlement 2009). The economic depression like financial crisis prompts many firms to manipulate accounts to show better financial performance (Filip and Raffournier 2014). This section of the study assesses the effect of

this economic distress on the accounting quality of material industry. The effect of financial crisis on accounting quality of Australian listed material sector companies are based on 107 ASX listed companies in material sector. The accounting quality is analysed using earning management, timely loss recognition and value relevance.

5.3.6.1 Earning Management

The result of the four earning management measures is presented in table 5.7.1 below. The first measure variability of CNI, gives a pre-financial crisis value -0.011 and a value of 0.021 in post financial crisis period with a probability value of 0.000. These values denote that there is a statistically significant increase in the variability of change in net income, suggesting that the earning smoothing has reduced in post -financial crisis period denoting a rise in accounting quality. Ratio of CNI/ CCF the second measure is used to supplement the first measure CNI and is not giving a clear mandate in support of the first finding. The ratio of CNI/CCF increased from the value 0.325 in pre-financial crisis period to 1.374 in post financial crisis period which is not statistically significant as the probability value is 0.483. There is no change in ratio of CNI/CCF between the periods which denotes that variability of change in net income shown in the earlier measure CNI can be due to increase in cash flow and there is no sign of use of accrual to smooth earning. The correlation between ACC and CF another measure used to supplement CNI shows a value of 0.172 in pre-financial crisis period and 1.151 in post financial crisis period. The z-score calculated to evaluate the significance of difference in correlation between the two periods gives a z-score of 0.399 and a probability value of 0.690 both suggests that the difference is not statistically significant. This also supports the findings in ratio of CNI/CCF that there is no evidence for the use of accrual to smooth earnings. Frequency of reporting small positive net income, SPOS, is used to know whether the companies are managing earnings towards positive target which is another measure of earning management. SPOS interpreted using the coefficient of POST shows a value of -0.001 and a probability value of 0.974. This suggests a minor reduction in reporting small operating savings in the post-financial crisis period which is not statistically significant. Based on all the earning management measures it can be concluded that there is no significant variation in earning management and change in accounting quality between pre and post financial crisis periods.

Table 5.7.1 Results of Earning Management Material Sector Pre and Post Financial Crisis				
Earning Management	Prediction	Pre-FC	Post- FC	Significance
Variability of CNI	POST FC > PRE FC	-0.011	0.021	0.000***
Ratio of Variability of CNI over CCF	POST FC > PRE FC	0.325	1.374	0.483
Correlation of ACC and CF	POST FC > PRE FC	0.172	1.151	0.399 (*z-value*) P-value 0.690
Small Positive Net Income	-	-0.001		0.974
*p < .10; **p < .05; ***p < .01.				

5.3.6.2 Timely Loss Recognition

Table 5.7.2 gives the result of timely loss recognition measured by frequency of reporting large negative net income LNEG. LNEG is interpreted using the coefficient of independent variable POST from the regression of LNEG on POST and control variables. The coefficient of POST as given in Table 5.7.2, is 0.103 with a probability value of 0.053. This shows that increase in reporting large negative net income is not statistically significant at 95 percentage confidence intervals. This measure also suggests that there is no change in reporting large negative net income and accounting quality after financial crisis.

Table 5.7.2 Results of Timely Loss Recognition Material Sector Pre and Post Financial Crisis			
Timely Loss Recognition	Prediction	Coefficient of POST	Significance
Large negative net income	+	0.103	0.053
*p < .10; **p < .05; ***p < .01.			

5.3.6.3 Value Relevance

The two value relevance measures used to evaluate the explanatory power of financial report by using the adjusted R^2 from the regression of financial reporting information with market information is providing opposing result. Price model which regress market price P as dependent variable and NIPS and BVEPS as independent variable gives an adjusted R^2 value of 0.465 in pre-financial crisis period and a value of 0.546 in post -financial crisis period (see table 5.7.3). There is an increase of 8.1 percentage in the explanatory power indicating an increasing in accounting quality. The return model of value relevance gives an opposite result with an adjusted R^2 value of 0.206 and 0.144 respectively in pre-and post-financial crisis period. The decrease of 6.2 percentage indicates a reduction in value relevance in the post-financial crisis period. The two value relevance measures are showing opposing out come

Table 5.7.3 Results of Value Relevance Material Sector Pre and Post Financial Crisis

Value Relevance	Prediction	Pre-FC Adjusted R^2	Post-FC Adjusted R^2	Difference in R^2
Price model	POST FC > PRE FC	0.465	0.546	0.081
Return model	POST FC > PRE FC	0.206	0.144	-0.062

The accounting quality measures earning management and timely loss recognition shows no significant change in accounting quality. But value relevance price model shows signs of improvement in accounting quality in the post-financial crisis period. But value relevance return model indicate a reduction in value relevance and accounting quality. Material sector is the largest industrial sector in Australia and financial crisis has not affected Australian economy like many other economies. Along with that quality of AASB standards and the efficient regulatory system can be the reason for maintaining the

accounting quality financial reports even in financial crisis periods. The fall in price and the increase in operating cost in material sector in post-financial crisis period would have reduced the net income and dividend pay-out in these sector which can reduce the value relevance in return model.

5.3.7 Real Estate Sector

In the wake of 2008 financial crisis, the housing market of Australia and New Zealand have experienced a downturn, but the magnitude of the price decline was not as intense as in many other countries like USA, UK and Ireland (Murphy 2011). Many critics points out that the bubble in real estate sector and the fair value accounting model of assets valuation as the contributing factor of financial crisis. In the wake of these criticism, there was extensive pressure on IASB from different accounting bodies and regulators to make unjustifiable changes in the IFRS (Alali and Cao 2010). This section of the study evaluates whether these pressures and the resulting changes made to the IFRS has affected the quality of financial report of real estate sector. As in the study of earlier industry groups analysis of accounting quality in made using earning management, timely loss recognition and value relevance.

5.3.7.1 Earning Management

The first earning management measure used to evaluate accounting quality is earning smoothing. Table 5.8.1 gives the result of the four earning management measures. Variability of CNI the first metrics gives a pre-financial crisis period value of 0.013 and a post-financial crisis period value of 0.007. The probability value on comparison of CNI for two periods using paired mean comparison test is 0.633, indicating that the difference is not statistically significant. Thus, even if there is a small decrease in variability of CNI it is not statistically significant to suggest that there is an increase in earning smoothing and decrease in accounting quality in post-financial crisis period. Ratio of CNI/CCF, the second measure of earning smoothing also shows a decrease from -1.058 in pre-financial crisis period to -1.277 in post-financial crisis period. The probability value on comparison of ratio between the two periods using paired mean comparison test is 0.909. The decrease in ratio is not statistically significant meaning that there is no evidence for the use of accrual

to manage earning and earning smoothing. The third measure correlation between CF and ACC also shows a similar result as that of earlier two measures. The pre-financial crisis period correlation value is 0.116 and 0.052 in post-financial crisis period. The z-score from the comparison of correlation of the two-period using fisher's r to z transformation is 0.524 and probability value is 0.600. There is an increase in negative correlation which is not statistically significant meaning that there is no indication of use of accrual to smooth earning and change in accounting quality. Frequency of reporting small positive operating profit, SPOS, interpreted using coefficient of the value of POST from the multivariate regression is -0.036 signifying a decrease in value. The probability value 0.534 suggests that the decrease is not statistically significant. Thus, there is no significant change in the frequency of reporting small positive net income and managing earning towards positive target. The overall result of earning management is that there is no significant evidence of managing earning and change in accounting quality in post-financial crisis period.

Table 5.8.1 Results of Earning Management Real Estate Sector Pre and Post Financial Crisis

Earning Management	Prediction	Pre-FC	Post- FC	Significance
Variability of CNI	POST FC > PRE FC	0.013	0.007	0.633
Ratio of Variability of CNI over CCF	POST FC > PRE FC	-1.058	-1.277	0.909
Correlation of ACC and CF	POST FC > PRE FC	0.116	0.052	0.524 (*z-value*) P-value 0.600
Small Positive Net Income	-	-0.036	0.534	

*p < .10; **p < .05; ***p < .01.

5.3.7.2 Timely Loss Recognition

A quality financial report recognises losses when they arise without delaying it to a future period. Based on this view, the frequency of reporting large negative net income, LNEG, is the metric used to evaluate timely loss recognition. The frequency of LENG is interpreted using the coefficient of POST from the multivariate regression of LNEG on POST and other control variables. Table 5.8.2 below gives the coefficient of POST as 0.036 with a probability value of 0.534. The result indicates that there is a small increase in the frequency of reporting large negative net income, which is not statistically significant. The frequency of reporting large negative net income and accounting quality has not made any changes in the post-financial crisis period as compared to pre-financial crisis period.

Table 5.8.2 Results of Timely Loss Recognition Real Estate Sector Pre and Post Financial Crisis

Timely Loss Recognition	Prediction	Coefficient of POST	Significance
Large negative net income	+	0.036	0.534

*p < .10; **p < .05; ***p < .01.

5.3.7.3 Value Relevance

Explanatory power of accounting numbers and market-based information is assessed using price model and return model in the value relevance measure of accounting quality. Adjusted R^2 from the regression of P on NIPS and BVEPS in the price model as given in table 5.8.3 for pre-financial crisis period is 0.465 and 0.365 in post-financial crisis period. There is a decrease of 10 percentages in the adjusted R^2 meaning that the explanatory power and value relevance reduced in post-financial crisis period indicating there is a decrease in accounting quality in the post-financial crisis period. Contrary to the result of price model return model shows an increase in adjusted R^2 from 0.176 in pre-financial crisis period to 0.385 in post-financial crisis period. Increase of 20.9 percentages in adjusted R^2 indicates an increase in value relevance and accounting quality in post-financial crisis period.

Table 5.8.3 Results of Value Relevance Metrics, Real Estate Sector Pre and Post Financial Crisis

Value Relevance	Prediction	Pre-FC Adjusted R^2	Post-FC Adjusted R^2	Difference in Adjusted R^2
Price model	POST FC > PRE FC	0.465	0.365	-0.1
Return model	POST FC > PRE FC	0.176	0.385	0.209

The result of real estate sector gives a diverse outcome. The earning management and timely loss recognition measures indicates that there is no significant change in accounting quality between the two periods. But the value relevance measure is giving opposing result. Price model shows a clear sign of reduction in value relevance but the return model indicates an increase in value relevance. Financial crisis effected all the economies throughout the world and Australia was not an exception even if the effect was not very severe in Australia. The real estate industry is the business sector effected the most. But when the effect of financial crisis on accounting quality was analysed, it was found that earning management and timely loss recognition shows no change in accounting quality because as mentioned earlier it can be either for the reason that the AASB standards used are as good as the IFRS or Australia have a strong regulatory system which monitor and control the quality of accounting report. Opposing result shown in value relevance models can be due to the market reaction to the distress in economy because of financial crisis and the dividend policy followed by companies in the sector to attract more investors in this sector.

5.3.8 Software and Service Sector

The software and service sector are the most developing industry sector in the recent time. It is a sector which is related to all other sectors as almost all the organisations are using computers and software in their day to day activities and even in their production process. Therefore, the economic distress of financial crisis can affect software sector also. Firms usually tries to boost earnings in periods of economic distrusts (Filip and Raffournier 2014, Graham, Harvey, and Rajgopal 2005). This section of the study evaluates whether the

impact of financial crisis has affected the quality of financial reporting of software and service sector. Following the analysis in earlier sector here also the accounting quality measures earning management, timely loss recognition and value relevance are the three criteria used to evaluate and compare the accounting quality of software and service sector between pre and post financial crisis period.

5.3.8.1 Earning Management

The earning management is measured using variability of change in net income, CNI, ratio of change in net income and change in cash flow, CNI/CCF, correlation between cash flow, CF, and accrual, ACC, and frequency of reporting small positive net income, SPOS, are presented in table 5.9.1 below. The first findings variability of change in net income, CNI, has a pre-financial crisis value of 0.056 which decreased to 0.020 in post financial crisis period. The comparison of the value between the periods using paired mean comparison test gives a probability value of 0.007 indicating that the decrease is statistically significant. The decrease in variability of change in net income is significant meaning that the earning management has increased in post-financial crisis period. The second measure ratio of CNI/CCF is used to supplement the result of first measure CNI. The result of the ratio CNI/CCF is used to know whether the decrease in frequency of change in net income is the result of using accrual to manage earning or due to change in cash flow. The result of the ratio is decreased from 6.317 in pre-financial crisis period to 1.398 in post-financial crisis period with a probability value of 0.476 meaning that the difference is not statistically significant. As the decrease is not statistically significant there is no clear evidence of use of accrual in managing earning. The third measure correlation between CF and ACC shows an increase in correlation from 0.230 to 0.335 with a z-score of -1.123 and also a probability value of 0.261 meaning the increase is not statistically significant. Considering the result of these three measures together suggests that even if there is a decrease in CNI there is no evidence of use of accrual to smooth earnings in post-financial crisis period. The next measure of earning management, frequency of reporting small positive net income, SPOS, is evaluated using the coefficient of POST from the regression of SPOS on POST and control variables. The coefficient of POST given in table 5.9.1 is -0.000, with a probability value of 0.988 meaning that there is no statistically significant evidence for difference in

reporting small positive net income in post -financial crisis period compared to pre-financial crisis period.

Table 5.9.1 Results of Earning Management Software and Services Sector Pre and Post Financial Crisis

Earning Management	Prediction	Pre-FC	Post- FC	Significance
Variability of CNI	POST FC > PRE FC	0.056	0.02	0.007
Ratio of Variability of CNI over CCF	POST FC > PRE FC	6.317	1.398	0.476
Correlation of ACC and CF	POST FC > PRE FC	0.23	0.335	-1.123 (*z-value*) P-value 0.261
Small Positive Net Income	-	0		0.988

*p < .10; **p < .05; ***p < .01.

All the four earning management measures points out that even if there is an increase in CNI in post-financial crisis period there is no evidence of use of accrual to smooth earnings. frequency of reporting small positive net income is also not showing any difference between pre and post-financial crisis periods to conclude that there is earning management and reduction in accounting quality in post-financial crisis period.

5.3.8.2 Timely Loss Recognition

Frequency of reporting large negative net income (LNEG) is the measure used to evaluate the timely loss recognition. The frequency of reporting large losses will increase if a firm recognises losses in a timely manner (Lang 2006, Ahmed, Neel, and Wang 2013, Barth 2007). Table 5.9.2 presents the result of LNEG, interpreted using the coefficient of POST from the multivariate regression of LNEG as dependent variable and POST and other control variables as independent variables. The value of LNEG is 0.024 with a probability value of 0.773, suggesting that the frequency of reporting large negative net income has

increased, which is not statistically significant. The result shows that there is a small increase in the frequency of reporting large negative net income, but the increase is not sufficiently significant to indicate that timely loss recognition has improved denoting an increase in accounting quality.

Table 5.9.2 Results of Timely Loss Recognition Software and Services Industry Pre and Post Financial Crisis

Timely Loss Recognition	Prediction	Coefficient of POST	Significance
Large negative net income	+	0.024	0.773

*p < .10; **p < .05; ***p < .01.

5.3.8.3 Value Relevance

Value relevance gives the explanatory power of accounting numbers and market information using price model and return model. Adjusted R^2 from the price model and return models are presented in table 5.9.3. The value of adjusted R^2 of price model in pre-financial crisis period is 0.273 and that of post-financial crisis period is 0.589, an increase of 31.6 percentage. The increase signifies a remarkable raise in value relevance and accounting quality. The return model of value relevance gives a contrasting result of value relevance. The value of adjusted R^2 value for per-financial crisis period is 0.240 and 0.178 in post-financial crisis period. There is a decrease of 6.2 percentage in the adjusted R^2 meaning a decrease in explanatory power accounting numbers and value relevance.

Table 5.9.3 Results of value relevance software and services industry pre and post financial crisis

Value Relevance	Prediction	Pre-FC Adjusted R^2	Post-FC Adjusted R^2	Difference in Adjusted R^2
Price model	POST FC > PRE FC	0.273	0.589	0.316
Return model	POST FC > PRE FC	0.240	0.178	0.062

The overall result of software and services sector indicates that the first two measures of accounting quality, based on the information from financial reports, earning management and timely loss recognition shows that there is no significant proof to conclude that there is a change in accounting quality. But the result of value relevance, measures based on market information, gives a mixed result. When price model shows a remarkable increase in value relevance and accounting quality, return model shows a reduction in explanatory power and accounting quality. The improvement in value relevance price model can be the outcome of use of fair value model in valuing assets and the increase in public confidence in software and services sector.

5.4 Effect of Financial Crisis on Accounting Quality Measures

The financial crisis of 2008 effected almost all the economies throughout the world because of the volatility and global integration of financial markets. Even though its effects on Australian capital markets were comparatively lower. There was severe criticism from all quarters that it was the adoption of IFRS specifically the use of fair value measurement of assets used in accounting which contributed to the global financial crisis. Considering this criticism, political intervention and the pressure from different interest groups, IASB made some changes in the fair value model of assets valuation which can affect the quality of published financial reports. More over the possibility of manipulations in accounts are usually higher in periods of bad financial situations. In this context it is expected that the financial crisis may affect the accounting quality of published financial report of Australian listed companies. An analysis of data relating to seven pre-financial crisis periods, 2002 to 2008 and seven post-financial crisis period 2009 to 2015, is made in this chapter.

The result of the analysis of effect of the financial crisis on the accounting quality of Australian listed companies is interpreted in the following section of the study. The effect of financial crisis on accounting quality was interpreted for all 264 sample companies and also by dividing the sample companies into seven industry sectors as per GICS using three accounting quality metrics, i.e. earning management, timely loss recognition, and value relevance. Earning management used the metrics CNI, ratio of CNI/CCF, and correlation

between ACC and CF. SPOS was used as a measure for managing earning towards positive target and the study used LNEG to measure timely loss recognition. Value relevance was measured using price model and return model. The impact of financial crisis on each accounting quality measure on all 264 sample companies and companies in each different industrial sectors is assessed in the following section.

5.4.1 Earning Management

The study used two measures, earning smoothing and managing earnings towards positive target, to analyse the effect of earning management. Earning smoothing is measured by CNI, ratio of CNI/CCF and correlation between ACC and CF

5.4.1.1 Variability of Change in Net Income (CNI)

CNI is the measure used to assess the earning smoothing behaviour of listed companies in pre and post-financial crisis period. Two other metrics, ratio of CNI/CCF and correlation between ACC and CF is used to substantiate the result of CNI by examining whether the change in CNI is due to the use of accruals to smooth earnings or whether it is due to the change in cash flow. Table 5.10.1 below give the comparative result of CNI of 264 sample companies and the seven industrial sectors selected for the study. The CNI for 264 sample companies and material sector gives a statistically significant increase in variability of change in net income suggesting a proof of decrease in earning smoothing in post-financial crisis period, while the software and services sector displays a decrease in CNI which is statistically significant, suggesting an increase in earning smoothing. All the other five sectors display an insignificant difference in earning smoothing. Thus all the sectors except software and services shows that there is either an increase or no change in variability in change in net income and earning smoothing.

Table 5.10.1 Variability of CNI Financial Crisis Period Prediction POST-Financial Crisis > PRE-Financial Crisis			
Industry sector	Pre-IFRS	Post-IFRS	Significance
All 264 companies	0.0003	0.014	0.001***
Commercial and professional service	0.017	0.037	0.204
Diversified Financials	0.011	0.017	0.499
Energy	0.018	-0.02	0.869
Health Care equipment's and Services	-0.024	-0.028	0.173
Material	-0.011	0.021	0.000***
Real estate	0.013	0.007	0.633
Software and services	0.056	0.02	0.007***

*p < .10; **p < .05; ***p < .01.

5.4.1.2 Ratio of CNI/CCF

The above finding can confirmed only by analysing the result of two supporting tests ratio of CNI/CCF and correlation between ACC and CF. Ratio of CNI and CCF for pre and post-financial crisis period given in Table 5.10.2 shows that the difference in ratio between periods are not statistically significant in any sector meaning that there is no proof of using accrual to smooth earning.

Table 5.10.2 Ratio of CNI/CCF Financial Crisis Period.			
Prediction POST-Financial Crisis > PRE-Financial Crisis			
Industry sector	Pre-IFRS	Post- IFRS	Significance
All 264 companies	0.255	-0.57	0.451
Commercial and professional service	0.536	0.33	0.834
Diversified Financials	-0.945	-0.747	0.904
Energy	0.391	-5.628	0.658
Health care equipment's and services	0.341	1.022	0.344
Material	0.325	1.374	0.483
Real estate	-1.058	-1.277	0.909
Software and services	6.317	1.398	0.476
*p < .10; **p < .05; ***p < .01.			

5.4.1.3 Correlation Between ACC and CF

Correlation between ACC and CF is another measure used to assess the use of accrual to smooth earning. Table 5.10 3 gives the result of correlation between ACC and CCF for pre and post-financial crisis period. An increase in negative correlation is considered as a sign of use of accrual to smooth earnings. The correlation between ACC and CF, for sample of 264 companies, commercial and professional services sector and the energy sector shows a statistically significant increase in positive correlation and all the remaining sector there is no significant difference in the value of correlation between the two periods. As such there is no proof for use of accrual to smooth earnings. Both the measures used to know whether the companies are using accrual to manage earnings are not giving any evidence for use of accrual. Therefore, even if there is change in the value of CNI between pre and post-IFRS periods it cannot be established that the variability of change in net income is due to the use of accrual to smooth earning but can be the change in the cash flow between periods and there is no evidence for increase in earning smoothing in the post financial crisis period.

Table 5.10.3 Correlation Between ACC and CF Financial Crisis Period Prediction Post- Financial Crisis > Pre-Financial Crisis				
Industry sector	Pre-IFRS	Post-IFRS	Z-value	p-value
All 264 companies	0.201	0.293	-2.97	0.003***
Commercial and professional service	-0.41	0.113	-2.526	0.012**
Diversified Financials	0.341	0.234	1.208.	0.227
Energy	0.164	0.39	-3.12	0.002***
Health care equipment's and services	0.329	0.237	0.711	0.477
Material	0.172	1.151	0.399	0.69
Real estate	0.116	0.052	0.524	0.6
Software and services	0.23	0.335	-1.123	0.261
*p < .10; **p < .05; ***p < .01.				

5.4.2 Managing Earnings Towards Positive Target

Frequency of reporting small positive net income, SPOS, is the measure used to evaluate managing earnings towards positive target, interpreted using the coefficient of POST from the regression of SOPS on POST and control variables. A reduction in the coefficient of POST is taken as lower frequency of reporting small positive savings and increase in accounting quality in post-financial crisis period. The coefficient of POST for different sample groups, presented in table 5.10.4 displays an increase in the value of coefficient for energy and real estate sector suggesting a rise in frequency of reporting small positive savings in post-financial crisis period and all remaining industrial sectors indicates a decrease in the coefficient of POST signifying reduction in frequency of reporting SPOS. The difference in coefficient of POST in post-financial crisis period is not statistically significant in any sample group to determine that there is substantial change in frequency of reporting small positive savings and managing earnings towards positive target. As such it can be arrived that there is no difference in frequency of reporting small positive savings between pre and post-financial crisis period and no proof for managing earnings towards positive target and change in accounting quality

Table 5.10.4 Frequency of Small Positive Net Income (SPOS) Financial Crisis Period

Prediction Negative Value in Post-Financial Period

Industry sector	Coefficient of POST	p-value
All 264 companies	0.016	0.213
Commercial and professional service	0.033	0.564
Diversified Financials	0.05	0.317
Energy	0.016	0.48
Health care equipment's and services	-0.073	0.166
Material	-0.001	0.974
Real estate	-0.036	0.534
Software and services	0	0.988

*p < .10; **p < .05; ***p < .01.

5.4.3 Timely Loss Recognition

LNEG the frequency of reporting large negative operating savings is the measure used to assess timely loss recognition. Here also LNEG is assessed by taking the coefficient of POST from the regression of LNEG on POST and control variables. An increase in the coefficient of POST is a sign of increase in reporting losses in a timely manner and a sign of accounting quality. The comparative result of POST for all the sample group of Australian listed companies is depicted in Table 5.10.5. It can be seen that the sample of 264 companies taken together, diversified financial and material sector marked a statistically significant rise in POST indicating an increase in incidence of reporting LNEG. All the other sectors registered insignificant increase in frequency of LNEG. Thus the financial crisis has not reduced the frequency of reporting large negative operating savings and timely loss recognition as expected. The economic effects of financial crisis and the changes made in IFRS has not reduced the incidence of reporting large loss as and when they arise meaning there is no reduction in accounting quality in post financial crisis period as expected. Both the accounting quality measures, earning management and timely loss recognition, based on the internal information from the financial records of the Australian

listed companies suggests that there is no sign of reduction in accounting quality after the financial crisis as expected.

Table 5.10.5 Frequency of Large Negative Net Income (LNEG) Financial Crisis Period

Prediction Positive Value in Post-Financial Crisis Period

Industry sector	Coefficient of POST	p-value
All 264 companies	0.82	0.005***
Commercial and professional service	1.574	0.272
Diversified Financials	0.201	0.002***
Energy	0	0.998
Health care and services	0.091	0.298
Material	0.103	0.053*
Real estate	0.036	0.534
Software and services	0.024	0.773

*p < .10; **p < .05; ***p < .01.

5.4.4 Value Relevance - Price Model

The Adjusted R^2 from the regression of P, on NIPS and BVEPS, is used to interpret the value relevance of price model. An increase in the value of adjusted R^2 is taken as sign of increase in value relevance and accounting quality. The result of value relevance price modal of all the samples together and the seven industrial sectors are shown in the table 5.10.6. All the sectors except energy and real estate marked a reduction in value relevance. But the reduction in the energy sector is only 0.8 percent while real estate marked a reduction of 10%. All the remaining sectors marked an increase in value relevance. Software sector marked the highest increase in value relevance which is 31.6 percent followed by commercial and professional services sector with 24.7 percent. The other two service sectors diversified financial and health care equipment and services marked an increase of more than 15 percentages in value relevance. Thus all the service sectors show an increase in value relevance compared to other sectors as the importance of service sector has increased in the recent years as many entities are outsourcing their supplementary activities so that they can concentrate on their core functions. The value relevance price model is showing a mixed result in different sectors.

Table 5.10.6 Value Relevance Price Model Financial Crisis Period.
Prediction Post-Financial Crisis R^2 Value > Pre-Financial Crisis Value

Industry sector	Adjusted R^2 Pre-IFRS	Adjusted R^2 Post IFRS	Change in value of adjusted R^2
All 264 companies	0.494	0.552	0.058
Commercial and professional service	0.437	0.684	0.247
Diversified Financials	0.523	0.677	0.154
Energy	0.529	0.521	-0.008
Health care and services	0.638	0.796	0.158
Material	0.465	0.546	0.081
Real estate	0.465	0.365	-0.1
Software and services	0.273	0.589	0.316

*p < .10; **p < .05; ***p < .01

5.4.5 Value Relevance - Return Model

Adjusted R^2 from the regression of NIOP on RETURN is taken to evaluate the value relevance of return model. Table 5.10.7 shows the result of value relevance of all the sectors. Value relevance return model is also not showing a consist trend among different sectors. The highest increase is shown in the sample of 264 companies taken together with an increase of 29.2 percent. The other sectors that marked an increase are real estate with 20.9 percent, diversified financial with 17.8 percent and energy with only 5.5 percent. Health care equipment and services displayed the highest decrease with 34.8 percent followed by commercial and professional services sector 18.3 percent and material and software and services marking 6.2 percentages each. In both the value relevance model for the sample of 264 companies shows that value relevance has improved after financial crisis even if the result of different industry sectors is not consistent. The value relevance return model is not showing a consistent result in the explanatory power between accounting records and market information among different industry sectors as this is a measure effected by many external factors which can vary among different sectors. The increase in value relevance can also due to the changes made in the fair value measurement based on

exit price and uses fair value hierarchy in measuring the value of assets which are effective from financial year beginning on or after 2013.

Table 5.10.7 Value Relevance Return Model Financial Crisis Period. Prediction Post-Financial Crisis > Pre-Financial Crisis Value

Industry sector	Adjusted R^2 Pre-IFRS	Adjusted R^2 Post IFRS	Change in value of adjusted R^2
All 264 companies	0.26	0.552	0.292
Commercial and professional service	0.276	0.093	-0.183
Diversified Financials	0.234	0.412	0.178
Energy	0.162	0.217	0.055
Health care equipment's and services	0.599	0.251	-0.348
Material	0.206	0.144	-0.062
Real estate	0.176	0.385	0.209
Software and services	0.24	0.178	-0.062

*p < .10; **p < .05; ***p < .01

5.5 Findings of Effect of Financial Crisis on Accounting Quality

Financial crisis of 2008 has effect all most all the countries including Australia even if its effect was not very severe to the Australian economy. Financial crisis can affect the quality of accounting information published by companies due to the amendments made by IFRS in the fair value accounting, because of the pressure from different interest groups and also because fact that the companies are prone to manipulation of accounts in bad economic conditions. This study also analysed how the financial crisis has affected the quality of published financial reports of Australian listed companies considering three accounting quality measures earning management, timely loss recognition and value relevance.

Earning smoothing, the first measure of earning management is evaluated using CNI and ratio of CNI/CCF and correlation between ACC and CF is used to corroborate the findings in CNI. The result shows that the financial crisis has made either an increase in CNI or no significant difference in the value of CNI except for software and services sector. But the other two measures used to substantiate CNI is not giving any evidence of use of accrual

to smooth earnings and as such the changes in CNI can be due to change in cash flow. The findings that financial crisis has not made any significant change in earning smoothing are against the expectation. The result reject the first three hypotheses that financial crisis can reduce CNI, decrease ratio of CNI/CCF and increase the magnitude of negative correlation.

The effect of financial crisis on the accounting quality of published financial statements is also evaluated by using SPOS the measure for managing earning for positive target. The coefficient of POST for none of the sample groups are statistically significant. The frequency of reporting small positive savings has not made any significant change between pre and post financial crisis period. Thus the financial crisis has not increased the frequency in reporting small positive savings and managing earnings towards positive target. The hypothesis that financial crisis can increase the frequency of reporting small losses and decrease accounting quality is rejected. Financial crisis has not affected the accounting quality of Australian listed companies.

LNEG is used to measure timely loss recognition by comparing the frequency of reporting large negative income between pre and post-financial crisis periods. The coefficient of POST marked positive value for all sectors indicating an increase in frequency of LNEG and improvement in reporting losses in a timely manner. This result specifies that there is an improvement in reporting losses in a timely manner and as such improvement in accounting quality after financial crisis. It rejects the hypothesis that frequency of reporting large losses will reduce in the post-financial crisis period decreasing accounting quality.

The value relevance model displayed a mixed result in both the price model and return model in all sample groups. Even if the result of different industrial sectors marked mixed outcome the result of the 264 listed companies shows a consistent improvement in value relevance and explanatory power of market information and information from the entities books under both the models. The expectation that financial crisis can lessen value relevance of accounting information is not supported by the findings of the study. The result of all the variables are against our expectation that financial crisis can adversely affected the accounting quality of Australian listed companies.

5.6 Overall Result of Financial Crisis

Against the prediction the effect of financial crisis on all Australian listed companies and each of the seven industry sectors discussed above shows that the financial crisis has either shows an insignificant improvement in accounting quality or no change in accounting quality. The first two measures, earning management and timely loss recognition suggests an improvement in accounting quality in post-financial crisis period, even though the improvement in accounting quality, in the case of each individual groups, is not statistically significant. However, the two value relevance measures showed contradicting results. The value relevance of accounting information and market data measured using price model for all the Australian listed companies and all industry groups except real estate and energy sector shows an improvement in value relevance and accounting quality. While the real estate sector showed a 10% decrease in adjusted R^2 and value relevance, which was significant, the energy sector displayed that there as a decrease of only 0.8% in adjusted R^2, which could be taken as insignificant. On the contrary, the return model for diversified financial and energy sector showed no significant improvement in value relevance, whereas real estate exhibited an improvement in value relevance and accounting quality. All the remaining groups showed a decrease in value relevance and accounting quality.

Earning management and timely loss recognition are measures related to accounting information and as such are more related adoption of IFRS. When these two measures shows that the financial crisis has not adversely effected the quality of financial reports, it can the quality of AASB standards corroborated by the regulatory system in Australia that helped in maintaining the accounting quality even in economic distress like financial crisis. The other two measures value relevance price model and return model are based on the comparison of book value of the companies with that of the market values. These measures depend on external and internal information like conditions of the economy, of the industry, dividend policy of the company, fund requirement of the company etc., the effect of which differ among sectors. That may be why these value relevance models are showing diverse result.

The summary of the objective of the study, hypothesis developed to test the objective, accounting quality measures used to test the hypothesis and the findings are given in table

5.11 below. Result suggests that all the accounting quality measures except value relevance return model exhibited an increase in accounting quality in post-financial crisis period. This is against the prediction that financial crisis will adversely affect accounting quality.

Table 5.11 Summary of Hypothesis effect of Financial Crisis on Accounting Quality

Accounting quality indicators		**Hypothesis**	**Measure**	**Result IFRS adoption**	**Finding**
Earning management	Earning smoothing	*H1= Higher variability of change in net income leads to lower earning smoothing and higher quality financial report.*	Variability of Change in net income (CNI)	Statistically significant increase in CNI. Indication of improvement in accounting quality	Increase in earning management and accounting quality in post-financial crisis period compared to pre-financial crisis period, which is
		H2. Higher ratio of variability of the change in net income to the variability of change in operating cash flows leads to lower earning smoothing and better quality of financial report.	Ratio of Variability of change in net income to variability of change in cash flow (CNI/CCF)	Decrease in ratio between CNI/CCF which is not statistically significant. No sign of use of accrual to manage earning	

		H3. Small magnitude of negative correlation between accruals and current period cash flow is a sign of lower earning smoothing and higher quality financial report.	Correlation between accrual (ACC) and cash flow (CF)	An increase in correlation between ACC and CF, which is statistically significant .No sign of use of accrual to manage earning	against the expectation
	Managing earning towards positive target	*H4. Lower frequency positive net income is a sign of managing towards positive earning and lowers quality financial report.*	Frequency of reporting small positive operating savings (SPOS)	An increase in SPOS which is not statistically significant	
Timely loss recognition		*H5. Recognising large losses frequently is a sign of quality financial report.*	Frequency of reporting large negative income (LNEG)	Statistically significant increase in LNEG	Increase in timely loss recognition and accounting quality in post-financial crisis period compared to pre-financial crisis period which is against the expectation

Value relevance	Price model	*H6. High association of share price to equity book value of shares and net income per share is a sign of quality financial report.*	Explanatory power of market price per share (P) to book value of equity per share (BVEPS)and net income per share (NIPS)	Increase in R^2 indicating an increase in explanatory power	Increase in accounting quality which is against the expectation
	Return model	*H7: High association between net income per share scaled by share price to annual return per share is a sign of accounting quality.*	Explanatory power of net income per share divided by share price (NIOP) and shareholders' annual return RETURN)	Reduction in R^2 indicating a reduction in explanatory power	Reduction in accounting quality

CHAPTER 6

Interpretation of The Impact of IFRS Adoption and Financial Crisis on Accounting Quality

6.1 Introduction

The adoption of IFRS by a number of countries around the world and the 2008 financial crisis are the two major incidents that have affected the business world in the first decade of the 21st century. The adoption of IFRS, the accounting standards issued by IASB, provides a globally accepted common business language to communicate business affairs to stakeholders. The main objective of IFRS is to develop a high quality, comparable accounting standard that can be used globally. Thus, the adoption of IFRS is expected to improve the quality of published financial reports of companies. Nevertheless, the 2008 financial crisis affected almost all the economies throughout the world and many economists considered the use of IFRS, especially the fair value accounting method of assets valuation as one of the contributing factors of this crisis. Due to this allegation, there was high pressure from the banking sector and finance ministers of several EU countries to make changes in the fair value method of assets valuation (Bengtsson 2011b, Alali and Cao 2010). Consequently, IASB has made some changes in IFRS that may affect the quality of published financial reports. Moreover, the possibility of manipulations in accounts is usually higher in periods of bad financial situations. Based on this, the current research has put forward two major objectives. One is to identify whether the mandatory adoption of IFRS improves the quality of published financial reports of Australian listed companies; second is to identify how the international financial crisis in 2008 affects the quality of published financial statements of Australian listed companies. Based on the three accounting quality measures, i.e. earning management, timely loss recognition, and value relevance, the study put forward three specific objectives each to evaluate the impact of IFRS adoption and the effect of financial crisis on the accounting quality of Australian listed companies. This chapter provides the interpretation and conclusion based on the findings of the analysis in the earlier chapters on the impact of IFRS adoption on earning

management, timely loss recognition, and value relevance and also how the financial crisis affected the earning management, timely loss recognition, and value relevance of Australian listed companies.

6.2 Interpretation of the Findings on Effect of IFRS Adoption

Based on the analysis of the data for pre and post-IFRS adoption periods through the accounting quality measures, it is found that the mandatory IFRS adoption has not made any statistically significant change in earning management for the sample of 264 companies, and timely loss recognition marked a reduction in accounting quality. The value relevance also shows no improvement in explanatory power of accounting information. Thus it can be concluded that IFRS adoption has not made any improvement in earning management, timely loss recognition, and value relevance. The mandatory adoption of IFRS by Australian listed companies has not helped in improving the accounting quality of published financial reports as expected.

Accounting quality measures earning management and timely loss recognition, evaluates accounting quality exclusively based on the information from the financial reports. The finding in the case of 264 listed companies indicates that the adoption of IFRS has not made any improvement in earning management and quality of financial reports. The similarity in the rules and principles of accounting followed in both IFRS and AASB can be the reason for not having change in accounting quality. On comparison of the objectives and principles of some key accounting standards of IFRS and AASB it can be seen that both the accounting standards are similar. For example, when we compare 'Framework for the Preparation and Presentation of Financial Statements' under IFRS and AASB, which explains the rules and the principle to recognize elements of financial statement, both standards specifies that to recognize an element of financial statement it must meet the definition of the element of financial statement and also full fill the two criteria of probability and measurability.

Regarding fair value measurement, both the standards IFRS 13 and AASB 13 defines fair value, and also set out a standard framework to measure and disclose of fair value. Both the standards explain that fair value is a market based measurement and has to follows Fair

value hierarchy in estimating fair value. In the accounting standard for inventory also both IAS 2 and AASB 102, inventory, specifies that inventory is to be measured at lower of cost and net realisable value (see appendex-3, page -306). Both the standards define net reliable value as selling price less estimated cost for completion and sale. These similarities in the principles and objectives followed in IFRS and AASB standards can be the reason for not having any change in accounting quality in the post IFRS adoption period. The frequency of timely loss recognition reduced in the post-IFRS period indicating an improvement in accounting quality. This can be because post-IFRS period includes some of the financial years immediately preceding financial crisis, when there was an economic boom which increased the income of the companies reducing the possibility of incurring large losses.

The value relevance is a market based measure which explains the explanatory power of accounting and market information. The market price in an efficient capital market will also reflect the quality of the information in financial statement. When it is found that the there is no difference in value relevance after adoption of IFRS it is evident that the financial reports prepared under both IFRS and AASB are relevant and faithfully represents financial performance and position of listed companies. Here also it is the similarity in the basic principles and objectives of these standards which helps them to produce quality accounting reports.

The accounting quality evaluation of seven individual industrial sectors has given mixed results. Earning management and timely loss recognition registered no statistically significant change. The two value relevance measures, price model and return model, which are based on market information, exhibited a mixed result. There are different factors that influence accounting quality. Accounting standards used, regulatory system, legal and political system, tax system, ownership structure, capital structure, capital market development, and the incentive to have a quality financial report all had influence on accounting quality (Soderstrom and Sun 2007). The accounting standard used in preparing the financial report is only one of the important determinants of the quality of published financial reports. When it is found that the adoption of IFRS by Australian listed companies has not made any significant improvement in accounting quality in terms of earning management and timely loss recognition, it is clear that AASB standards used in the

preparation of these reports are as good as IFRS. The mixed result in the market-based measures, value relevance, can be the influence of external factors that affect the capital market.

In commercial and professional services sector the result of all the measures except value relevance price model indicates that there is no significant change in earning management timely loss recognition and value relevance return model. The value relevance price model shows an improvement in the explanatory power of financial information suggesting an improvement in accounting quality. This can be the reflection of recent developments and importance of the commercial and professional service sector in the modern times. In recent years there is a tendency among business firms to concentrate on their core business and outsource other auxiliary activities to commercial and professional service firms. This improvement in the business of these sector can increase investors' confidence and rise the market price of shares and improvement in value relevance price model. Even though the price model marked an improvement the return model registered a decrease in value relevance which means that the return and the net income over market price is not matching. This can be the because of the conservative dividend policies followed by these sector to increase the fund availability for their development activities.

On analysing the accounting quality of diversified financial sector it is found that there is no improvement in earning management, timely loss recognition and value relevance price model. But value relevance return model marked an increase in value relevance and accounting quality. Diversified financial sector companies are the entities which deal with financial instruments and the impact of fair value model of assets valuation used in IFRS is more relevant in the valuation of financial instruments. The economic boom witnessed in the period immediately before the 2008 financial crises would have influenced assets valuation and through that profit and return of these sector effecting the value relevance return model.

Energy is important for the economic development of every country and the major source of energy is the fossil fuels the use of which have harmful effect on environment (Abokyi et al. 2019). The Australian energy sector mainly consists of fossil fuel like coal mining and oil and gas. The environmental activists are lobbying for environmental laws and

enforcement of existing laws which actually increased the operating cost of many of these entities. The result of the analysis of energy sector found that there is an increase in earning smoothing, no significant change in SPOS and LNEG and a reduction in value relevance. This is a sign that there is no improvement in accounting quality after adoption of IFRS. The adoption of IFRS will not affect companies in these sector as many aspects of accounting like impairment of assets, component approach of depreciation, capitalization of start-up cost including the treatment of exploration and development costs, fair value accounting etc. are followed in AASB as in IFRS. The increase in operating cost and the reduction in price witnessed in energy sector can affect the profit and financial position of these companies. Furthermore, accounting for impairment of assets, treatment of exploration and development expenses and fair vale measurement, which can influence the assets valuation and net income of companies affecting value relevance in this sector.

The usage of latest technologies and equipment's in diagnosis, assessing and treating patients in health sector has increased the investments in this sector and also made it costlier to the patents. This sector is a fast growing sector which will not be much affected by economic factors as it is a necessity. Just like in all the listed company's health care equipment and services sector also is not showing any significant change in the accounting quality measures earning management and timely loss recognition. But value relevance price model and return model shows contrasting result. The price model shows an increase in value relevance and return model is showing a decrease. The increased value relevance in the price model can be the increase in investors' interest and confidence in this sector seeing the future prospect of this sector. While the reduction in value relevance return model can be due to the dividend policy followed by the sector in view of the future investment requirement by these companies.

Material is a primary industrial sector which need huge investment and plays a major role in Australian economy. This sector like the total listed companies are not showing any significant change in any measures of accounting quality between pre and post-IFRS period. As seen earlier it is the similarities in the principles and objectives of key IFRS and AASB accounting standards that helped in maintaining the quality of accounting even after adoption of IFRS.

The result of real estate sector shows that both the measures using accounting information shows no significant change in accounting quality, while both the market based measures value relevance price model and return model shows an improvement. The real estate sector worldwide marked a boom in the pre-financial crisis periods. In our analysis post-IFRS period includes some of these financial years. The economic boom in real estate sector in these periods can increase value of net assets, net income and return of these sector showing an increase in market price and value relevance.

As in the result of all the 264 listed companies and other sectors in software and services sector also the accounting information based measures earning management and timely loss recognition are not indicating any significant change in accounting quality between periods. But both value relevance measures show an improvement in explanatory power and accounting quality. The development of software and services industry in every part of the world, including Australia, due to the wide spread use of computer and computer software in all paces of business activities increased income, return and investors' confidence in this sector. This can increase the market price of shares and can be the reason for increasing the value relevance marked in this sector in contrast to the result of all Australian listed companies.

The findings in all the 264 listed companies together and most of sector indicates that the accounting quality measures based on accounting information earning management and value relevance is not showing any change in accounting quality. The similarities in the objectives and principles followed in both IFRS and AASB are the cause for such findings (see appendix-3). Contrary to this both the market based measures in different industry sectors are showing mixed result. The influence of economic and market factors varies among different sectors. These dissimilarities can be the reason for showing a mixed result in different sectors. The inference that there is no significant change in accounting quality of financial reports is supporting the findings of some of the earlier studies which found that the accounting quality was stable even after adopting IFRS (Bryce, Ali, and Mather 2015).The study neither supports the finding that change from domestic standard to IFRS has improved the accounting quality (Barth 2007, Liu et al. 2011, Chua, Cheong, and Gould

2012, Chebaane and Othman 2014, Iatridis 2010) or that the there is a reduction in accounting quality after IFRS adoption(Ahmed, Neel, and Wang 2013). There are also studies which specifies that there is improvement in earning management but value relevance reduced(Morais and Curto 2008). The findings conclude that in the case of listed companies as a whole there is no significant change in accounting quality after adoption of IFRS. But it can be the influence of different economic and legal factors other than IFRS that influence the assets valuation, net income and market value of shared that lead to mixed result in individual sectors.

6.3 Interpretation of the Findings on Effect of Financial Crisis

It is expected that the financial crisis can reduce the accounting quality of published financial statements of entities because of the changes made in the accounting standards due to the pressure from interest groups and also because companies are inclined to earning management in periods of economic distress. The evaluation of the effect of financial crisis on accounting quality of published financial statements of Australian listed companies is also made using the three accounting quality measures, namely earning management, timely loss recognition, and value relevance. According to the analysis of 264 sample companies, it is found that only value relevance's return model marked a small reduction in value relevance and accounting quality. On the other hand, earning management marked no significant difference between the pre-and post-financial crisis periods, while timely loss recognition and value relevance's price model marked an improvement. Thus, it cannot be concluded that financial crisis has reduced the accounting quality of financial statement by Australian listed companies as expected. For individual industrial sectors, when earning management and timely loss recognition showed no significant change in accounting quality, the value relevance models displayed a mixed result. The diverse results of value relevance can be the impact of external factors other than the use of accounting standards that influence the capital market information.

The result of 264 listed companies reveals that there is no significant change in earning management, but an increase in timely loss recognition. These two are measures base on accounting information and shows that the financial crisis has not adversely affected

accounting quality of listed companies. Thus the changes made to IFRS after financial crisis or the influence of bad economic conditions cannot negatively affect the quality of financial reports of listed companies. This can be because AASB standards are equally good in maintaining accounting quality as that of IFRS. Moreover, the regulatory system in Australia is very good in monitoring the accounting activities of companies ensuring that the companies are maintaining and publishing quality accounting information. The improvement in timely loss recognition can be the result of the fair value measurement hierarchy introduced by IFRS after financial crisis. IFRS introduced three levels of inputs to be used in measuring fair value. At the first level the hierarchy require the fair value to be the quoted price of an identical asset or liability if there is an active market. Second level is used when active market is not available for identical assets or liabilities, where fair value is based on observable information from the quoted price of similar assets or liabilities in active or inactive markets. Third level is used when there is no market activity for the asset or liability, when other observable information like cash flow can be used. This fair value measurement hierarchy would have helped in measuring the assets and liabilities reliably and recording the resulting reduction in the market value of many assets in the post financial crisis period leading to recognizing loss as and when they arise.

The reliable valuation of assets and liabilities using fair value hierarchy can also influence the share price in the market which can also be the cause for an increase in value relevance price model. But decrease in the return model can be the outcome of conservative dividend policy followed by companies in view of the bad economic condition anticipated in the periods of financial crisis.

Commercial and professional sector marked no significant change in earning management and timely loss recognition and accounting quality in post-financial crisis period. As explained earlier this can be because accounting standards under both AASB and IFRS are equally good in maintaining accounting quality and Australian regulatory system is very good in monitoring and maintaining the quality of published financial reports. The market based value relevance measures of the sector is showing diverse result. The price model shows an increase in value relevance, but return model shows a decrease in value relevance. The increase in the price model can be because of the development trend witnessed in

commercial and professional serves sector in the recent years which increased the investors interest in the sector. The adverse economic conditions in post financial crisis period in the market will make it difficult for companies to raise fund externally. This will force companies to follow a stringent dividend policy to find fund for the development activities. This can be the reason for a decrease in value relevance return model in post-financial crisis periods.

Diversified financials is a sector associated closely with financial markets as major share of their assets are financial assets. When it is found that the financial crisis has not made any significant change in the first measure earning management it can be because of the similarities in the accounting standards of IFRS and AASB and the good regulatory system existing in Australia. But an improvement in timely loss recognition can be due to the use of fair value hierarchy in measuring the financial assets of diversified financial sector after the financial crisis. The use of fair value hierarchy makes the assets valuation more market based and relevant which can be the reason for improvement in value relevance marked in both price model and return model.

The reduction in the price of petroleum products and the reduction in exports can affect the energy sector in the post- financial crisis period. But it can be seen that there is no change in earning management, timely loss recognition and value relevance price model. Only return model of value relevance shows an increase which is not substantial. Thus the result of this sector is similar to the 264 listed companies showing no significant change in accounting quality.

Analysing the effect of financial crisis on health care equipment and services sector it is found that there is no change in earning management and timely loss recognition between pre and post-financial crisis periods. On the other hand, the value relevance price model marked an increase in value relevance and return model marked a decrease. The two accounting quality measures related to financial statement information has not marked any difference between pre and post-financial crisis periods because of the similarity in the objectives and principles of AASB and IFRS and the good regulatory system as explained earlier. The contradicting result of value relevance measures can be the outcome of the economic distress of financial crisis on health care spending and investment witnessed in

the post financial crisis period. Financial distress can affect the profit, market price and the return by that the value relevance of the sector.

The findings in material sector also shows that there is no significant change in earning management and timely loss recognition between pre and post financial crisis period, but value relevance measures marked a conflicting result. Price model shows an increase in value relevance and return model marked a decrease in value relevance and accounting quality. Australian material sector includes minerals and other resources which depend mainly on the exports to Asian countries. When financial crisis effected Asian countries it effected the export and demand of material sector and profitability. This can affect the return and market price of shared which can be the reason for the opposing result in material sector. Moreover, changes in fair value measurement hierarchy introduced after financial crisis can affect the asset valuation and net income of these sector influencing the market price of shares.

Similar to most of the earlier sectors the effect of financial crisis on accounting quality of real estate sector also shows no change in earning management and timely loss recognition between pre and post-financial crisis period and a contradicting result in value relevance measures. Price model shows a decrease in value relevance and return model marks an increase. Real estate is the sector severely affected by the financial crisis which had a very great influence on the market price and income of this sector. The reduction in the value of real estate assets and the use of fair value measurement of assets can also have affected the market price of shares in this sector. The contrasting findings in value relevance measures can be the reflection of these factors.

Software and services sector is also showing a similar pattern in findings of the analysis of accounting quality. Both earning management and timely loss recognition shows no significant change in accounting quality while the result of value relevance price model and return model shows contradicting result. Even if there is extensive use of computer and software in all business sectors the distress of financial crisis can effect this sector effecting the profitability and return. This can be the reason for the diverse result in value relevance measures in this sector.

6.4 Inferences of the Findings

It is evident from the analysis that the adoption of IFRS and 2008 financial crisis has not affected the accounting quality of published financial statement of Australian listed companies. There are different factors that support this inference. One of the reason is the quality of AASB. AASB always tried to align its standards with international accounting standards and standards of other nations that would have bridged the differences between the two accounting standards. In 1994, AASB through its Australia-New Zealand Harmonisation Policy Statement 4 required the standard setters of Australia and New Zealand to consult each other in developing standards and conceptual frameworks so as to reduce the difference between the two standards. Later in 1996, through its International Harmonisation Policy 6, AASB specified that its objective of international harmonisation is to develop an internationally accepted accounting standard that can be used in Australia. As the objective can be achieved only in the long run, AASB also issued an interim policy to work towards with IASB ensuring compliance of AASB standards with international accounting standards. Again in 2002, AASB issued a revised Policy Statement 4, combining Policy Statements 4 and 6 with an objective to pursue the development of an internationally accepted single set of accounting standards that can be used in Australia and across the globe (AASB 2013).

Australia was a member of the working group G4, which is a group of national accounting standard setters representing national accounting standard setting bodies: Australian Accounting Standards Board (AASB), Canadian Accounting Standards Board (AcSB), U.K. Accounting Standards Board (ASB), and U.S. Financial Accounting Standards Board (FASB). IASC served as an observer in this working group and was known as G4+1. Between 1992 and 2001, this working group had a major advisory role in the standard setting process and attempted to harmonise their accounting standards (Street 2002). Its involvement in the international accounting standard setting process from the very beginning has helped AASB in attaining sufficient competences in developing quality

accounting standards, which can be the reason that the adoption of IFRS has not affected the accounting quality of Australian listed companies.

AASB issued Australian standards equivalent to IASB standards, A-IFRS, after making several amendments to IFRS, such as the removal of some options permitted, inclusion of additional implementation guidelines and minor changes in wording to enable IFRS to suit Australian business environment and Australian companies applying A-IFRS is considered as complying with IFRS (Deloitte 2005). These changes made to A-IFRS are made to align IFRS with AASB this can be another reason why adoption of IFRS has not created any change in accounting quality of financial reports. All these actions of AASB would have reduced the disparities between the two Standards making the quality of financial reports prepared after adoption of IFRS without much difference. A comparison of the objectives of some key accounting standards under IFRS and AASB are given in appendix-3. It is evident that both standards provide the same objectives for these standards.

A strong regulatory system prevailing in a country is another important factor that helps in maintaining accounting quality. To maintain the quality of financial reports, there are a number of regulatory bodies that oversee the preparation and disclosure of financial reports of Australian listed companies. When the IFRS adoption and financial crisis have not affected accounting quality, it is proof of a strong regulatory system in Australia. Australian Securities and Investments Commission (ASIC), Financial Reporting Council (FRC), Australian Accounting Standards Board (AASB), Australian Securities Exchange (ASX), corporate law board etc. are some of the regulatory bodies that ensure the quality of financial reports.

Australian Securities and Investments Commission (ASIC) established under the Australian Securities and Investments Commission Act 2001 is a statutory body formed to regulate the activities of Australian companies, financial markets, and financial service organisations, and to protect the interest of customers and investors. The Financial Reporting Council (FRC) is another statutory body established under the Australian Securities and Investments Commission Act 2001 (ASIC Act). The activities of FRC will help in maintaining the quality of accounting records of Australian listed companies. The main function of FRC is to work for the development of a single set of accounting and

auditing standards that can be used worldwide and to promote the adoption of these standards. It also monitors the auditing and accounting standard setting process and provides advice on the quality of audit and financial reporting framework in Australia (FRC 2015). ASX oversees compliance by listed entities regarding the ASX listing rules including the timing and information in the published financial reports of listed companies. The activities of these regulatory bodies in monitoring and controlling the activities help Australian companies to maintain accounting quality in all periods.

The Corporate Law Economic Reform Programme (CLERP) is another regulatory measure initiated by the Australian government to review and reform corporate and business regulations. Corporate Law Economic Reform Programme (Audit Reform and Corporate Disclosure) Bill 2003 was introduced with an objective to improve the operation of the market by promoting transparency, accountability, and shareholder activism. It gives extra powers to FRC and ASIC to ensure the independence of auditors and established Financial Reporting Panel (FRP) to resolve disputes between ASIC and companies regarding the application of accounting standards (LEGISLATION 2004). These regulatory requirements can help companies to generate the quality of financial reports.

The conversion to IFRS is likely to affect the quality of financial reporting, but it is only one of the determinants of the overall accounting quality and other determinants may vary from country to country, which makes accounting quality different across countries. The adoption of IFRS cannot completely eliminate the cross-country differences in accounting quality as accounting quality is the outcome of institutional settings in the country such as the legal and political system of the country (Soderstrom and Sun 2007). AASB is a well-developed and regulated accounting standard and as such, the adoption of IFRS will not make much difference in the accounting quality of financial reports of Australian listed companies. The quick movement towards IFRS has been criticised by some opponents who contend that IFRS is a set of principle-based standards and not rule-based standards, and are not as well-developed as at least some domestic accounting standards that give managers an opportunity to engage in earning management (Barth 2007). Moreover, implementing accounting standards alone cannot improve accounting quality. As mentioned by Ebaid (2016), a single set of market-oriented and comprehensive accounting

standard can contribute towards the accounting quality and comparability of financial statements; nevertheless, there are doubts on the premise that mandating IFRS alone can improve accounting quality (Ebaid 2016). The financial reporting practices followed by an entity are also influenced by the incentive of managers preparing financial reports. IFRS is a principle-based standard that involves judgement and gives substantial discretion to managers who depend on their reporting incentive. The institutional structure of the legal/judicial system, securities law, market forces, tax system, and even the political economy affect the managers' incentive and quality of financial reports (Daske 2008, Burgstahler, Hail, and Leuz 2006, Ball, Robin, and Wu 2003).

6.5 Contribution to the Body of Knowledge

This research evaluates the impact of two important events happened in the business world in the first decade of 21st century. One adoption of IFRS and second 2008 financial crisis. It is expected that these two events affect accounting quality in different direction. Adoption of IFRS is expected to improve the accounting quality of financial reports as the primary object of IFRS adoption is to improve the accounting quality of financial reports. While the adverse economic condition of financial crisis, link between remuneration package of key managerial persons and firm performance, motivates companies to make changes in accepted accounting policies and practices to show better performance of companies. Moreover, the interference of political actors and interest groups in standard setting process after 2008 financial crisis and the subsequent changes made to IFRS can adversely affect the accounting quality(Alali and Cao 2010). So far there is no research study which evaluates the impact of two opposing events on the accounting quality of financial reports of listed companies. The empirical result of this research reveals that both the events cannot make any significant change in the accounting quality. The study determined that there are two causes for this result. One AASB is as good as IFRS in maintaining accounting quality and secondly the Australia has a very good regulatory system in monitoring and maintaining accounting quality. Thus this research asserts that the accounting quality can be improved only if there is a good regulatory and enforcement system along with the use of IFRS.

The impact of accounting quality on IFRS adoption is analysed in this research in two steps. One the accounting quality of 264 listed companies taken together are analysed and then these companies are classified in to seven industry sectors according to GICS and impact of IFRS adoptions on accounting quality of each of these sector is analysed. The result of the analysis of different industrial sectors are showing a mixed outcome. Thus the study establishes that the variations in institutional settings, accounting standards used by different sectors can influence the accounting quality of financial reports.

Even if there are many studies evaluating the impact of change from domestic accounting standard to IFRS on accounting quality, so far no study investigates the effect of financial crisis on accounting quality of published financial reports. This study by analysing the effect of financial crisis on accounting quality of Australian listed companies asserts that the regulatory system and enforcement plays an important role in maintaining the accounting quality of published financial reports in periods of economic distress.

The study used indirect method to evaluate accounting quality using three accounting quality measures earning management, timely loss recognition and value relevance. The first two measures, earning management and timely loss recognition are based on the information from financial report and the value relevance is a measure of accounting quality based on market price of company shares. A close look in to the results of analysis can reveal that the earning management and timely loss recognition are showing no significant difference in accounting quality in both events. But, value relevance measures show a mixed result, especially in the case of individual industry sectors. Value relevance is a market based measure as such it is influenced by a number of factors like the general economic conditions, industry specific conditions, legal and institutional settings etc. The mixed result of value relevance measure in this study indicates that market based measures cannot be taken as a reliable measure of accounting quality especially in individual industry sector.

6.6 Assumptions and Limitations

This thesis provides an insight on the impact of IFRS adoption and financial crisis on the quality of published financial statements of Australian listed companies. Nevertheless, like any other research, this project also has its own assumptions and limitations.

6.6.1 Assumptions

The study uses a matched sample technique in comparing quality for pre and post-IFRS period and pre and post-financial crisis period. For that accounting quality of same firms for pre and post-IFRS period and pre and post-post financial crisis periods are evaluated. The comparison of same firms between periods reduces company specific variations and allows to reveal the absolute and relative changes in accounting quality facilitating generalization of the finding.

The study uses the information from the published financial reports and stock market information of companies in analysing the accounting quality. It is assumed that published financial report of the companies and market information are the most reliable information and as such the data used are most reliable which makes the result of the study accurate and dependable.

The study analyses accounting quality of four periods. Four years 2002 to 2005 is taken as pre-IFRS period and four years 2006 to 2009 is taken as post-IFRS period, similarly seven years 2002 to 2008 is taken as pre-financial crisis period and seven years 2009 to 2015 is the post-financial crisis period. Australia adopted IFRS for the preparation of financials reports for the financial year beginning on or after January 1, 2005 and as such all the financial reports for period ending before 31 December 2005 is assumes to be of pre-IFRS period. In a similar way all the financial reports for period ending before 31 December 2008 is assumed to be of pre-financial crisis period.

6.6.2 Limitations

Like any other studies this study also has its own limitations. The study uses financial information from a sample of 264 companies listed in Australian stock exchange. These 264 companies are from seven different industry sectors as per GICS standards. And the

sample size from each sector is not same as the number of listed companies in each sector are different. Moreover, number of companies with 14 full years' financial reports are limited as many of these companies are listed in ASX after 2002. Therefore, the sample size of different sectors in the total sample of 264 companies are not distributed equally. For example, the number of samples in material sector is 107 companies, energy sector the number of sample companies are 46 while that of health care and services sector it is only 15. This can influence the result of all the 264 companies taken together. To mitigate the effect of this problem the study has included information of maximum number of companies for which the financial information of full 14 years from 2002 to 2015 are available, which comes to approximately fifty percentage of listed companies from each industry sector.

Measuring the quality of financial report is a key problem because financial reporting quality is a relative concept, it is context specific, different constituents have diverse preference and also because different users within a user group may also perceive the usefulness of similar information differently (Ferdy van Beest 2009). Being a relative concept this research uses indirect method in analysing accounting quality. Moreover, accounting quality is influenced by different internal and external factors other than the accounting standards used. To mitigate the impact of other factors effecting accounting quality a number of control variables are used in the metric of all accounting quality variables.

The accounting standards used by an entity depends on the type of assets held, investments made, liabilities assumed and equity instruments held by a company and the different assets valuation methods and principles of accounting used. These factors vary from entity to entity and can influences the information content and quality of the financial reports prepared. The accounting standards used by different companies in the same sector can also vary because of the difference in the composition of assets and liabilities held by each company and this can influence of the result of different industry sectors. This gives scope for further study on accounting quality selecting companies in each sector that uses similar standards in preparing their financial reports.

The findings that the adoption of IFRS and financial crisis has not made any significant change in accounting quality and it is because of the quality of AASB standards and good regulatory system in Australia, is based on the data of Australian listed companies as such it is applicable only in Australian context. However, it can give confidence to investors in ASX, government, and other stakeholders about the reliability of the published financial statements of Australian listed companies. The changes in the quality of national accounting standards, legal, political and economic environment of each country can give a different result.

The accounting quality measures earning management and value relevance are using residuals from the regression equation in evaluating the accounting quality. It is assumed that the residual reflects the impact of change to IFRS. But the residual may also reflect the influence of some other variables effecting accounting quality. To mitigate this limitation maximum number of independent control variables are included in the regression used to find dependent variables CNI, CCF, ACC, CF, P and NIOP so that the residual can reflect the impact of adoption of IFRS.

These limitations are common to similar studies relating to accounting quality of published financial reports. However, the result conveys a valuable insight that adoption of IFRS can improve the accounting quality of published financial reports only if the country has a very good regulatory system to monitor and control the corporate entities together with a quality accounting standards.

6.7 Significance of the Study

The result of this research will contribute to accounting literature and will be of interest to different interest groups as the study highlight that accounting quality can be enhance and maintained only if the adoption of IFRS is supported by a good regulatory and enforcement system. The research supports the use of IFRS by companies as a quality financial report can reduce information asymmetry which can reduce agency problem and agency cost. The finding that the there is no change in accounting quality even after adopting IFRS the managers can be confident that they are fulfilling their fiduciary and stewardship responsibilities as agents of shareholders.

This research will be of much interest to AASB and FRC which are the standard setting bodies in Australia. The study helps these bodies to understand how far the adoption of IFRS helped to accomplish their stated objective of developing, promoting and maintaining high quality globally accepted accounting and financial reporting standards.

The present and prospective investors and creditors are always interested in the quality of financial information of companies in which they have invested their money. This study will be of interest to them to know whether they are using reliable and relevant information in make their economic decisions. A quality financial report will provide them information to evaluate past, present and future events or confirm or correct their past evaluation and decisions. The knowledge that the accounting quality has not changed in both the circumstances and Australia has a good regulatory system will be of much interest to them, as it will enhance confidence of present and prospective investors and creditors that they are using reliable information in making their investment decisions.

ASX, FRC and all other regulators are always interested in protecting the interest of investors. Quality information on companies provided through the adoption of IFRS will be more reliable, relevant and useful to the investors in making informed decisions on their investment. The information in financial report will be useful to the investors in making informed decisions on their investment, only if it is properly regulated. The finding that the regulators have a major role in providing reliable, relevant and useful information inspires them in developing rules and principles that can reduce information asymmetry and earnings manipulation and increase the quality of reported disclosures especially in periods of high uncertainty and risk. This research underscores the importance of regulators in maintaining the accounting quality of financial statements.

The Institute of Public Accountants (IPA), CPA Australia (CPA) and Chartered Accountants Australia and New Zealand (CA) are the professional accounting bodies in Australia. The members of these professional bodies are the qualified external independent auditors who conduct statutory audit of the companies. The knowledge that the adoption of IFRS and financial crisis has not affected the quality of the published financial reports of Australian listed companies under their audit will increase their confidence in their work. The use of IFRS by companies and a good regulatory system in Australia will significantly

reduce their risk as independent auditors in assuring that the financial statements show a true and fair view of the financial position and performance of these entities.

The government of Australia will also be interested to know that the IFRS adoption and financial crisis have not made any changes in the accounting quality of financial statements of listed companies as Australia is using an accounting standard that can maintain the quality and has a good regulatory system. Australia is a developed economy that needs foreign direct investment (FDI) for its economic development. The finding of the research that Australian listed companies are able to maintain the quality of their financial reports even in bad economic conditions and with Australia having a good regulatory system, will increase the competitive advantage of Australian listed companies and capital market internationally, which can attract more FDI to Australia and boost better economic development. This is consistent with the fact that one of the objectives of Australia adopting IFRS is to enable listed companies to maintain relationships with international financial markets.

There are many other stakeholders like employees, customers, and the community where the company operates. The knowledge that the accounting standards used by these listed companies and the regulatory system in the country ensure the quality of financial reports even in periods of economic distress will increase their confidence in using the published information of these companies in their economic and other decisions.

The aim of the study is to assess whether adoption of IFRS and the 2008 financial crisis have affected the quality of the financial reports of Australian listed companies. To accomplish the above aim the two objectives, one the impact of the adoption of IFRS on accounting quality of Australian listed companies and secondly the impact of the financial crisis on accounting quality of Australian listed companies are developed. The study used earnings management, timely loss recognition, and value relevance metric to evaluate the impact of these two events on accounting quality. The empirical findings revealed that both the events have not made any changes in earnings management, timely loss recognition, and value relevance and through that the accounting quality of the financial reports of Australian listed companies. The findings that both the adoption of IFRS and financial crisis 2008 has not made any impact on earning management, timely loss recognition and

value relevance of published financial reports helped in accomplishing the objective of this study.

6.8 Suggestions for Further Research

This research evaluated accounting quality in two different circumstances. First is the adoption of IFRS, where it is expected that accounting quality can improve, as the prime objective of IFRS is to develop a high quality, comparable, and globally accepted accounting standard. Second is the financial crisis, a bad economic situation, where it is expected that accounting quality can be adversely affected as entities are likely to manipulate accounts in bad periods to show better financial position and performance. When both situations do not have any change in accounting quality, it is clear that the adoption of IFRS alone cannot improve the quality of financial reports. Thus, this study finds that the accounting quality of published financial report can improve only if a country uses a quality accounting standard in preparing the accounting records and has a good regulatory system to monitor and control the activities of corporate entities. This gives scope for further research on the importance of a good regulatory environment in maintaining the quality of published financial reports.

ASX is an important regulator of Australian listed companies. One of the requirements of listing shares in ASX is the use of accounting standard. As such, ASX monitors whether the companies are properly using the accounting standards. Thus, the development of capital market and listing of shares influences the accounting quality. With capital market being one of the important regulators, a study on the influence of listing on accounting quality can be useful to investors and creditors to know whether the information they use in making economic decisions are reliable and relevant.

IFRS 13, fair value measurement, issued in May 2011 applies to annual periods beginning on or after 1st January 2013. This standard defines fair value based on exit price and uses fair value hierarchy in measuring the value of assets, which is market based rather than entity specific. Fair value accounting was a long debated matter during the financial crisis period, as an important determinant that contributed for the pro-cyclical effects on firms that led to the financial crisis. Since IFRS 13 applies only from financial year beginning on

or after 1st January 2013, a study on the impact of fair value measurement on accounting quality and share price can be of interest to the regulators and IASB.

The results of this study have provided evidence that the adoption of IFRS and financial crisis has not made significant changes in the accounting quality of Australian listed companies. This gives scope for future research to expand on the current study. For example, future research can explore the reasons why IFRS adoption has not improved the accounting quality of Australian listed companies in both situations.

Most of the researchers on accounting quality measure the quality of financial report by indirectly focusing on the different attributes that can influence the quality of financial report, such as earning management and timely loss recognition. This study also used the quantitative method of research that measures quality using indirect measures of accounting quality, e.g. changes in variability of net income, frequency of reporting small positive net income, frequency of recognising losses in a timely manner, and value relevance of information. Nevertheless, the quality of financial statement is a relative factor and depends on the disclosure made in the financial reports. This gives a scope for further qualitative research using the content analysis to evaluate the usefulness of financial information based on the fundamental qualitative character's relevance and faithful representation and enhanced qualitative characteristics such as comparability, verifiability, timeliness, and understandability.

This study has not included banking and insurance sectors in the sample selection as the number of companies listed before 2001 in these sectors are below 30. This gives scope for further qualitative research based on the content analysis of the financial statements of companies in these sectors in which the ethical issues can also be included as one measure of the quality of financial reports.

Many countries have adopted IFRS because their accounting standards are not developed, they do not have financial and manpower resources, and they lack expertise to develop a standard. Their objective of IFRS adoption is not international harmonisation, but to meet the requirement of an appropriate accounting and reporting standard. This research gives these countries an insight that the adoption of IFRS can improve accounting quality only if they have a good regulatory system to monitor and control the implementation of these

standards. Altogether, this research reinstates the fact that the adoption of IFRS alone cannot improve accounting quality unless the country has a good regulatory system to monitor the application of the standards by companies. Thus, a study on the influence of a regulatory system on accounting quality will be much useful.

6.9 Concluding Remarks

The basic objective of IFRS foundation is to develop a single set of globally accepted, high quality, understandable, and enforceable accounting standards based on clearly articulated principles. Based on this objective, it is expected that the adoption of IFRS can improve the quality of financial reports published by Australian listed companies. Fair value accounting, which is an important requirement of IFRS, is considered as a significant factor that contributes towards the pro-cyclical effects on firms that led to the financial crisis by many economists. The changes made in the basic fair value accounting by IASB in light of the financial crisis is expected to affect the quality of financial report. This research has evaluated the impact of IFRS adoption and the effect of financial crisis on accounting quality of Australian listed companies. The empirical evidence of this research found that both adoptions of IFRS and financial crisis has not made any significant changes in the accounting quality of financial reports of Australian listed companies and it can be the superior quality of AASB used in pre-IFRS period and a better regulatory system in the country that helped in maintaining the accounting quality of financial reports in both situations. Even if the adoption of IFRS cannot improve accounting quality, it can bring many other benefits to Australian investors and the economy. The adoption of IFRS globally can increase cross-country comparability of the financial report, increase international capital mobility, reduce information asymmetry, proper resources allocation, and consequently reduce cost of capital.

Globalisation has increased the economic cooperation and integration of economies. This helps corporate entities seeking capital and investors and lenders seeking investment opportunities to look beyond borders for their capital requirement. The use of IFRS gives more uniform disclosure and more useful accounting information to investors by increasing the comparability of financial reports of companies listed in stock markets located in

different countries, which can attract more investors. It can also increase the international mobility of capital. The use of IFRS makes the accounting information more relevant, reliable, and timely, reduces the information asymmetry and risk of investment, and through that the cost of capital. Moreover, the reduction in information asymmetry can increase the efficiency of capital market and resource allocation. The finding that the adoption of IFRS by Australian listed companies has not adversely effected the accounting quality of published financial reports and it is because AASB standards are as good as IFRS and Australia has a very good regulatory system, benefits Australian companies and economy. The findings will also improve the competitive advantage of Australian listed companies in the international capital market, which can benefit Australian companies, investors and the economy.

References: -

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AARF, Australian Accounting Research Foundation. 2001. "Objective of General Purpose Financial Reporting." Public Sector Accounting Standards Board of the Australian Accounting Research Foundation and by the Accounting Standards Review Board. https://www.aasb.gov.au/admin/file/content102/c3/SAC2_8-90_2001V.pdf.

AASB. 2004. "Policy Statement PS 4." Australian Accounting Standards Board. https://www.aasb.gov.au/admin/file/content102/c3/ACCPS4_4-02.pdf.

AASB. 2011. "AASB 10 Consolidated Financial Statements." Australian Accounting Standards Board. https://www.aasb.gov.au/admin/file/content105/c9/AASB10_08-11.pdf.

AASB. 2013. *Accounting Hand book*. Edited by Mark Shying and RamSubramanian. New sS: Pearson Australia.

AASB. 2015a. "AASB 3 Business Combinations ". Australian Accounting Standards Board. https://www.aasb.gov.au/admin/file/content105/c9/AASB3_08-15.pdf.

AASB. 2015b. "AASB 13 Fair Value Measurement." Australian Accounting Standards Board. https://www.aasb.gov.au/admin/file/content105/c9/AASB13_08-15.pdf.

AASB. 2015c. "Australian Accounting Standards Board AASB." AASB. http://www.aasb.gov.au/.

AASB. 2015d. "Financial Instruments: Disclosures." Australian Accounting Standards Board. https://www.aasb.gov.au/admin/file/content105/c9/AASB7_08-15.pdf.

AASB. 2015e. "Non-current Assets Held for Sale and Discontinued Operations." Australian Accounting Standards Board. https://www.aasb.gov.au/admin/file/content105/c9/AASB5_08-15.pdf.

AASB. 2016. "AASB 16 Leases." Australian Accounting Standards Board. https://www.aasb.gov.au/admin/file/content105/c9/AASB16_02-16.pdf.

AASB. 2019. "Framework for the Preparation and Presentation of Financial Statements ". Australian Accounting Standards Board. https://www.aasb.gov.au/admin/file/content105/c9/Framework_07-04_COMPjun14_07-14.pdf.

ABA, American Bankers Association. 2008. "Letter to Robert H. Herz, Chairman, Financial Accounting Standards Board (November13). ." http://www.aba.com/NR/rdonlyres/DC65CE12B1C7-11D4-AB4A-00508B95258D/56797/ABAlettertoFASBOTTINovember132008.pdf.

Abokyi, Eric, Paul Appiah-Konadu, Francis Abokyi, and Eric Fosu Oteng-Abayie. 2019. "Industrial growth and emissions of CO2 in Ghana: The role of financial development and fossil fuel consumption." *Energy Reports* 5:1339-1353. doi: https://doi.org/10.1016/j.egyr.2019.09.002.

Adibah Wan Ismail, Wan, Khairul Anuar Kamarudin, Tony van Zijl, and Keitha Dunstan. 2013. "Earnings quality and the adoption of IFRS-based accounting standards: Evidence from an emerging market." *Asian Review of Accounting* 21 (1):53-73. doi: doi:10.1108/13217341311316940.

Ahmed, Abdullahi D. 2016. "Integration of financial markets, financial development and growth: Is Africa different?" *Journal of International Financial Markets, Institutions and Money* 42:43-59. doi: http://dx.doi.org/10.1016/j.intfin.2016.01.003.

Ahmed, Anwer S., Michael Neel, and Dechun Wang. 2013. "Does Mandatory Adoption of IFRS Improve Accounting Quality? Preliminary Evidence." *Contemporary Accounting Research* 30 (4):1344-1372. doi: 10.1111/j.1911-3846.2012.01193.x.

AICPA. 2018. "IFRS resources." American Institute of Certified Public Accountants. https://www.ifrs.com/ifrs_faqs.html#q3.

Alali, Fatima, and Lei Cao. 2010. "International financial reporting standards — credible and reliable? An overview." *Advances in Accounting* 26 (1):79-86. doi: http://dx.doi.org/10.1016/j.adiac.2010.02.001.

Allen, Franklin, and Elena Carletti. 2010a. "An Overview of the Crisis: Causes, Consequences, and Solutions." *International Review of Finance - Int Rev Finance* 10:1-26. doi: 10.1111/j.1468-2443.2009.01103.x.

Allen, Franklin, and Elena Carletti. 2010b. "An Overview of the Crisis: Causes, Consequences, and Solutions." *International Review of Finance* 10 (1):1-26. doi: 10.1111/j.1468-2443.2009.01103.x.

Ames, Daniel. 2013. "IFRS adoption and accounting quality: The case of South Africa." *Journal of Applied Economics & Business Research* 3 (3):154-165.

Apergis, Nicholas. 2015. "The Role of IFRS in Financial Reporting Quality: Evidence from a Panel of MENA Countries." *International Journal of Economics and Finance* 7 (10):182-191. doi: 10.1111/j.1468-0262.2006.00692..

ASX. 2015. "ASX listing rules." Australian Stock exchange. http://www.asx.com.au/regulation/rules/asx-listing-rules.htm.

Atwood, T. J., Michael S. Drake, James N. Myers, and Linda A. Myers. 2011. "Do earnings reported under IFRS tell us more about future earnings and cash flows?" *Journal of Accounting and Public Policy* 30 (2):103-121. doi: https://doi.org/10.1016/j.jaccpubpol.2010.10.001.

AUparlement, The Parliament of the Commonwealth of Australia. 2009. "The Global Financial Crisis and regional Australia." https://www.aph.gov.au/binaries/house/committee/itrdlg/financialcrisis/report/gfc%20final%20report.pdf;.

Badertscher, B. A., J. J. Burks, and P. D. Easton. 2012. "A convenient scapegoat: Fair value accounting by commercial banks during the financial crisis." *Accounting Review* 87 (1):59-90. doi: 10.2308/accr-10166.

Ball, R. 2006. "International financial reporting standards (IFRS): Pros and cons for investors." *Accounting and Business Research* 36 (SPEC. ISS):5-27.

Ball, Ray. 2009. "The Global Financial Crisis and the Efficient Market Hypothesis: What Have We Learned?" *Journal of Applied Corporate Finance* 21 (4):8-16. doi: 10.1111/j.1745-6622.2009.00246.x.

Ball, Ray. 2016. "IFRS – 10 years later." *Accounting and Business Research* 46 (5):545-571. doi: 10.1080/00014788.2016.1182710.

Ball, Ray, S. P. Kothari, and Ashok Robin. 2000. "The effect of international institutional factors on properties of accounting earnings." *Journal of Accounting and Economics* 29 (1):1-51. doi: http://dx.doi.org/10.1016/S0165-4101(00)00012-4.

Ball, Ray, Ashok Robin, and Joanna Shuang Wu. 2003. "Incentives versus standards: properties of accounting income in four East Asian countries." *Journal of Accounting and Economics* 36 (1–3):235-270. doi: http://dx.doi.org/10.1016/j.jacceco.2003.10.003.

Baltagi, Badi H. 2008. *Econometric analysis of panel data / Badi H. Baltagi*. 4th ed.. ed. Chichester, UK Hoboken, NJ: Chichester, UK Hoboken, NJ : John Wiley & Sons.

Baltagi, Badi H., Seuck Heun Song, Byoung Cheol Jung, and Won Koh. 2007. "Testing for serial correlation, spatial autocorrelation and random effects using panel data." *Journal of Econometrics* 140 (1):5-51. doi: https://doi.org/10.1016/j.jeconom.2006.09.001.

Banziger, H. 2008. "Setting the right framework for modern financial markets – Lessons learned from the recent crisis." *Financial Stability Review*.

Barth, Mary E. Landsman, Wayne R. Lang, Mark H. 2007. "International Accounting Standards and Accounting Quality." doi: http://dx.doi.org/10.2139/ssrn.688041.

Beltratti, Andrea, Nasser Spear, and Mark Daniel Szabo. 2013. "The Value Relevance and Timeliness of Write-downs During the Financial Crisis of 2007–2009." *The International Journal of Accounting* 48 (4):467-494. doi: https://doi.org/10.1016/j.intacc.2013.10.008.

Bengtsson, E. 2011a. "Repoliticalization of accounting standard setting-The IASB, the EU and the global financial crisis." *Critical Perspectives on Accounting* 22 (6):567-580. doi: 10.1016/j.cpa.2011.04.001.

Bengtsson, Elias. 2011b. "Repoliticalization of accounting standard setting—The IASB, the EU and the global financial crisis." *Critical Perspectives on Accounting* 22 (6):567-580. doi: http://dx.doi.org/10.1016/j.cpa.2011.04.001.

Bengtsson, Elias. 2013. "Shadow banking and financial stability: European money market funds in the global financial crisis." *Journal of International Money and Finance* 32:579-594. doi: http://dx.doi.org/10.1016/j.jimonfin.2012.05.027.

Benson, Henry. 1976. "The story of international accounting Standards." *Accountancy* 87 (995):34-39.

Bernstein, Leopold A. 1992. "A Financial Analyst's Guide to Accounting Quality." *Business Credit* 1992.

Bertomeu, J., and R. P. Magee. 2011. "From low-quality reporting to financial crises: Politics of disclosure regulation along the economic cycle." *Journal of Accounting and Economics* 52 (2-3):209-227. doi: 10.1016/j.jacceco.2011.08.005.

Biddle, Gary, Gilles Hilary, and Rodrigo Verdi. 2009. "How Does Financial Reporting Quality Improve Investment Efficiency?" *Journal of Accounting and Economics* 48:112-131. doi: 10.2139/ssrn.1146536.

BIS. 2020. "Bank for international settlements." bis.org.

Botosan, Christine A. 2004. "Discussion of a framework for the analysis of firm risk communication." *The International Journal of Accounting* 39 (3):289-295. doi: http://dx.doi.org/10.1016/j.intacc.2004.06.007.

Bowrin, Anthony R. 2007a. "International accounting standards and financial reporting uniformity : the case of Trinidad and Tobago." *Advances in international accounting : a research annual*:27-53.

Bowrin, Anthony R. 2007b. "International Accounting Standards and Financial Reporting Uniformity: The Case of Trinidad and Tobago." *Advances in International Accounting* 20 (0):27-53. doi: http://dx.doi.org/10.1016/S0897-3660(07)20002-9.

Bradshaw, Mark T., and Gregory S. Miller. 2008. "Will Harmonizing Accounting Standards Really Harmonize Accounting? Evidence from Non-U.S. Firms Adopting U.S. GAAP." *Journal of Accounting, Auditing & Finance* 23 (2):233-264. doi: 10.1177/0148558X0802300206.

Brenda Laurel, Peter Lunenfeld. 2003. *Design Research: Methods and Perspectives*. Edited by Brenda Laurel. First Edition Edition ed. USA: Amazon.

Bricket, Robert, and Nandini Chandar. 1998. "On Applying Agency Theory in Historical Accounting Research." *Business and Economic History* 27 (2):486-499.

Bryce, Mitchell, Muhammad Jahangir Ali, and Paul R. Mather. 2015. "Accounting quality in the pre-/post-IFRS adoption periods and the impact on audit committee effectiveness — Evidence from Australia." *Pacific-Basin Finance Journal* 35:163-181. doi: 10.1016/j.pacfin.2014.12.002.

Burgstahler, David C., Luzi Hail, and Christian Leuz. 2006. "The Importance of Reporting Incentives: Earnings Management in European Private and Public Firms." *The Accounting Review* 81 (5):983-1016.

Bushman, Robert, and Wayne R. Landsman. 2010. "The pros and cons of regulating corporate reporting: A critical review of the arguments." *Accounting and Business Research* 40 (3):259-273. doi: 10.1080/00014788.2010.9663400.

Bushman, Robert M., and Abbie J. Smith. 2001. "Financial accounting information and corporate governance." *Journal of Accounting and Economics* 32 (1):237-333. doi: https://doi.org/10.1016/S0165-4101(01)00027-1.

Cabán, David. 2015. *Agency costs and accounting quality within an all-equity setting: The role of free cash flows and growth opportunities*: Florida Atlantic University.

Callen, Jeffrey, Mozaffar Khan, Brian Akins, Randy Beatty, Rei-Ning Chen, Zhaoyang Gu, Michelle Hanlon, Chandra Kanodia, Stephannie Larocque, Maria Ogneva, Sugata Roychowdhury, Devin Shanthikumar, Kr Subramanyam, Rodrigo Verdi, Ross Watts, Joe Weber, and Franco Wong. 2010. "Accounting quality, stock price delay and future stock returns."

Carletti, Franklin Allen and Elena. 2009. "<The Global Financial Crisis: cause and consequences.pdf>."

Carriger, Michael S. 2012. "RESEARCH DESIGN ". MIGWI. http://migwimwangi.blogspot.my/2012/07/research-design-is-cornerstone-of.htmlWW.

Cellucci, Rebecca. 2010. "<The International Accounting standards board.pdf>."

Chalmers, Keryn; Godfrey, Jayne; Langfield-Smith, Ian Anthony; Lu, Wei. 2007. *Globalisation of accounting: Implications for Australian public sector entities*. Cheltenham UK: Edward Elgar Publishing.

Chamisa, Edward E. 2000. "The Relevance and Observance of the IASC Standards in Developing Countries and the Particular Case of Zimbabwe." *The International Journal of Accounting* 35 (2):267-286. doi: http://dx.doi.org/10.1016/S0020-7063(00)00049-2.

Chan, Ann L. C., Audrey W. H. Hsu, and Edward Lee. 2015. "Mandatory adoption of IFRS and timely loss recognition across Europe: The effect of corporate finance incentives." *International Review of Financial Analysis* 38:70-82. doi: 10.1016/j.irfa.2015.02.002.

Chapman, James. 2018. "The relevance and importance of IFRS." Windhoek Bank. http://www.bankwindhoek.com.na/News/Pages/The-relevance-and-importance-of-IFRS.aspx.

Chebaane, Sawcen, and Hakim Ben Othman. 2014. "The Impact of IFRS Adoption on Value Relevance of Earnings and Book Value of Equity: The Case of Emerging Markets in African and Asian Regions." *Procedia - Social and Behavioral Sciences* 145:70-80. doi: https://doi.org/10.1016/j.sbspro.2014.06.012.

Chen, C. 2011a. "Accounting quality: Choosing fair value versus historical cost." 2011 International Conference on Management Science & Engineering 18th Annual Conference Proceedings, 13-15 Sept. 2011.

Chen, C. 2011b. "Accounting quality: Choosing fair value versus historical cost." International Conference on Management Science and Engineering - Annual Conference Proceedings.

Cheney, Glenn. 2008. "FASB, IASB present docs on framework." *Accounting Today* 22 (13):14-14,16.

Cheong, Chee Seng, Sujin Kim, and Ralf Zurbruegg. 2010. "The impact of IFRS on financial analysts' forecast accuracy in the Asia-Pacific region: The case of Australia, Hong Kong and New Zealand." *Pacific Accounting Review* 22 (2):124-146. doi: http://dx.doi.org/10.1108/01140581011074511.

Christensen, Hans B., Edward Lee, Martin Walker, and Cheng Zeng. 2015. "Incentives or Standards: What Determines Accounting Quality Changes around IFRS Adoption?" *European Accounting Review* 24 (1):31-61. doi: 10.1080/09638180.2015.1009144.

Chua, Y. L., C. S. Cheong, and G. Gould. 2012. "The Impact of Mandatory IFRS Adoption on Accounting Quality: Evidence from Australia." *Journal of International Accounting Research* 11 (1):119-146. doi: 10.2308/jiar-10212.

Coetsee, D. 2010. "The role of accounting theory in the development of accounting principles." *Meditari Accountancy Research* 18 (1):1-16. doi: 10.1108/10222529201000001.

Collins, Daniel W., Edward L. Maydew, and Ira S. Weiss. 1997a. "Changes in the value-relevance of earnings and book values over the past forty years." *Journal of Accounting & Economics* 24 (1):39.

Collins, Daniel W., Edward L. Maydew, and Ira S. Weiss. 1997b. "Changes in the value-relevance of earnings and book values over the past forty years." *Journal of Accounting and Economics* 24 (1):39-67. doi: http://dx.doi.org/10.1016/S0165-4101(97)00015-3.

Comer, Susan Welsh & John. 2006. *Quantitative Methods for Public Administration: Techniques and Applications*. 3rd Edition ed, *Quantitative Methods for Public Administration: Techniques and Applications*: Amazon Publishing

CPA, Australia. 2013. *Accounting Handbook 2013*. 2013 ed: Pearson.

CPA, Canada. 2018. "Financial reporting and assurance standards Canada." http://www.frascanada.ca/accounting-standards-board.

Cramer, J. S. 1987. "Mean and variance of R2 in small and moderate samples." *Journal of Econometrics* 35 (2–3):253-266. doi: http://dx.doi.org/10.1016/0304-4076(87)90027-3.

Crocker, Keith J., and Joel Slemrod. 2007. "The Economics of Earnings Manipulation and Managerial Compensation." *The RAND Journal of Economics* 38 (3):698-713.

Cudia, Cynthia P., and Aeson Luiz C. Dela Cruz. 2018. "Determinants of Earnings Management Choice among Publicly Listed Industrial Firms in the Philippines." *DLSU Business & Economics Review* 27 (2):119-129.

Das, Surajit, and Tapash Ranjan Saha. 2017. "Benefits of Mandatory IFRS Adoption in India: A Study Based on the Perception of Indian Investors." *TSM Business Review* 5 (2):15-24. doi: http://dx.doi.org/10.23837/tbr/2017/v5/n2/164228.

Daske, Holger Hail, Luzi Leuz, Christian Verdi, Rodrigo. 2008. "Mandatory IFRS Reporting around the World: Early Evidence on the Economic Consequences." *Journal of Accounting Research* 46 (5):1085-1142. doi: 10.1111/j.1475-679X.2008.00306.x.

Dawn Iacobucci, Gilbert A. Churchill. 2005. *Marketing Research: Methodological Foundations*. 9th ed. USA: South-Western.

De George, Emmanuel T., Xi Li, and Lakshmanan Shivakumar. 2016. "A review of the IFRS adoption literature." *Review of Accounting Studies* 21 (3):898-1004. doi: 10.1007/s11142-016-9363-1.

de Moura, André Aroldo Freitas, Aljaohra Altuwaijri, and Jairaj Gupta. 2020. "Did mandatory IFRS adoption affect the cost of capital in Latin American countries?" *Journal of International Accounting, Auditing and Taxation* 38:100301. doi: https://doi.org/10.1016/j.intaccaudtax.2020.100301.

de Moura, André Aroldo Freitas, and Jairaj Gupta. 2019. "Mandatory adoption of IFRS in Latin America: A boon or a bias." *Journal of International Financial Markets, Institutions and Money* 60:111-133. doi: https://doi.org/10.1016/j.intfin.2018.12.016.

Debelle, Guy. 2009. Some Effects of the Global Financial Crisis on Australian Financial Markets. edited by Reserve Bank of Australia. SYDNEY Reserve Bank of Australia

Dechow, Patricia, and I. D. Dichev. 2002. "The Quality of Accruals and Earnings: The Role of Accrual Estimation Errors." *The Accounting Review* 77:35-59. doi: 10.2308/accr.2002.77.s-1.35.

Deegan, Craig Michael. 2012. *Australian Financial Accounting*. 7 ed. AUSTRALIA: Rosemary Noble. Original edition, McGraw -Hill Australia Pty Ltd.

DeFond, Mark, Xinzi Gao, Oliver Zhen Li, and Lijun Xia. 2019. "IFRS adoption in China and foreign institutional investments." *China Journal of Accounting Research* 12 (1):1-32. doi: https://doi.org/10.1016/j.cjar.2018.07.006.

Deloitte. 2005. "A-IFRS vs IFRS." Deloitte Touche Tohmatsu. https://www.iasplus.com/en/binary/au/0509differences.pdf.

Deloitte. 2008. "Fair value measurement." Deloitte. https://www.iasplus.com/en/meeting-notes/iasb/2008/agenda_0805/agenda982.

Deloitte. 2015a. "About the International Accounting Standards Committee (IASC)." [Internet]. deloitte. http://www.iasplus.com/en/resources/ifrsf/history/resource25.

Deloitte. 2015b. "IAS plus." Deloitte Global Services Limited. http://www.iasplus.com/en.

Deloitte. 2016. "IAS plus." Deloitte Touche Tohmatsu Limited, accessed December 9. http://www.iasplus.com/en/jurisdictions/asia/malaysia.

Denise F. Polit, Cheryl Tatano Beck, Bernadette P. Hungler, and Published by. 2001. *Essentials of Nursing Research: Methods, Appraisal, and Utilization*: Lippincott Williams & Wilkins

Dimitropoulos, Panagiotis E., Dimitrios Asteriou, Dimitrios Kousenidis, and Stergios Leventis. 2013. "The impact of IFRS on accounting quality: Evidence from Greece." *Advances in Accounting* 29 (1):108-123. doi: http://dx.doi.org/10.1016/j.adiac.2013.03.004.

Ding, Yuan, Ole-Kristian Hope, Thomas Jeanjean, and Hervé Stolowy. 2007. "Differences between domestic accounting standards and IAS: Measurement, determinants and implications." *Journal of Accounting and Public Policy* 26 (1):1-38. doi: http://dx.doi.org/10.1016/j.jaccpubpol.2006.11.001.

Dobre, Florin, Laura Brad, and Radu Ciobanu. 2015. "Timely loss recognition and the value relevance of the Romanian listed companies considering the IFRS approach." *Accounting & Management Information Systems / Contabilitate si Informatica de Gestiune* 14 (4):732-747.

Donnelly, Shawn. 2007. "The International Accounting Standards Board." *New Political Economy* 12 (1):117-125. doi: 10.1080/13563460601068875.

Ebaid, Ibrahim El-Sayed. 2016. "International accounting standards and accounting quality in code-law countries." *Journal of Financial Regulation and Compliance* 24 (1):41-59.

Economist. 2008. "Accounting standards: Closing the GAAP." *The economist*, 28 August 2008.

El-Helaly, Moataz, Collins G. Ntim, and Mark Soliman. 2020. "The Role of National Culture in International Financial Reporting Standards Adoption." *Research in International Business and Finance* 54:101241. doi: https://doi.org/10.1016/j.ribaf.2020.101241.

EU, PARLIAMENT. 2002. REGULATION (EC) No 1606/2002 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 19 July 2002 on the application of international accounting standards. In *Official Journal of the European CommunitiesL*.

Ewert, Ralf, and Alfred Wagenhofer. 2015. "Economic Relations Among Earnings Quality Measures." *Abacus* 51 (3):311-355. doi: 10.1111/abac.12054.

FAMA, EUGENE F., and KENNETH R. FRENCH. 1992. "The Cross-Section of Expected Stock Returns." *The Journal of Finance* 47 (2):427-465. doi: 10.1111/j.1540-6261.1992.tb04398.x.

Fargher, Neil, and John Ziyang Zhang. 2014. "Changes in the measurement of fair value: Implications for accounting earnings." *Accounting Forum* 38 (3):184-199. doi: https://doi.org/10.1016/j.accfor.2014.06.002.

FASB, Financial Accounting Standards Board. 2009. "Fairvalue Disclosure and Measurement ". https://www.fasb.org/jsp/FASB/Document_C/DocumentPage?cid=1176156434276&acceptedDisclaimer=true.

Ferdy van Beest, Geert Braam and Suzanne Boelens. 2009. NiCE Working Papers. Netherlands: Radboud University Nijmegen.

Field, Andy. 2009. *DISCOVERING STATISTICS USING SPSS*, *DISCOVERING STATISTICS USING SPSS*

Singapore SAGE Publications Asia-Pacific Pte Ltd

Filip, Andrei, and Bernard Raffournier. 2014. "Financial Crisis And Earnings Management: The European Evidence." *The International Journal of Accounting* 49 (4):455-478. doi: http://dx.doi.org/10.1016/j.intacc.2014.10.004.

Frankel, Richard, and Xu Li. 2004. "Characteristics of a firm's information environment and the information asymmetry between insiders and outsiders." *Journal of Accounting and Economics* 37 (2):229-259. doi: https://doi.org/10.1016/j.jacceco.2003.09.004.

Frascanada. 2015. "Conceptual Framework." Financial reporting and assurance standstds Canada, accessed 11 January 2016. http://www.frascanada.ca/international-financial-reporting-standards/

FRC, Auatralian government. 2015. "Financial Reporting Council." http://www.frc.gov.au/contact-us/.

FSB, The Financial Stability Board. 2002. "International Financial Reporting Standards (IFRS Standards)." http://www.fsb.org/2002/10/cos_021001a/.

Gassen, Joachim, and Thorsten Sellhorn. 2006. "Applying IFRS in Germany - Determinants and Consequences." *BFuP* 58 (4):365--386.

Graham, John R., Campbell R. Harvey, and Shiva Rajgopal. 2005. "The economic implications of corporate financial reporting." *Journal of Accounting and Economics* 40 (1):3-73. doi: https://doi.org/10.1016/j.jacceco.2005.01.002.

Groenewold, Nicolaas. 2018. "Australia saved from the financial crisis by policy or by exports?" *Journal of Policy Modeling* 40 (1):118-135. doi: https://doi.org/10.1016/j.jpolmod.2017.09.005.

Gu, Zhaoyang, Jeff Ng, and Albert Tsang. 2019. "Mandatory IFRS adoption and management forecasts: The impact of enforcement changes." *China Journal of Accounting Research* 12 (1):33-61. doi: https://doi.org/10.1016/j.cjar.2018.09.001.

Guay, Wayne. 2005. "Discussion of The Role of Accruals in Asymmetrically Timely Gain and Loss Recognition." *Journal of Accounting Research* 44. doi: 10.2139/ssrn.871092.

Hair, J. F., Hult, G. T. M., Ringle, C. M., and Sarstedt, M. . 2014. *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. Thousand Oaks, CA 91320: SAGE Publications

Hamburg, Morris. 1985. *Basic Statistics: A Modern Approach* 3rd edition ed: Harcourt Brace Jovanovich.

Hines, Todd M. 2007a. "International Financial Reporting Standards." *Journal of Business & Finance Librarianship* 12 (3):3-26. doi: 10.1300/J109v12n03_02.

Hines, Todd M. 2007b. "International Financial Reporting Standards

A Guide to Sources for International Accounting Standards." *Journal of Business & Finance Librarianship* 12 (3):3-26. doi: 10.1300/J109v12n03_02.

Huifa, Chen, Tang Qingliang, Jiang Yihong, and Lin Zhijun. 2010. "The Role of International Financial Reporting Standards in Accounting Quality: Evidence from the European Union." *Journal of International Financial Management & Accounting* 21 (3):220-278. doi: 10.1111/j.1467-646X.2010.01041.x.

Hyun-Ah, Lee, and Choi Won-Wook. 2016. "Allowance for uncollectible accounts as a tool for earnings management: Evidence from South Korea." *International Journal of Accounting & Information Management* 24 (2):162-184. doi: doi:10.1108/IJAIM-06-2015-0040.

IASB. 2008. "AN IMPROVED CONCEPTUAL FRAMEWORK FOR FINANCIAL REPORTING." http://www.assb.gov.sg/docs/attachments/EDofChapters1and2theJointImprovedConceptualFramework.pdf.

Iatridis, George. 2010. "International Financial Reporting Standards and the quality of financial statement information." *International Review of Financial Analysis* 19 (3):193-204. doi: http://dx.doi.org/10.1016/j.irfa.2010.02.004.

Iatridis, George, and Augustinos I. Dimitras. 2013. "Financial crisis and accounting quality: Evidence from five European countries." *Advances in Accounting* 29 (1):154-160. doi: http://dx.doi.org/10.1016/j.adiac.2013.03.001.

Ibrahim Murtala Aminu, Mohd Noor Mohd Shariff. 2014. "Strategic Orientation, Access to Finance, Business Environment and SMEs Performance in Nigeria: Data Screening and Preliminary Analysis." *European Journal of Business and Management*

Vol.6, No.35,:124-131.
ICAEW. 2014. "Knowledge guide to International accounting standard." http://www.icaew.com/en/library.
IEA, International Energy Agency. 2009. "The impact of the financial and economic crisis on energy investment ". https://www.iea.org/publications/freepublications/publication/impact.pdf.
IFRS. 2010. "Conceptual Framework for Financial Reporting." accessed 21 April2014. http://www.ifrs.org/Current-Projects/IASB-Projects/Conceptual-Framework/Documents/CFFeedbackStmt.pdf.
IFRS. 2014. "Constitution." Web: www.ifrs.org30
IFRS. 2017a. "IFRS 3 Business Combinations."
IFRS. 2017b. "IFRS 5 Non-current Assets Held for Sale and Discontinued Operations." https://www.ifrs.org/issued-standards/list-of-standards/ifrs-5-non-current-assets-held-for-sale-and-discontinued-operations/.
IFRS. 2017c. "IFRS 7 Financial Instruments: Disclosures." https://www.ifrs.org/issued-standards/list-of-standards/ifrs-7-financial-instruments-disclosures/.
IFRS. 2017d. "IFRS 10 Consolidated Financial Statements." https://www.ifrs.org/issued-standards/list-of-standards/ifrs-10-consolidated-financial-statements/.
IFRS. 2017e. "IFRS 13 Fair Value Measurement." IFRS foundation. https://www.ifrs.org/issued-standards/list-of-standards/ifrs-13-fair-value-measurement/.
IFRS. 2017f. "IFRS 16 Leases." IFRS Foundation. https://www.ifrs.org/issued-standards/list-of-standards/ifrs-16-leases/.
IFRS. 2018. "Conceptual Framework for Financial Reporting." IFRS. https://www.ifrs.org/-/media/project/conceptual-framework/fact-sheet-project-summary-and-feedback-statement/conceptual-framework-project-summary.pdf.
IFRS, Foundation. 2013a. "Constitution IFRS." IFRS Foundation Publications Department, accessed 26 June 2014. http://www.ifrs.org/The-organisation/Governance-and-accountability/Constitution/Documents/IFRS-Foundation-Constitution-January-2013.pdf.
IFRS, Foundation. 2013b. IFRS APPLICATION AROUND THE WORLD

JURISDICTIONAL PROFILE: Australia.
IFRS, Foundation. 2013c. "IFRS foundation Constitution ". IFRS Foundation Publications Department, accessed 26 June 2014. http://www.ifrs.org/The-organisation/Governance-and-accountability/Constitution/Documents/IFRS-Foundation-Constitution-January-2013.pdf.
IFRS, Foundation Publications Department. 2015. "BASIS FOR CONCLUSIONS ON CONCEPTUAL FRAMEWORK FOR FINANCIAL REPORTING." International Accounting Standards Board (IASB). https://dart.deloitte.com/USDART/resource/295369d3-3f4e-11e6-95db-0389faa39760.
Ihlanfeldt, William J. 1997. "International accounting standards: Why should you care?" *Management Accounting* 79 (5):6.
Institute, Australasian Legal Information. 2012. "CORPORATIONS ACT ". Australasian Legal Information Institute. http://www.austlii.edu.au/au/legis/cth/consol_act/ca2001172/s292.html.
Jackson, Sherri L. 2006. *Research methods and statistics : a critical thinking approach*: Belmont, CA : Thomson Wadsworth.
Janice Loftus, Ken Leo, Ruth Picker, Victoria Wise,Kerry Clark. 2013. *Understanding Australinan Accounting Standards*

first ed: John Wiley & Sons Australia, Ltd.
Jason Zezhong Xiao, Guoqiang Hu. 2017. "Fair value accounting in China: implementation and usefulness." ICAEW's charitable trusts. https://www.icaew.com/-/media/corporate/files/technical/research-and-academics/fair-value-report-web-final.ashx.

Johnson, Simon, Peter Boone, Alasdair Breach, and Eric Friedman. 2000. "Corporate governance in the Asian financial crisis." *Journal of Financial Economics* 58 (1–2):141-186. doi: http://dx.doi.org/10.1016/S0304-405X(00)00069-6.

Jones, Stewart, and Aimee Finley. 2011a. "Have IFRS made a difference to intra-country financial reporting diversity?" *The British accounting review : the journal of the British Accounting Association* 43 (1, (3)):22-38.

Jones, Stewart, and Aimee Finley. 2011b. "Have IFRS made a difference to intra-country financial reporting diversity?" *The British Accounting Review* 43 (1):22-38. doi: http://dx.doi.org/10.1016/j.bar.2010.10.004.

Jones, Stewart, and Alison D. Higgins. 2006. "Australia's switch to international financial reporting standards: a perspective from account preparers." *Accounting & Finance* 46 (4):629-652. doi: 10.1111/j.1467-629X.2006.00186.x.

Kline, Rex B. 2011. *Principles and Practice of Structural Equation Modeling*. 5th edition. ed. New York: The Guilford Press.

Kline, Rex B. 2015. *Principles and Practice of Structural Equation Modeling*. Edited by Todd D. Little. Fourth Edition ed, *Principles and Practice of Structural Equation Modeling*.

Kothari, C. . 2008. *Research methodology: methods and techniques*. USA: New Age International. book.

Kothari, S. P., and Rebecca Lester. 2012. "The Role of Accounting in the Financial Crisis: Lessons for the Future." *Accounting Horizons* 26 (2):335-351. doi: 10.2308/acch-50134.

Kotlyar, Julia. 2008. "<THE ADVENT OE THE INTERNATIONAL Financial Reporting Standards A catalyst for changing global finance.pdf>." *Journal of International Affairs* 62 (1):8.

Kouki, Ahmed. 2018. "IFRS and value relevance: A comparison approach before and after IFRS conversion in the European countries." *Journal of Applied Accounting Research* 19 (1):60-80. doi: 10.1108/JAAR-05-2015-0041.

Kumar, Ranjit. 2011. *Research Mathodology*. 3rd edition ed. New Delhi: Saga publication.

Kutner, Ryszard, and Filip Świtała. 2004. "Remarks on the possible universal mechanism of the non-linear long-term autocorrelations in financial time-series." *Physica A: Statistical Mechanics and its Applications* 344 (1):244-251. doi: http://dx.doi.org/10.1016/j.physa.2004.06.126.

Lang, Mark, Jana Smith Raedy, and Michelle Higgins Yetman. 2003. "How Representative Are Firms That Are Cross-Listed in the United States? An Analysis of Accounting Quality." *Journal of Accounting Research* 41 (2):363-386. doi: 10.1111/1475-679X.00108.

Lang, Mark Raedy, Jana Smith Yetman, Michelle Higgins. 2003. "How Representative Are Firms That Are Cross-Listed in the United States? An Analysis of Accounting Quality." *Journal of Accounting Research* 41 (2):363-386. doi: 10.1111/1475-679X.00108.

Lang, Mark Smith Raedy, Jana Wilson, Wendy. 2006. "Earnings management and cross listing: Are reconciled earnings comparable to US earnings?" *Journal of Accounting and Economics* 42 (1–2):255-283. doi: http://dx.doi.org/10.1016/j.jacceco.2006.04.005.

LEGISLATION, FEDERAL REGISTER OF. 2004. "Corporate Law Economic Reform Program (Audit Reform and Corporate Disclosure) Bill 2003." https://www.legislation.gov.au/Details/C2004B01549/Supplementary%20Explanatory%20Memorandum/Text.

Leuz, Christian, and Robert E. Verrecchia. 2000. "The Economic Consequences of Increased Disclosure." *Journal of Accounting Research* 38:91-124. doi: 10.2307/2672910.

Lewis, Ellis Connolly and Christine. 2010. "Structural Change in the

Australian Economy." Reserve bank of Australia. https://www.rba.gov.au/publications/bulletin/2010/sep/pdf/bu-0910-1.pdf.

Li, Bin, Gianfranco Siciliano, and Mohan Venkatachalam. 2020. "Economic Consequences of IFRS Adoption: The Role of Changes in Disclosure Quality." *Contemporary Accounting Research* n/a (n/a). doi: 10.1111/1911-3846.12638.

Li, Yuanhui, Xiao Li, Erwei Xiang, and Hadrian Geri Djajadikerta. 2020. "Financial distress, internal control, and earnings management: Evidence from China." *Journal of Contemporary Accounting & Economics* 16 (3):100210. doi: https://doi.org/10.1016/j.jcae.2020.100210.

Lin, Steve, William Riccardi, and Changjiang Wang. 2012. "Does accounting quality change following a switch from U.S. GAAP to IFRS? Evidence from Germany." *Journal of Accounting and Public Policy* 31 (6):641-657. doi: https://doi.org/10.1016/j.jaccpubpol.2012.10.006.

Liu, Chunhui, Lee J. Yao, Nan Hu, and Ling Liu. 2011. "The Impact of IFRS on Accounting Quality in a Regulated Market: An Empirical Study of China." *Journal of Accounting, Auditing & Finance* 26 (4):659-676. doi: 10.1177/0148558X11409164.

Lonergan, Wayne. 2003. "The emasculation of accounting standard setting in Australia." *JASSA* (3):6-12.

Mala, Rajni, and Parmod Chand. 2012. "Effect of the global financial crisis on accounting convergence." *Accounting & Finance* 52 (1):21-46. doi: 10.1111/j.1467-629X.2011.00418.x.

Marquardt, Carol A., and Christine I. Wiedman. 2004. "The Effect of Earnings Management on the Value Relevance of Accounting Information." *Journal of Business Finance & Accounting* 31 (3-4):297-332. doi: 10.1111/j.0306-686X.2004.00541.x.

Martínez, Juana Aledo, Diego Abellán Martínez, and Henghsiu Lin. 2014. "The Value Relevance of Accounting Numbers Under International Financial Reporting Standards." *Australian Accounting Review* 24 (3):237-254. doi: 10.1111/auar.12043.

Meckling, Michael C. Jensen and William H. 1976. "THEORY OF THE FIRM: MANAGERIAL BEHAVIOR, AGENCY COSTS AND OWNERSHIP STRUCTURE " *Journal of Financial Economics* 3: 305-360. .

Menicucci, Elisa, and Guido Paolucci. 2016. "Fair value accounting and the financial crisis: a literature-based analysis." *Journal of Financial Reporting and Accounting* 14 (1):49-71. doi: http://dx.doi.org/10.1108/JFRA-05-2014-0049.

Mohseni-Cheraghlou, Amin. 2016. "The Aftermath of Financial Crises: A Look on Human and Social Wellbeing." *World Development* 87:88-106. doi: http://dx.doi.org/10.1016/j.worlddev.2016.06.001.

Mongrut, Samuel, and Diego Winkelried. 2019. "Unintended effects of IFRS adoption on earnings management: The case of Latin America." *Emerging Markets Review* 38:377-388. doi: https://doi.org/10.1016/j.ememar.2018.11.004.

Moradi-Motlagh, A., and A. Babacan. 2015. "The impact of the global financial crisis on the efficiency of Australian banks." *Economic Modelling* 46:397-406. doi: 10.1016/j.econmod.2014.12.044.

Morais, Ana Isabel, and JosÉ Dias Curto. 2008. "ACCOUNTING QUALITY AND THE ADOPTION OF IASB STANDARDS - PORTUGUESE EVIDENCE." *Revista Contabilidade & Finanças - USP* (48):103-111.

Morris, Richard D. 1987. "Signalling, Agency Theory and Accounting Policy Choice." *Accounting and Business Research* 18 (69):47-56. doi: 10.1080/00014788.1987.9729347.

Motley, Fool. 2018. "What Are the Differences Between Positive and Normative Accounting?". https://www.fool.com/knowledge-center/differences-between-positive-normative-accounting.aspx.

Murphy, Laurence. 2011. "The global financial crisis and the Australian and New Zealand housing markets." *Journal of Housing and the Built Environment* 26 (3):335-351.

Narayanan, S. 2014. "The impact of the goods and services tax (GST) in Malaysia: Lessons from experiences elsewhere (A Note)." *Singapore Economic Review* 59 (2).

Nolke, Andreas. 2005. "Introduction to the Special Issue: The Globalization of Accounting Standards." accessed Issue 3. http://www.degruyter.com/view/j/bap.

Ochi, Takatsugu. 2014. "<International-accounting-standards-essential-for-growth-Nikkei-May-2014.pdf>."
Ong, LTH Tan and KL. 2002. "The impact of medical technology on healthcare today." *Hong Kong Journal of Emergency Medicine „* Vol. 9(4) (Oct 2002).
Opare, Solomon, Muhammad Nurul Houqe, and Tony van Zijl. 2020. "IFRS adoption and seasoned equity offering underperformance." *Pacific-Basin Finance Journal* 61:101289. doi: https://doi.org/10.1016/j.pacfin.2020.101289.
Othman, Hakim Ben, and Daniel Zeghal. 2006. "A study of earnings-management motives in the Anglo-American and Euro-Continental accounting models: The Canadian and French cases." *The International Journal of Accounting* 41 (4):406-435. doi: http://dx.doi.org/10.1016/j.intacc.2006.09.004.
Outa, Erick Rading. 2011. "The Impact of International Financial Reporting Standards (IFRS) Adoption on the Accounting Quality of Listed Companies in Kenya." doi: http://dx.doi.org/10.2139/ssrn.1976146.
Paananen, Mari, and Lin Henghsiu. 2009. "The Development of Accounting Quality of IAS and IFRS over Time: The Case of Germany." *Journal of International Accounting Research* 8 (1):31-55.
Pallant, Julie. 2010. *SPSS survival manual : a step by step guide to data analysis using SPSS*: Fourth edition. Maidenhead : Open University Press/McGraw-Hill, 2010.
Panda, Brahmadev, and N. M. Leepsa. 2017. "Agency theory: Review of Theory and Evidence on Problems and Perspectives." *Indian Journal of Corporate Governance* 10 (1):74-95. doi: 10.1177/0974686217701467.
Paolucci, Guido, and Elisa Menicucci. 2016. "Fair value accounting and the financial crisis: a literature-based analysis." *Journal of Financial Reporting and Accounting* 14 (1):49-71. doi: 10.1108/JFRA-05-2014-0049.
Parker, David N. 2003. "The Lifeblood of The American Economy." *American Gas* 85 (9):4.
Parliament, European Union. 2005. "Accounting regulation." http://europa.eu.int/comm/internal_market/accounting/ias_en.htm#iasb-adoption.
Pekdemir, Recep, and Asli Türel. 2014. "AN ATTEMPT TO UNDERSTAND COMPLIANCE DEGREE OF IMPLEMENTING INTERNATIONAL STANDARDS IN ACCOUNTANCY: THE TURKEY EXPERIENCE." *Academy of Accounting and Financial Studies Journal* 18 (1):49-63.
Perotti, Pietro, and Alfred Wagenhofer. 2014. "Earnings Quality Measures and Excess Returns." *Journal of Business Finance & Accounting* 41 (5-6):545-571. doi: 10.1111/jbfa.12071.
Pignatel, Isabelle, and Hubert Tchakoute Tchuigoua. 2020. "Microfinance institutions and International Financial Reporting Standards: An exploratory analysis." *Research in International Business and Finance* 54:101309. doi: https://doi.org/10.1016/j.ribaf.2020.101309.
Pounder, Bruce. 2013. "Measuring accounting quality: the SEC is developing a software model to measure the accounting quality of its registrants' filings. Accounting professionals should be aware of the implications." *Strategic Finance*, 2013/05//, 18+.
Quiggin, John. 2011. "What Have We Learned from the Global Financial Crisis?" *Australian Economic Review* 44 (4):355-365. doi: 10.1111/j.1467-8462.2011.00661.x.
Raosoft. 2004. "Sample size calculator." Raosoft, accessed 10 Feb 2015. http://www.raosoft.com/samplesize.html.
RBA. 2020. "About RBA." https://www.rba.gov.au/about-rba/.
Register, The Legislation. 2018. "Corporations Act 2001." Federal Register of Legislation. https://www.legislation.gov.au/Details/C2018C00031/Html/Volume_2.
Richardson, Grant, Grantley Taylor, and Roman Lanis. 2015. "The impact of financial distress on corporate tax avoidance spanning the global financial crisis: Evidence from Australia." *Economic Modelling* 44:44-53. doi: https://doi.org/10.1016/j.econmod.2014.09.015.

Rindskopf, D., and M. Shiyko. 2010. "Measures of Dispersion, Skewness and Kurtosis." In *International Encyclopedia of Education (Third Edition)*, edited by Penelope Peterson, Eva Baker and Barry McGaw, 267-273. Oxford: Elsevier.

Ross, S.A., R. Westerfield, and J.F. Jaffe. 2005. *Corporate finance*: McGraw-Hill/Irwin.

S&P, MSCI and Standard & Poor's. 2016. "Global Industry Classification Standard (GICS)." MSCI. https://www.msci.com/gics.

Sanabria-García, Sonia, and Pascual Garrido-Miralles. 2020. "Impact of IFRS on non-cross-listed Spanish companies: Financial analysts and volume of trade." *European Research on Management and Business Economics* 26 (2):78-86. doi: https://doi.org/10.1016/j.iedeen.2020.04.001.

Saunders, M., Lewis, P. and Thornhill, A. . 2007. *Research methods for Business Students*. Harlow, England: Pearson Education Limited.

Schipper, Katherine, and Linda Vincent. 2003. "Earnings quality." *Accounting Horizons* 17:97.

Seligman, Robert Gold and Jeffrey Englander and Phillip. 2008. "Financial Crisis Hits Health-Care Companies." Bloomberg. https://www.bloomberg.com/news/articles/2008-11-28/financial-crisis-hits-health-care-companiesbusinessweek-business-news-stock-market-and-financial-advice.

Soderstrom, Naomi S., and Kevin Jialin Sun. 2007. "IFRS Adoption and Accounting Quality: A Review." *European Accounting Review* 16 (4):675-702. doi: 10.1080/09638180701706732.

Street, Donna L. 2002. "GAAP 2001--Benchmarking national accounting standards against IAS: summary of results." *Journal of International Accounting, Auditing & Taxation* 11 (1):77.

Sylva, Nicola de. 2015. "Qatar: Definitions of professional services." *International Financial Law Review*:1-1.

Tabachnick, Barbara G., and Linda S. Fidell. 2013. *Using multivariate statistics*. Boston: Pearson Education.

Talpas, Liis. 2016. "The Theoretical Bases for the Preparation of Financial Statements for SMEs: the Case of Estonia." Doctor of Philosophy, Department of Accounting, TALLINN UNIVERSITY OF TECHNOLOGY.

Taylor, Grantley, Greg Tower, Mitchell Van Der Zahn, and John Neilson. 2008. "Corporate governance determinants on Australian resource companies' financial instrument disclosure practices." *Asian Review of Accounting* 16 (1):56-73. doi: http://dx.doi.org/10.1108/13217340810872472.

Tsalavoutas, Ioannis, Fanis Tsoligkas, and Lisa Evans. 2020. "Compliance with IFRS mandatory disclosure requirements: A structured literature review." *Journal of International Accounting, Auditing and Taxation* 40:100338. doi: https://doi.org/10.1016/j.intaccaudtax.2020.100338.

Tweedie, David, and Thomas R. Seidenstein. 2005. "Setting a Global Standard: The Case for Accounting Convergence." *Northwestern Journal of International Law & Business* 25 (3):589-608.

UN, United Nations. 2008. "Review of practical implementation issues relating to international financial reporting standards ". United Nations Conference on Trade and Development https://unctad.org/en/Docs/c2isard45_en.pdf.

VYAS, DUSHYANTKUMAR. 2011. "The Timeliness of Accounting Write-Downs by U.S. Financial Institutions During the Financial Crisis of 2007–2008." *Journal of Accounting Research* 49 (3):823-860. doi: 10.1111/j.1475-679X.2011.00410.x.

Wang, Xiaojiao. 2019. "Compliance Over Time by Australian Firms with IFRS Disclosure Requirements." *Australian Accounting Review* 29 (4):679-691. doi: 10.1111/auar.12267.

Weaver, Lisa. 2014. *Managing the Transition to IFRS-Based Financial Reporting: A Practical Guide to Planning and Implementing a Transition to IFRS or National GAAP which is Based on, or Converged with, IFRS*.

Yetman, Mark Lang; Jana Smith Raedy; Michelle Higgins. 2003. "How Representative Are Firms That Are Cross Listed in the United States." *Journal of Accounting research* 41.

Zeff, Stephen. 2012. "The Evolution of the IASC into the IASB, and the Challenges it Faces." *The Accounting Review*:120202131311000. doi: 10.2308/accr-50130.

Zehri, Fatma, and Jamel Chouaibi. 2013. "Adoption determinants of the International Accounting Standards IAS/IFRS by the developing countries." *Determinantes de la adopción de las Normas Internacionales de Contabilidad IAS/IFRS por los países en desarrollo.* 18 (35):56-62.

Zhang, Dayong, and David C. Broadstock. 2020. "Global financial crisis and rising connectedness in the international commodity markets." *International Review of Financial Analysis* 68:101239. doi: https://doi.org/10.1016/j.irfa.2018.08.003.

Appendix-1 List of Population Companies			
SL NO	**NAME OF THE COMPANY**	**ASX CODE**	**SECTOR**
1	ARB CORPORATION LIMITED	ARB	**Automobiles and components 4 companies**
2	G.U.D. HOLDINGS LIMITED	GUD	
3	RPM AUTOMOTIVE GROUP LIMITED	RPM	
4	SCHAFFER CORPORATION LIMITED	SFC	
5	AUSTRALIA AND NEW ZEALAND BANKING GROUP LIMITED	AZN	**Bank 8 companies**
6	AUSWIDE BANK LTD	ABA	
7	BANK OF QUEENSLAND LIMITED.	BOQ	
8	BENDIGO AND ADELAIDE BANK LIMITED	BEN	
9	COMMONWEALTH BANK OF AUSTRALIA.	CBA	
10	NATIONAL AUSTRALIA BANK LIMITED	NAB	
11	RESIMAC GROUP LTD	RMC	
12	WESTPAC BANKING CORPORATION	WBC	
13	AFT CORPORATION LIMITED	AFT	**Capital goods 24 companies**
14	AIR CHANGE INTERNATIONAL LIMITED	AHJ	
15	CMI LIMITED.	CMI	
16	ELECTRO OPTIC SYSTEMS HOLDINGS LIMITED	EOS	
17	ENERGY TECHNOLOGIES LIMITED	EGY	
18	ENVIRONMENTAL GROUP LIMITED (THE)	EGL	
19	EVZ LIMITED	EVZ	
20	GWA GROUP LIMITED.	GWA	
21	HGL LIMITED	HNG	
22	KORVEST LTD	KOV	
23	KTL TECHNOLOGIES LIMITED	KTL	
24	LEIGHTON HOLDINGS LIMITED	LEI	
25	MONADELPHOUS GROUP LIMITED	MND	
26	OLDFIELDS HOLDINGS LIMITED	OLH	
27	ORH LIMITED	ORH	
28	PAPERLINX LIMITED	PPX	
29	RCR TOMLINSON LIMITED	RCR	
30	RECTIFIER TECHNOLOGIES LTD	RFT	
31	REECE AUSTRALIA LIMITED	REH	
32	SOLCO LTD	SOO	
33	STEAMSHIPS TRADING COMPANY LIMITED	SST	

34	THO SERVICES LIMITED	THO	
35	UGL LIMITED	UGL	
36	VIENTO GROUP LIMITED	VIE	
37	AERIS ENVIRONMENTAL LTD	AEI	**Commercial and professional services 30 companies**
38	ALS LIMITED	ALQ	
39	AMBITION GROUP LIMITED	AMB	
40	ARIADNE AUSTRALIA LIMITED	ARA	
41	BKM MANAGEMENT LIMITED	BKM	
42	BRAMBLES LIMITED	BXB	
43	BSA LIMITED	BSA	
44	CABCHARGE AUSTRALIA LIMITED	CAB	
45	CHANDLER MACLEOD GROUP LIMITED	CMG	
46	CLARIUS GROUP LIMITED	CND	
47	COFFEY INTERNATIONAL LIMITED	COF	
48	COLLECTION HOUSE LIMITED	CLH	
49	COMMODITIES GROUP LIMITED	COZ	
50	CONNEXION MEDIA LIMITED	CXZ	
51	CREDIT CORP GROUP LIMITED	CCP	
52	CROWE HORWATH AUSTRALASIA LTD	CRH	
53	DOWNER EDI LIMITED	DOW	
54	ENVIRONMENTAL CLEAN TECHNOLOGIES LIMITED	ESI	
55	HITECH GROUP AUSTRALIA LIMITED	HIT	
56	HJB CORPORATION LIMITED	HJB	
57	INVENTIS LIMITED	IVT	
58	JOHN SHEARER (HOLDINGS) LIMITED	SHR	
59	NAMOI COTTON CO-OPERATIVE LIMITED	NAM	
60	PMP LIMITED	PMP	
61	PROGRAMMED MAINTENANCE SERVICES LIMITED	PRG	
62	SINO-EXCEL ENERGY LIMITED	SLE	
63	SKILLED GROUP LIMITED	SKE	
64	TEMPO AUSTRALIA LTD	TPP	
65	TOX FREE SOLUTIONS LIMITED	TOX	
66	TRANSFIELD SERVICES LIMITED	TSE	
67	ATLAS PEARLS AND PERFUMES LTD	ATP	**Consumer Durables and Apparel 14 companies**
68	BILLABONG INTERNATIONAL LIMITED	BBG	
69	FLEETWOOD CORPORATION LIMITED	FWD	

70	G.U.D. HOLDINGS LIMITED	GUD	
71	GALE PACIFIC LIMITED	GAP	
72	GAZAL CORPORATION LIMITED	GZL	
73	GLOBE INTERNATIONAL LIMITED	GLB	
74	GUINNESS PEAT GROUP PLC.	GPG	
75	KRESTA HOLDINGS LIMITED	KRS	
76	MCPHERSON'S LIMITED	MCP	
77	MERCHANT HOUSE INTERNATIONAL LIMITED	MHI	
78	QUANTUM ENERGY LIMITED.	QTM	
79	TAMAWOOD LIMITED	TWD	
80	WATERCO LIMITED	WAT	
81	3P LEARNING LIMITED..	3PL	**Consumer Services 20 companies**
82	ACADEMIES AUSTRALASIA GROUP LIMITED	AKG	
83	AINSWORTH GAME TECHNOLOGY LIMITED	AGI	
84	ARDENT LEISURE GROUP	AAD	
85	ARISTOCRAT LEISURE LIMITED	ALL	
86	EBET LIMITED	EBT	
87	EUMUNDI GROUP LIMITED	EBG	
88	FLIGHT CENTRE TRAVEL GROUP LIMITED	FLT	
89	HELLOWORLD LIMITED	HLO	
90	JUMBO INTERACTIVE LIMITED	JIN	
91	NEWHAVEN HOTELS LIMITED	NHH	
92	REEF CASINO TRUST	RCT	
93	SINO STRATEGIC INTERNATIONAL LIMITED	SSI	
94	SITE GROUP INTERNATIONAL LIMITED	SIT	
95	SKYCITY ENTERTAINMENT GROUP LIMITED	SKC	
96	TABCORP HOLDINGS LIMITED	TAH	
97	TRANSMETRO CORPORATION LIMITED	TCO	
98	TRUSTEES AUSTRALIA LIMITED	TAU	
99	VEALLS LIMITED	VEL	
100	VIAGOLD CAPITAL LIMITED	VIA	
101	A1 INVESTMENTS & RESOURCES LTD	AYI	**Diversified Financials**
102	ABERDEEN LEADERS LIMITED	ALR	
103	AMCIL LIMITED	AMH	
104	ASF GROUP LIMITED	AFA	

105	ASK FUNDING LIMITED	AKF	
106	ASX LIMITED	ASX	
107	AUSTRALIAN RURAL CAPITAL LIMITED	ARC	
108	AUSTRALIAN UNITED INVESTMENT COMPANY LIMITED	AUI	
109	BENTLEY CAPITAL LIMITED	BEL	
110	BIOTECH CAPITAL LIMITED	BTC	
111	BISAN LIMITED	BSN	
112	CARLTON INVESTMENTS LIMITED	CIN	
113	CENTURIA CAPITAL LIMITED	CNI	
114	CHAPMANS LIMITED	CHP	
115	CHARTER PACIFIC CORPORATION LIMITED	CHF	
116	CLIME INVESTMENT MANAGEMENT LTD	CIW	
117	CVC LIMITED	CVC	
118	DIGITAL CC LIMITED	DCC	
119	DIVERSA LIMITED	DVA	
120	DIVERSIFIED UNITED INVESTMENT LIMITED	DUI	
121	DJERRIWARRH INVESTMENTS LIMITED	DJW	
122	EQUITY TRUSTEES LIMITED	EQT	
123	EUROZ LIMITED	EZL	
124	FATFISH INTERNET GROUP LTD	FFG	
125	FIDUCIAN PORTFOLIO SERVICES LIMITED	FPS	
126	FIRST GROWTH FUNDS LIMITED	FGF	
127	FLAGSHIP INVESTMENTS LIMITED	FSI	
128	FSA GROUP LIMITED	FSA	
129	GOWING BROS LIMITED	GOW	
130	GRANDBRIDGE LIMITED	GBA	
131	HILLCREST LITIGATION SERVICES LIMITED.	HLS	
132	HUNTER HALL INTERNATIONAL LIMITED	HHL	
133	IMF BENTHAM LIMITED	IMF	
134	IMPERIAL PACIFIC LIMITED	IPC	
135	IRONBARK CAPITAL LIMITED	IBC	
136	KEYBRIDGE CAPITAL LIMITED	KBC	
137	LONDON CITY EQUITIES LIMITED	LCE	
138	MACQUARIE GROUP LIMITED	MQG	

139	MARINER CORPORATION LIMITED	MCX	
140	MDS FINANCIAL GROUP LIMITED	MWS	
141	MILTON CORPORATION LIMITED	MLT	
142	MIRRABOOKA INVESTMENTS LIMITED	MIR	
143	MULTI CHANNEL SOLUTIONS LIMITED	MUT	
144	MURCHISON HOLDINGS LIMITED	MCH	
145	ONCARD INTERNATIONAL LIMITED	ONC	
146	ORION EQUITIES LIMITED	OEQ	
147	PERPETUAL LIMITED	PPT	
148	PLATINUM CAPITAL LIMITED	PMC	
149	PUBLIC HOLDINGS (AUSTRALIA) LIMITED	PHA	
150	QUEST INVESTMENTS LIMITED	QST	
151	RAFFLES CAPITAL LIMITED	RAF	
152	SKYFII LTD	SKF	
153	STANFIELD FUNDS MANAGEMENT LIMITED	SFN	
154	TAG PACIFIC LIMITED	TAG	
155	TECHNICHE LIMITED.	TCN	
156	TEMPLETON GLOBAL GROWTH FUND LIMITED	TGG	
157	TREASURY GROUP LIMITED	TRG	
158	WAM CAPITAL LIMITED	WAM	
159	WHITEFIELD LIMITED	WHF	
160	3D OIL LIMITED	TDO	**Energy 91 companies**
161	ACACIA COAL LIMITED	AJC	
162	ABILENE OIL AND GAS	ABL	
163	ADX ENERGY LTD	ADX	
164	AFRICAN CHROME FIELDS LIMITED	ACJ	
165	ALEATOR ENERGY LIMITED	AWD	
166	ANATOLIA ENERGY LIMITED	AEK	
167	ANTARES ENERGY LIMITED	AZZ	
168	ARMOUR ENERGY LIMITED	AJQ	
169	AWE LIMITED	AWE	
170	BEACH ENERGY LIMITED	BPT	
171	BLACK RANGE MINERALS LIMITED	BLR	
172	BOUNTY OIL & GAS	BUY	
173	BLUE ENERGY LIMITED	BUL	
174	CALTEX AUSTRALIA LIMITED	CTX	
175	CARBON ENERGY LIMITED	CNX	

176	CARBON MINERALS LIMITED	CRM	
177	CARNARVON PETROLEUM LIMITED	CVN	
178	CRE8TEK	CR8	
179	COALSPUR MINES LIMITED	CPL	
180	COOPER ENERGY LTD	COE	
181	CORAL SEA PETROLEUM LTD	CSP	
182	CUE ENERGY RESOURCES LIMITED	CUE	
183	DEEP YELLOW LIMITED	DYL	
184	DRILLSEARCH ENERGY LIMITED	DLS	
185	EAST AFRICA RESOURCES LIMITED	EAF	
186	EMERALD OIL & GAS NL	EMR	
187	EMPIRE ENERGY GROUP LIMITED	EEG	
188	EMPIRE OIL & GAS NL	EGO	
189	ENERGY RESOURCES OF AUSTRALIA LIMITED	ERA	
190	FAR LIMITED	FAR	
191	FIRESTONE ENERGY LIMITED	FSE	
192	FITZROY RIVER CORPORATION LTD	FZR	
193	FORTE ENERGY NL	FTE	
194	GALILEE ENERGY LIMITED	GLL	
195	GLOBAL PETROLEUM LIMITED	GBP	
196	GRAND GULF ENERGY LIMITED	GGE	
197	GREENVALE ENERGY NL	GRV	
198	HORIZON OIL LIMITED	HZN	
199	INDUS ENERGY NL	IND	
200	KAIRIKI ENERGY LIMITED	KIK	
201	LAKES OIL NL	LKO	
202	LION ENERGY LIMITED	LIO	
203	LONESTAR RESOURCES LIMITED	LNR	
204	LONGREACH OIL LIMITED	LGO	
205	MOLOPO ENERGY	MPO	
206	MARENICA ENERGY LTD	MEY	
207	MARION ENERGY LIMITED	MAE	
208	MEO AUSTRALIA LIMITED	MEO	
209	MUSTANG RESOURCES	MUS	
210	MIRRABOOKA INVEST	MIR	
211	MORETON RESOURCES LTD	MRV	
212	NEON ENERGY LIMITED	NEN	
213	NEW AGE EXPLORATION LIMITED	NAE	
214	NEW ZEALAND OIL & GAS LIMITED	NZO	
215	NEON CAPITAL	NEN	

216	NIDO PETROLEUM LIMITED	NDO	
217	NORWEST ENERGY NL	NWE	
218	NUENERGY GAS LIMITED	NGY	
219	OGL RESOURCES LIMITED	OGL	
220	OIL BASINS LIMITED	OBL	
221	OIL SEARCH LIMITED	OSH	
222	ORCA ENERGY LIMITED	OGY	
223	ORIGIN ENERGY LIMITED	ORG	
224	OTIS ENERGY LIMITED	OTE	
225	PALADIN ENERGY LTD	PDN	
226	PAN ASIA CORPORATION LIMITED	PZC	
227	PAN PACIFIC PETROLEUM NL	PPP	
228	PANCONTINENTAL OIL & GAS NL	PCL	
229	PENINSULA ENERGY LIMITED	PEN	
230	PETSEC ENERGY LIMITED	PSA	
231	RANGE RESOURCES LIMITED	RRS	
232	RESOURCE STAR LIMITED	RSL	
233	ROC OIL COMPANY LIMITED	ROC	
234	SAMSON OIL & GAS LIMITED	SSN	
235	SANTOS LIMITED	STO	
236	SOUTH PACIFIC RES	SPB	
237	SENEX ENERGY LIMITED	SXY	
238	SIROCCO ENERGY LTD	SCY	
239	STRATEGIC ENERGY RESOURCES LIMITED	SER	
240	SUMMIT RESOURCES LIMITED	SMM	
241	SUN RESOURCES NL	SUR	
242	SYNGAS LIMITED	SYS	
243	TANGIERS PETROLEUM LIMITED	TPT	
244	TAP OIL LIMITED	TAP	
245	URANIUM EQUITIES LIMITED	UEQ	
246	WASHINGTON H SOUL PATTINSON & COMPANY LIMITED	SOL	
247	WAVENET INTERNATIONAL LIMITED	WAL	
248	WHITE ENERGY COMPANY LIMITED	WEC	
249	WOODSIDE PETROLEUM LIMITED	WPL	
250	XSTATE RESOURCES LIMITED	XST	
251	METCASH LIMITED	MTS	**Food & Staples Retailing**
252	WESFARMERS LIMITED	WES	
253	WOOLWORTHS LIMITED	WOW	
254	AUSTRALIAN AGRICULTURAL COMPANY LIMITED.	AAC	

255	AUSTRALIAN VINTAGE LTD	AVG	
256	BRAND NEW VINTAGE LIMITED	BNV	
257	BUDERIM GINGER LIMITED	BUG	
258	COCA-COLA AMATIL LIMITED	CCL	
259	DROMANA ESTATE LIMITED	DMY	
260	ELDERS LIMITED	ELD	
261	FARM PRIDE FOODS LIMITED	FRM	
262	FFI HOLDINGS LIMITED	FFI	
263	FREEDOM FOODS GROUP LIMITED	FNP	
264	GRAINCORP LIMITED	GNC	
265	PHW CONSOLIDATED LIMITED	PHW	
266	RIDLEY CORPORATION LIMITED	RIC	
267	SELECT HARVESTS LIMITED	SHV	
268	TANDOU LIMITED	TAN	
269	TW HOLDINGS LIMITED	TWH	
270	WEBSTER LIMITED	WBA	
271	YOWIE GROUP LTD	YOW	
272	1ST GROUP LIMITED	1ST	**Health Care Equipment & and services 30 companies**
273	1300 SMILES LIMITED	ONT	
274	ANALYTICA LIMITED	ALT	
275	ANSELL LIMITED	ANN	
276	ANTEO DIAGNOSTICS LIMITED	ADO	
277	AVITA MEDICAL	AVH	
278	BRAIN RESOURCE LIMITED	BRC	
279	CLOVER CORPORATION LIMITED	CLV	
280	COCHLEAR LIMITED	COH	
281	ELLEX MEDICAL LASERS LIMITED	ELX	
282	FISHER & PAYKEL HEALTHCARE CORPORATION LIMITED	FPH	
283	GLOBAL HEALTH LIMITED	GLH	
284	ICSGLOBAL LIMITED	ICS	
285	IM MEDICAL LTD	IMI	
286	ISONEA LIMITED	ISN	
287	KONEKT LIMITED	KKT	
288	MEDIVAC LIMITED	MDV	
289	MEDTECH GLOBAL LIMITED	MDG	
290	OPTISCAN IMAGING LIMITED	OIL	
291	PARAGON CARE LIMITED	PGC	
292	PRIMARY HEALTH CARE LIMITED	PRY	
293	PRO MEDICUS LIMITED	PME	
294	RAMSAY HEALTH CARE LIMITED	RHC	

295	RESPIRI	RSH	
296	RESONANCE HEALTH LIMITED	RHT	
297	SDI LIMITED	SDI	
298	SONIC HEALTHCARE LIMITED	SHL	
299	SIRTEX MEDICAL LTD	SRX	
300	SUDA LTD	SUD	
301	TEMPO AUSTRALIA	TPP	
302	ABM RESOURCES NL	ABU	**Materials 214 companies**
303	ACACIA COAL	AJC	
304	ADELAIDE BRIGHTON	ABC	
305	ADMIRALTY RESOURCES NL.	ADY	
306	ADELAIDE RES	AND	
307	ALKANE RESOURCES	ALK	
308	ALLIANCE RESOURCES	AGS	
309	ALTURA MINING	AMC	
310	ANGLO AUSTRALIAN RESOURCES NL	AGG	
311	ANGLOGOLD ASHANTI LIMITED	AQP	
312	AQUARIUS PLATINUM LIMITED	ARX	
313	ARC EXPLORATION LIMITED	ARE	
314	ARGONAUT RESOURCES NL	AGY	
315	ARGOSY MINERALS LIMITED	ARI	
316	ARRIUM LIMITED	ARV	
317	ARTEMIS RESOURCES LIMITED	AAJ	
318	ARUMA RESOURCES LIMITED	AJR	
319	ARUNTA RESOURCES LIMITED	ARO	
320	ASTRO RESOURCES NL	ATR	
321	ASTRON CORPORATION LIMITED	ATI	
322	AUSTPAC RESOURCES NL	APG	
323	AUSTRAL GOLD LIMITED	AGD	
324	AUSTRALASIAN RESOURCES LIMITED	ARH	
325	AUSTRALIAN MINES LIMITED	AUZ	
326	AUSTRALIAN PACIFIC COAL LIMITED	AQC	
327	AUSTRALIAN ZIRCON NL	AZC	
328	BALAMARA RESOURCES LIMITED	BMB	
329	BARRA RESOURCES LIMITED	BAR	
330	BCD RESOURCES NL	BCD	
331	BHP BILLITON LIMITED	BHP	
332	BLACK RIDGE MINING NL	BRD	
333	BLUENERGY GROUP LIMITED	BEG	
334	BORAL LIMITED.	BLD	
335	BOUGAINVILLE COPPER LIMITED	BOC	

336	BOULDER STEEL LIMITED	BGD	
337	BRICKWORKS LIMITED	BKW	
338	CABRAL RESOURCES LIMITED	CBS	
339	CAENEUS MINERALS LTD	CAD	
340	CAPE LAMBERT RESOURCES LIMITED	CFE	
341	CAPRAL LIMITED	CAA	
342	CARBON ENERGY LTD	CNB	
343	CARDIA BIOPLASTICS LIMITED	CNN	
344	CELSIUS COAL LIMITED	CLA	
345	CENTAURUS METALS LIMITED	CTM	
346	CENTRAL WEST GOLD NL	CWG	
347	CHONGHERR INVESTMENTS LTD	CDH	
348	CI RESOURCES LIMITED	CII	
349	CIMIC GROUP LTD	CIM	
350	CITIGOLD CORPORATION LIMITED	CTO	
351	COKAL LIMITED	CKA	
352	COMET RESOURCES LIMITED	CRL	
353	COMPASS RESOURCES LIMITED	CMR	
354	CONSOLIDATED GLOBAL INVESTMENTS LIMITED	CGI	
355	CRUCIBLE GOLD LIMITED	CUG	
356	CSR LIMITED	CSR	
357	CUDECO LIMITED	CDU	
358	CULLEN RESOURCES LIMITED	CUL	
359	CWH RESOURCES LTD	CWH	
360	DECIMAL SOFTWARE LTD	DSX	
361	DRAGON MINING LIMITED	DRA	
362	EAST AFRICA RES	EAF	
363	EQUUS MINING LIMITED	EQE	
364	ERIN RESOURCES LIMITED	ERI	
365	ESPERANCE MINERALS LIMITED	ESM	
366	EUROGOLD LIMITED	EUG	
367	EVZ LIMITED	EVZ	
368	EXCALIBUR MINING CORPORATION LIMITED	EXM	
369	FALCON MINERALS LIMITED	FCN	
370	FLETCHER BUILDING LIMITED	FBU	
371	FLINDERS MINES LIMITED	FMS	
372	FOCUS MINERALS LTD	FML	
373	FORTESCUE METALS GROUP LTD	FMG	
374	FOYSON RESOURCES LIMITED	FOY	
375	FYI RESOURCES LIMITED	FYI	

376	GALILEE ENERGY	GLL	
377	GALILEO MINING LTD	GAL	
378	GATEWAY MINING LIMITED	GBG	
379	GINDALBIE METALS LTD	GBG	
380	GIPPSLAND LIMITED	GIP	
381	GME RESOURCES LIMITED	GME	
382	GOLDEN CROSS RESOURCES LTD	GCR	
383	GOLDEN DEEPS LIMITED.	GED	
384	GOLDEN RIM RESOURCES LTD	GMR	
385	GOLDSEARCH LIMITED	GSE	
386	GONDWANA RESOURCES LIMITED	GDA	
387	GRANGE RESOURCES LIMITED.	GRR	
388	GULLEWA LIMITED	GUL	
389	GWA GROUP	GWA	
390	HAMPTON HILL MINING NL	HHM	
391	HAOMA MINING NL	HAO	
392	HAVILAH RESOURCES	HAV	
393	HAWTHORN RESOURCES LIMITED	HAW	
394	HELIX RESOURCES LIMITED	HLX	
395	HERON RESOURCES LIMITED	HRR	
396	HIGHLANDS PACIFIC LIMITED	HIG	
397	HILLGROVE RESOURCES LIMITED	HGO	
398	HILLS LIMITED	HIL	
399	ILUKA RESOURCES LIMITED	ILU	
400	IMDEX LIMITED	IMD	
401	IMX RESOURCES LIMITED	IXR	
402	INDO MINES LIMITED	IDO	
403	INTERMIN RESOURCES LIMITED	IRC	
404	INTREPID MINES LIMITED	IAU	
405	JAMES HARDIE INDUSTRIES PLC	JHX	
406	JERVOIS MINING LIMITED	JRV	
407	KING ISLAND SCHEELITE LIMITED	KIS	
408	KINGSGATE CONSOLIDATED LIMITED.	KCN	
409	KINGSTON RESOURCES LIMITED	KSN	
410	KOGI IRON LIMITED	KFE	
411	LACHLAN STAR LIMITED	LSA	
412	LAKE RESOURCES N.L.	LKE	
413	LANEWAY RESOURCES LTD	LNY	
414	LATROBE MAGNESIUM LIMITED	LMG	
415	LEAF RESOURCES LTD	LER	

416	LEGEND MINING LIMITED	LEG	
417	LEOPARD RESOURCES NL	LRR	
418	LEYSHON RESOURCES LIMITED	LRL	
419	LINDIAN RESOURCES LIMITED	LIN	
420	LYNAS CORPORATION LIMITED	LYC	
421	MACMAHON HLDGS LTD	MAH	
422	MAGNUM MINING AND EXPLORATION LIMITED	MGU	
423	MAGONTEC LIMITED	MGL	
424	MERAH RESOURCES LIMITED	MEH	
425	MERLIN DIAMONDS LIMITED	MED	
426	MESA MINERALS LIMITED	MAS	
427	METALS AUSTRALIA LTD	MLS	
428	MILLENNIUM MINERALS	MOY	
429	MINCOR RESOURCES NL	MCR	
430	MINERAL COMMODITIES LTD	MRC	
431	MINERAL DEPOSITS LIMITED	MDL	
432	MINING PROJECTS GROUP LIMITED	MPJ	
433	MOD RESOURCES LIMITED	MOD	
434	MONTERAY MINING GROUP LTD	MRY	
435	MONTO MINERALS LTD	MOO	
436	MORETON RESOURCES	MRV	
437	MULTISTACK INT'L LTD	MSI	
438	NEWCREST MINING LIMITED	NCM	
439	NYOTA MINERALS LIMITED	NYO	
440	OCHRE GROUP HOLDINGS LIMITED	OGH	
441	OM HOLDINGS LIMITED	OMH	
442	ORICA LIMITED	ORI	
443	ORO VERDE LIMITED	OVL	
444	OROYA MINING LIMITED	ORO	
445	OZ MINERALS LIMITED	OZL	
446	PACIFIC MINING LIMITED	PFM	
447	PACIFIC NIUGINI LIMITED	PNR	
448	PADBURY MINING LIMITED	PDY	
449	PANAUST LIMITED	PNA	
450	PANORAMIC RESOURCES LIMITED	PAN	
451	PANTERRA GOLD LIMITED	PGI	
452	PHILLIPS RIVER MINING LIMITED	PRH	
453	PLATINUM AUSTRALIA LIMITED	PLA	
454	PLATYPUS MINERALS LTD	PLP	
455	PLENTEX LIMITED	PRM	

456	POSEIDON NICKEL LIMITED	POS	
457	PRAIRIE MINING LIMITED	PDZ	
458	QUANTUM RESOURCES LIMITED	QUR	
459	QUEST MINERALS LIMITED	QNL	
460	RAND MINING LIMITED	RND	
461	RED 5 LIMITED	RED	
462	REDBANK COPPER LIMITED	RCP	
463	REDCLIFFE RESOURCES LIMITED	RCF	
464	REGIS RESOURCES LIMITED	RRL	
465	REPRODUCTIVE HEALTH SCIENCE LIMITED	RHS	
466	RESOLUTE MINING LIMITED	RSG	
467	RESOURCE MINING CORPORATION LIMITED	RMI	
468	REWARD MINERALS LTD	RWD	
469	RIMFIRE PACIFIC MINING NL	RIM	
470	RIO TINTO LIMITED	RIO	
471	RMG LIMITED	RMG	
472	RNI NL.	RNI	
473	SABRE RESOURCES LIMITED	SBR	
474	SARACEN MINERAL HOLDINGS LIMITED	SAR	
475	SHAREROOT LTD	SRO	
476	SIHAYO GOLD LIMITED	SIH	
477	SIMS METAL MANAGEMENT LIMITED	SGM	
478	SIPA RESOURCES LIMITED	SRI	
479	SIRIUS RESOURCES NL	SIR	
480	SML CORPORATION LIMITED	SOP	
481	SOUTH AMERICAN IRON & STEEL CORPORATION LIMITED	SAY	
482	SOUTH EAST ASIA RESOURCES LIMITED	SXI	
483	SOUTHERN CROSS EXPLORATION N.L.	SXX	
484	SPHERE MINERALS LIMITED	SPH	
485	SRG LTD	SRG	
486	ST BARBARA LIMITED	SBM	
487	STRANDLINE RESOURCES	SHK	
488	STRATEGIC ENERGY RES	SER	
489	STRATEGIC MINERALS CORPORATION NL	SMC	
490	STRIKE RESOURCES LIMITED	SRK	
491	SUMMIT RESOURCES	SMM	

492	SUNDANCE RESOURCES LIMITED	SDL	
493	TAG PACIFIC LTD	TAG	
494	TAKORADI LIMITED	TKG	
495	TANAMI GOLD NL	TAM	
496	TASMAN RESOURCES LTD	TAS	
497	TASMANIA MINES LIMITED	TMM	
498	TAWANA RESOURCES NL	TAW	
499	THUNDELARRA LIMITED	THX	
500	TIGER RESOURCES LIMITED	TGS	
501	TNG LIMITED	TNG	
502	TORIAN RESOURCES LIMITED	TNR	
503	TRIBUNE RESOURCES LIMITED	TBR	
504	TROY RESOURCES LIMITED	TRY	
505	TRUSCOTT MINING CORPORATION LIMITED	TRM	
506	UGL LIMITED	UGL	
507	UNITY MINING LIMITED	UML	
508	VARISCAN MINES LIMITED	VAR	
509	VIETNAM INDUSTRIAL INVESTMENTS LIMITED	VII	
510	WASHINGTON H SOUL	SOL	
511	WATPAC LIMITED	WTP	
512	WAVENET INT'L LTD	WAL	
513	WCP RESOURCES LIMITED	WCP	
514	WESTERN AREAS LIMITED	WSA	
515	ZIMPLATS HOLDINGS LIMITED	ZIM	
516	ADCORP AUSTRALIA LIMITED	AAU	**Media-22 companies**
517	AMALGAMATED HOLDINGS LIMITED	AHD	
518	APN NEWS & MEDIA LIMITED	APN	
519	ASIA PACIFIC DIGITAL LIMITED	DIG	
520	ASPERMONT LIMITED.	ASP	
521	AUSMANI LIMITED	ABF	
522	BEYOND INTERNATIONAL LIMITED	BYI	
523	BRISBANE BRONCOS LIMITED	BBL	
524	COMMSTRAT LIMITED	COJ	
525	FAIRFAX MEDIA LIMITED	FXJ	
526	INVIGOR GROUP LIMITED	IVO	
527	MUI CORPORATION LIMITED	MUI	
528	PACIFIC STAR NETWORK LIMITED	PNW	
529	PRIME MEDIA GROUP LIMITED	PRT	
530	Q LIMITED	QXQ	
531	REA GROUP LTD	REA	

532	SEVEN WEST MEDIA LIMITED	SWM	
533	SHOPLY LIMITED	SHP	
534	SKY NETWORK TELEVISION LIMITED.	SKT	
535	STW COMMUNICATIONS GROUP LIMITED	SGN	
536	TEN NETWORK HOLDINGS LIMITED	TEN	
537	VILLAGE ROADSHOW LIMITED	VRL	
538	ACUVAX LIMITED	ACU	**Pharmaceuticals & Biotechnology 28 companies**
539	AGENIX LIMITED	AGX	
540	ANTISENSE THERAPEUTICS LIMITED	ANP	
541	BENITEC BIOPHARMA LIMITED	BLT	
542	BIONOMICS LIMITED	BNO	
543	BIOTRON LIMITED	BIT	
544	BIOXYNE LIMITED	BXN	
545	BONE MEDICAL LIMITED	BNE	
546	CALZADA LIMITED	CZD	
547	CIRCADIAN TECHNOLOGIES LIMITED	CIR	
548	CLINUVEL PHARMACEUTICALS LIMITED	CUV	
549	CSL LIMITED	CSL	
550	GENETIC TECHNOLOGIES LIMITED	GTG	
551	IDT AUSTRALIA LIMITED	IDT	
552	IMMURON LIMITED	IMC	
553	IMUGENE LIMITED	IMU	
554	NOVOGEN LIMITED	NRT	
555	OBJ LIMITED	OBJ	
556	PHARMANET GROUP LIMITED	PNO	
557	PHARMAUST LIMITED	PAA	
558	PHOSPHAGENICS LIMITED	POH	
559	PRANA BIOTECHNOLOGY LIMITED	PBT	
560	PRIMA BIOMED LTD	PRR	
561	PROGEN PHARMACEUTICALS LIMITED	PGL	
562	SIRTEX MEDICAL LIMITED	SRX	
563	SOLAGRAN LIMITED	SLA	
564	STARPHARMA HOLDINGS LIMITED	SPL	
565	VIRALYTICS LIMITED	VLA	
566	ADVANCED ENERGY SYSTEMS LIMITED	AES	**Real estate 37 companies**
567	ASPEN GROUP	APZ	
568	AUSTRALIA CHINA HOLDINGS LIMITED	AAK	

569	AVEO GROUP	AOG	
570	AVJENNINGS LIMITED	AVJ	
571	AXIOM PROPERTIES LIMITED	AXI	
572	BWP TRUST	BWP	
573	CARINDALE PROPERTY TRUST	CDP	
574	CEDAR WOODS PROPERTIES LIMITED	CWP	
575	CENTURIA OFFICE REIT	COF	
576	CHARTER HALL RETAIL REIT	CQR	
577	CIC AUSTRALIA LIMITED	CNB	
578	CROMWELL PROPERTY GROUP	CMW	
579	CVC PROPERTY FUND	CJT	
580	DESANE GROUP HOLDINGS LIMITED	DGH	
581	DEVINE LIMITED	DVN	
582	FINBAR GROUP LIMITED	FRI	
583	FOLKESTONE LIMITED	FLK	
584	GPT GROUP	GPT	
585	HUDSON INVESTMENT GROUP LIMITED	HGL	
586	INTERNATIONAL EQUITIES CORPORATION LIMITED.	IEQ	
587	INVESTA OFFICE FUND	IOF	
588	LEND LEASE GROUP	LLC	
589	LIFESTYLE COMMUNITIES LIMITED	LIC	
590	METROLAND AUSTRALIA LIMITED	MTD	
591	MIRVAC GROUP	MGR	
592	NOVION PROPERTY GROUP	NVN	
593	PAYCE CONSOLIDATED LIMITED	PAY	
594	PBD DEVELOPMENTS LIMITED	PBD	
595	PHILEO AUSTRALIA LIMITED	PHI	
596	RAPTIS GROUP LIMITED	RPG	
597	SABINA CORPORATION LIMITED	SAP	
598	SERVCORP LIMITED	SRV	
599	SIETEL LIMITED	SSL	
600	STOCKLAND	SGP	
601	SUNLAND GROUP LIMITED	SDG	
602	UNITED OVERSEAS AUSTRALIA LIMITED	UOS	
603	AP EAGERS LIMITED	APE	**Retailing 14 companies**
604	BIRON APPAREL LIMITED	BIC	
605	BREVILLE GROUP LIMITED	BRG	
606	CASH CONVERTERS INTERNATIONAL	CCV	
607	DELECTA LIMITED	DLC	

608	FANTASTIC HOLDINGS LIMITED	FAN	
609	HARVEY NORMAN HOLDINGS LIMITED	HVN	
610	JOYCE CORPORATION LIMITED	JYC	
611	OROTONGROUP LIMITED	ORL	
612	PREMIER INVESTMENTS LIMITED	PMV	
613	RURALCO HOLDINGS LIMITED	RHL	
614	SPECIALTY FASHION GROUP LIMITED	SFH	
615	SUPPLY NETWORK LIMITED	SNL	
616	WEBJET LIMITED	WEB	
617	ADACEL TECHNOLOGIES LIMITED	ADA	**Software & Services 49 companies**
618	ADSLOT LTD	ADJ	
619	ALTIUM LIMITED	ALU	
620	ANITTEL GROUP LIMITED	AYG	
621	APPLABS TECHNOLOGIES LTD	ALA	
622	ASG GROUP LIMITED	ASZ	
623	BEAUTY HEALTH GROUP LIMITED	BHG	
624	BYTE POWER GROUP LIMITED	BPG	
625	CB AUSTRALIA LIMITED	CBK	
626	CLARITY OSS LIMITED	CYO	
627	COMOPS LIMITED	COM	
628	COMPUTERSHARE LIMITED.	CPU	
629	CORUM GROUP LIMITED	COO	
630	CPT GLOBAL LIMITED	CGO	
631	DATA#3 LIMITED	DTL	
632	DECIMAL SOFTWARE LIMITED	DSX	
633	ENTELLECT LIMITED	ESN	
634	ESERVGLOBAL LIMITED	ESV	
635	GOCONNECT LIMITED	GCN	
636	HANSEN TECHNOLOGIES LIMITED	HSN	
637	INFOMEDIA LTD	IFM	
638	INTEGRATED RESEARCH LIMITED	IRI	
639	IRESS LIMITED	IRE	
640	ISENTRIC LIMITED.	ICU	
641	JCURVE SOLUTIONS LTD	JCS	
642	MELBOURNE IT LIMITED	MLB	
643	MGM WIRELESS LIMITED	MWR	
644	MIGME LIMITED	MIG	
645	MOBILE EMBRACE LIMITED	MBE	
646	MONTECH HOLDINGS LIMITED	MOQ	
647	MOOTER MEDIA LIMITED	MMZ	

648	NEARMAP LTD	NEA	
649	OBJECTIVE CORPORATION LIMITED	OCL	
650	ON Q GROUP LIMITED	ONQ	
651	PANORAMA SYNERGY LTD	PSY	
652	PROPHECY INTERNATIONAL HOLDINGS LIMITED	PRO	
653	RECKON LIMITED	RKN	
654	RUBIK FINANCIAL LIMITED	RFL	
655	SMARTTRANS HOLDINGS LTD	SMA	
656	SMS MANAGEMENT & TECHNOLOGY LIMITED.	SMX	
657	SOFCOM LIMITED	SOF	
658	STREAM GROUP LIMITED	SGO	
659	SYNERGY PLUS LIMITED	SNR	
660	TECHNOLOGY ONE LIMITED	TNE	
661	TRANSACTION SOLUTIONS INTERNATIONAL LIMITED	TSN	
662	UXC LIMITED	UXC	
663	VOLTAGE IP LIMITED	VIP	
664	WELCOME STRANGER MINING LIMITED	WSE	
665	WORLD.NET SERVICES LIMITED	WNS	
666	AAT CORPORATION LIMITED	AAT	**Technology Hardware & Equipment 16 companies**
667	CELLNET GROUP LIMITED	CLT	
668	EHG CORPORATION LIMITED	EHG	
669	HILLS LIMITED	HIL	
670	ICASH PAYMENT SYSTEMS LIMITED	ICP	
671	INT CORPORATION LIMITED	INT	
672	KOLLAKORN CORPORATION LIMITED	KKL	
673	LEMARNE CORPORATION LIMITED	LMC	
674	MAXSEC GROUP LIMITED	MSP	
675	NETCOMM WIRELESS LIMITED	NTC	
676	OMNITECH HOLDINGS LIMITED	OHL	
677	Q TECHNOLOGY GROUP LIMITED	QTG	
678	REDFLEX HOLDINGS LIMITED	RDF	
679	SCANTECH LIMITED	SCD	
680	SENETAS CORPORATION LIMITED	SEN	
681	WORLD REACH LIMITED	WRR	
682	AMCOM TELECOMMUNICATIONS LIMITED	AMM	**Telecommunication Services 12 companies**
683	BROAD INVESTMENTS LIMITED	BRO	
684	DIRECT NICKEL LIMITED	DIR	

685	HUTCHISON TELECOMMUNICATIONS (AUSTRALIA) LIMITED	HTA	
686	IINET LIMITED	IIN	
687	NEWSAT LIMITED	NWT	
688	QUESTE COMMUNICATIONS LIMITED	QUE	
689	SPARK NEW ZEALAND LIMITED	SPK	
690	TEL.PACIFIC LIMITED	TPC	
691	TELSTRA CORPORATION LIMITED.	TLS	
692	TPG TELECOM LIMITED	TPM	
693	VOCUS COMMUNICATIONS LIMITED	VOC	
694	AUCKLAND INTERNATIONAL AIRPORT LIMITED	AIA	**Transportation 9 companies**
695	CHALMERS LIMITED	CHR	
696	CTI LOGISTICS LIMITED	CLX	
697	K & S CORPORATION LIMITED	KSC	
698	MERMAID MARINE AUSTRALIA LIMITED	MRM	
699	QANTAS AIRWAYS LIMITED	QAN	
700	TOLL HOLDINGS LIMITED	TOL	
701	TRAFFIC TECHNOLOGIES LTD.	TTI	
702	TRANSURBAN GROUP	TCL	
703	APA GROUP	APA	**Utilities 7 companies**
704	CARNEGIE WAVE ENERGY LIMITED	CWE	
705	ENERGY DEVELOPMENTS LIMITED	ENE	
706	ENERGY WORLD CORPORATION LTD	EWC	
707	ENERJI LTD	ERJ	
708	ENHANCED SYSTEMS TECHNOLOGIES LIMITED	ESY	
709	PACIFIC ENERGY LIMITED	PEA	
710	INSURANCE AUSTRALIA GROUP LIMITED	IAG	**Insurance 5 companies**
711	QBE INSURANCE GROUP LIMITED	QBE	
712	SUNCORP GROUP LIMITED	SUN	
713	SUNCORP-METWAY LIMITED	SBK	
714	TOWER LIMITED	TWR	
715	BXN BIOXYNE LIMITED	BXN	**Household & Personal Products 4 companies**
716	BKL BLACKMORES LIMITED	BKL	
717	MCP MCPHERSON'S LIMITED	MCP	
718	PTL PENTAL LIMITED	PTL	

719	SILEX SYSTEMS LIMITED	SLX	**Semiconductors and Semiconductor equipment's 1 company**

Appendix- 2 List of sample companies			
Sl. No	**Name of the company**	**ASX code**	**Industry sector**
1	AERIS ENVIRO	AEI	**Commercial and Professional Services 18 companies**
2	ALS LTD	ALQ	
3	AMBITION GROUP LTD	AMB	
4	ARIADNE AUSTRALIA	ARA	
5	BRAMBLES LTD	BKM	
6	BSA LTD	BSA	
7	CABCHARGE AUSTRALIA	CAB	
8	CLARIUS GROUP	CND	
9	COFFEY INT'L LTD	COF	
10	COLLECTION HOUSE	CLH	
11	CREDIT CORP	CCP	
12	DOWNER EDI LTD	DOW	
13	NAMOI COTTON CO	NAM	
14	PMP LTD	PMP	
15	PROGRAM MAINT SERV	PRG	
16	SKILLED GROUP LTD	SKE	
17	TEMPO AUSTRALIA	TPP	
18	TOX FREE SOLUTIONSAERIS ENVIRO	TOX	
19	ABERDEEN LEADERS LTD	ALR	**Diversified Financials 31 companies**
20	AMCIL LIMITED	AMH	
21	ASX LTD	ASX	
22	AUSTRALIAN RURAL	ARC	
23	AUSTRALIAN UNITED	AUI	
24	BENTLEY CAPITAL LTD	BEL	

25	BIOTECH CAPITAL	BTC	
26	BISAN LIMITED	BSN	
27	CARLTON INVESTMENTS	CIN	
28	CHAPMANS LIMITED	CHP	
29	CHARTER PACIFIC	CHF	
30	CLIME INV MGMT LTD	CIW	
31	CVC LTD	CVC	
32	DIVERSIFIED UNITED	DUI	
33	DJERRIWARRH INV LTD	DJW	
34	EQUITY TRUSTEES LTD	EQT	
35	EUROZ	EZL	
36	FLAGSHIP INV	FFG	
37	FSA GROUP LTD	FSA	
38	HUNTER HALL INTL.	HHL	
39	IMF BENTHAM LTD	IMF	
40	IRONBARK CAPITAL LTD	IBC	
41	KEYBRIDGE CAPITAL	KBC	
42	MACQUARIE GROUP	MQG	
43	MILTON CORP LTD	MLT	
44	PERPETUAL LTD	PPT	
45	PLATINUM CAPITAL LTD	PMC	
46	TEMPLETON GLOBAL	TGG	
47	WAM CAPITAL LTD	WAM	
48	WHITEFIELD LIMITED	WHF	
49	MIRRABOOKA INVEST	MIR	
50	CARBON ENERGY LTD	CNX	**Energy 46 companies**
51	ABILENE OIL AND GAS	ABL	
52	ACACIA COAL	AJC	
53	ADX ENERGY LTD	ADX	
54	AWE LTD.	AWE	
55	BEACH ENERGY LIMITED	BUY	
56	BLUE ENERGY LIMITED	BUL	
57	BOUNTY OIL & GAS	BUY	
58	CARNARVON PETROLEUM	CVN	
59	COOPER ENERGY LTD	COE	
60	CRE8TEK	CR8	
61	CUE ENERGY RESOURCES	CUE	
62	EMPIRE ENERGY	EMR	
63	EMPIRE OIL & GAS NL	EGO	

64	FITZROY RIVER	FZR	
65	GALILEE ENERGY	GLL	
66	GLOBAL PETROLEUM LTD	GBP	
67	GREENVALE ENERGY	GRV	
68	HORIZON OIL LTD	HZN	
69	INDUS ENERGY NL	IND	
70	KAIRIKI ENERGY LTD	KIK	
71	LAKES OIL NL	LKO	
72	LION ENERGY LTD	LIO	
73	LONESTAR RESOURCES	LNR	
74	LONGREACH OIL	LOG	
75	MEO AUSTRALIA LTD	MEO	
76	MOLOPO ENERGY	MPO	
77	MORETON RESOURCES	MRV	
78	MUSTANG RESOURCES	MUS	
79	NEON CAPITAL	NEN	
80	NORWEST ENERGY	NEW	
81	NUENERGY GAS	NGY	
82	OIL BASINS LTD	OBL	
83	ORCA ENE	OGY	
84	ORIGIN ENERGY LTD	ORG	
85	PAN PACIFIC - PETROLEUM NL	PPP	
86	PANCONTINENTAL OIL	PCL	
87	PENINSULA ENERGY	PEN	
88	PETSEC ENERGY LTD	PSA	
89	RANGE RESOURCES	RRS	
90	SAMSON OIL & GAS LTD	SSN	
91	SENEX ENERGY	SXY	
92	SOUTH PACIFIC RES	SPB	
93	SUN RESOURCES NL	SUR	
94	SYNGAS LTD.	SYS	
95	WASHINGTON H	SOL	
96	ANALYTICA LIMITED	ALT	**Health Care Equipment and Services 15 companies**
97	ANSELL LTD	ANN	
98	AVITA MEDICAL	AVH	
99	COCHLEAR LIMITED	COH	
100	ELLEX MEDICAL LASERS	ELX	
101	OPTISCAN IMAGING LTD	OIL	
102	PARAGON CARE LIMITED	PGO	

103	PRIMARY HEALTH CARE	PRY	
104	RAMSAY HEALTH CARE	RHC	
105	RESPIRI	RSH	
106	SDI LIMITED	SDI	
107	SIRTEX MEDICAL LTD	SRX	
108	SONIC HEALTHCARE LTD	SHL	
109	SUDA LTD	SUD	
110	TEMPO AUSTRALIA	TPP	
111	BHP BILLITON LTD	BHP	**Material 07 companies**
112	ABM RESOURCES NL	ABU	
113	ACACIA COAL	AJC	
114	ADELAIDE BRIGHTON	ABC	
115	ADELAIDE RES	AND	
116	ADMIRALTY RESOURCES	ADY	
117	ALKANE RESOURCES	ALK	
118	ALLIANCE RESOURCES	AGS	
119	ALTURA MINING	AMC	
120	ANGLO AUSTRALIAN RESOURCES NL	AGG	
121	ARGONAUT RESOURCES	AGY	
122	AUSTPAC RESOURCES NL	ARH	
123	AUSTRAL GOLD LTD	AGD	
124	AUSTRALIAN MINES LTD	AUZ	
125	BARRA RESOURCES LTD	BAR	
126	BRICKWORKS LIMITED	BKW	
127	CARBON ENERGY LTD	CNB	
128	CHONGHERR	CDH	
129	CI RESOURCES LTD	CII	
130	CIMIC GROUP LTD	CIM	
131	CITIGOLD CORP LTD	CTO	
132	COAL OF AFRICA	CZA	
133	CSR LIMITED	CSR	
134	CULLEN RESOURCES LTD	CUL	
135	DECIMAL SOFTWARE LTD	DSX	
136	EAST AFRICA RES	EAF	
137	EQUUS MINING LTD	EQE	
138	EVZ LIMITED	EV	
139	EXCALIBUR MINING	EXM	
140	FALCON MINERALS LTD	FCN	
141	FLINDERS MINES	FMS	

142	FOCUS MINERALS LTD	FML	
143	FOYSON RESOURCES LTD	FOY	
144	GALILEE ENERGY	GLL	
145	GALILEO MINING LTD	GAL	
146	GATEWAY MINING	GBG	
147	GIPPSLAND LIMITED	GIP	
148	GOLDEN CROSS RES LTD	GCR	
149	GOLDEN RIM RES	GMR	
150	GOLDSEARCH LIMITED	GSE	
151	GRANGE RESOURCES LTD	GRR	
152	GWA GROUP	GWA	
153	HAMPTON HILL MNG	HHM	
154	HAVILAH RESOURCES	HAV	
155	HELIX RESOURCES LTD	HLX	
156	HIGHLANDS PACIFIC	HIG	
157	HILLS	HIL	
158	ILUKA RESOURCES LTD	ILU	
159	IMX RESOURCES	IXR	
160	INTERMIN RES LTD	IRC	
161	INTREPID MINES LTD	IAU	
162	JERVOIS MINING LTD	JRV	
163	KINGSGATE CONSOLIDATED LIMITED	KCN	
164	LEGEND MINING LTD	LEG	
165	LEYSHON RESOURCES	LRL	
166	LINDIAN RESOURCES	LIN	
167	LYNAS CORP LTD	LYC	
168	MACMAHON HLDGS LTD	MAH	
169	MAGNUM MINING	MGU	
170	MERLIN DIAMONDS	MED	
171	MILLENNIUM MINERALS	MOY	
172	MINERAL COMMODITIES	MRC	
173	MINERAL DEP LTD	MDL	
174	MOD RESOURCES LTD	MOD	
175	MORETON RESOURCES	MRV	
176	MULTISTACK INT'L LTD	MSI	
177	NEWCREST MINING LTD	NCM	
178	NYOTA MINERALS	NYO	
179	OZ MINERALS LTD	OZL	
180	PADBURY MINING	PDY	

181	POSEIDON NIC	POS	
182	RAND MINING LTD	RND	
183	RED 5 LTD	RED	
184	RESOURCE MINING CORP	RMI	
185	RIMFIRE PACIFIC MNG	RIM	
186	RIO TINTO LIMITED	RIO	
187	RNI NL	RNI	
188	SABRE RESOURCES LTD	SBR	
189	SARACEN MINERAL	SAR	
190	SHAREROOT LTD	SRO	
191	SIPA RESOURCES LTD	SRI	
192	SRG LTD	SRG	
193	ST BARBARA LTD	SBM	
194	STRANDLINE RESOURCES	SHK	
195	STRATEGIC ENERGY RES	SER	
196	STRATEGIC MINERALS	SMC	
197	STRIKE RESOURCES LTD	SRK	
198	SUMMIT RESOURCES	SMM	
199	SUNDANCE RESOURCES	SDL	
200	TAG PACIFIC LTD	TAG	
201	TANAMI GOLD NL	TAM	
202	TASMANIA MINES LTD	TMM	
203	TAWANA RESOURCES NL	TAW	
204	THUNDELARRA LTD	THX	
205	TIGER RESOURCES LTD	TGS	
206	TNG LIMITED	TNG	
207	TORIAN RESOURCES LTD	TNR	
208	TRIBUNE RES	TBR	
209	TROY RESOUR	TRY	
210	UGL LIMITED	UGL	
211	VARISCAN MINES	VAR	
212	WASHINGTON H SOUL	SOL	
213	WATPAC LIMITED	WTP	
214	WAVENET INT'L LTD	WAL	
215	WCP RESOURCES LTD	WCP	
216	WESTERN AREAS LTD	WSA	
217	ZIMPLATS HLDNGS LTD	ZIM	
218	ASPEN GROUP	APZ	**Real Estate 19 companies**
219	AUSTRALIA CHINA HLDG	AAK	

220	AVEO GROUP	AOG	
221	AXIOM PROPERTIES	AXI	
222	BWP TRUST	BWP	
223	CARINDALE PROP TRUST	CDP	
224	CEDAR WOODS PROPS	CWP	
225	CHARTER HALL	CQR	
226	CROMWELL GROUP	CMW	
227	DESANE GROUP HLDGS	DGH	
228	DEVINE LIMITED	DVN	
229	FINBAR GROUP LTD	FRI	
230	FOLKESTONE LIMITED	FLK	
231	LEND LEASE GROUP	LLC	
232	LIFESTYLE COMM	LIC	
233	MIRVAC GROUP	MGR	
234	PAYCE	PAY	
235	SERVCORP LIMITED	SRV	
236	STOCKLAND CORP -	SGP	
237	ADACEL TECHNOLOGIES	ADA	**Software and Services 28 companies**
238	ADSLOT LTD	ADJ	
239	ALTIUM LTD -	ALU	
240	ASG GROUP	ASZ	
241	COMOPS LIMITED	COM	
242	COMPUTERSHARE LTD	CPU	
243	CORUM GROUP LTD	COO	
244	CPT GLOBAL LTD	CGO	
245	DATA#3 LIMITED	DTL	
246	DECIMAL SOFTWARE LTD	DSX	
247	ESERVGLOBAL LT	ESV	
248	HANSEN TECHNOLOGI	HSN	
249	INFOMEDIA LTD	IFM	
250	INTEGRATED	IRI	
251	IRESS LTD	IRE	
252	JCURVE SOLUTIONS	JCS	
253	MELBOURNE IT L	MLB	
254	MGM WIRELESS LTD	MWR	
255	MOBILE EMBRACE	MBE	
256	NEARMAP LTD	NEA	
257	OBJECTIVE CORP	OCL	
258	PROPHECY INT'	PRO	

259	RECKON LIMITED	RKN	
260	SMARTTRANS	SMA	
261	SMS MANAGEMENT	SMX	
262	STREAM GROUP LTD	SGO	
263	TECHNOLOGY ONE LTD	TNE	
264	UXC LIMITED	UXC	

Appendix -3 Comparison of Key IFRS and AASB Standards			
Accounting standard	Content of both IFRS and AASB	IFRS	AASB
		IFRS 3	AASB 3
Business combination	The objective of both IFRS 3 and AASB 3 Business combination are as below: Cost of acquisition is the fair value of consideration. Cost to the identifiable assets acquired and liabilities assumed based on their fair value. Goodwill/bargain purchase (profit) is recognized based on the difference between fair value of net assets acquired and the value of consideration.	IFRS 3 business combination require that the acquirer must measure the cost of acquisition at fair value of consideration transferred and allocate the cost to the identifiable assets acquired and liabilities assumed based on their fair value and any excess consideration over the fair value to be recognized as goodwill. If the fair value of net assets acquired is more than consideration a bargain purchase (profit) is recognized immediately (IFRS 2017a).	AASB-3 Business combination it also gives a similar objective for the standard. it clearly specifies that purchase method is to be followed in all business combinations. In para 37 specifies that The consideration transferred in a business combination shall be measured at fair value of the assets transferred and liability assumed by the acquirer. It must also measure the goodwill and bargain purchase based on the fair value of identifiable assets, liabilities and contingent liabilities at the acquisition date(AASB 2015a).
Non-current Assets Held for Sale and	Non-current asset or asset held for disposal are to be	IFRS 5 "A non-current asset or disposal group to be	In its objective AASB 5 specifies that "a) assets that meet the criteria to

Discontinued Operations	classifies as held for sale and presented separately in financial report. Such assets are to be measured at the lower of the carrying amount and fair value less costs to sell. No depreciation on such class of assets.	classified as held for sale if its carrying amount will be recovered principally through a sale transaction instead of through continuing use; assets held for sale to be measured at the lower of the carrying amount and fair value less costs to sell; depreciation of an asset to cease when it is held for sale; separate presentation in the statement of financial position of an asset classified as held for sale and of the assets and liabilities included within a disposal group classified as held for sale; and separate presentation in the statement of comprehensive income of the results of discontinued operations"(IFRS 2017b)	be classified as held for sale to be measured at the lower of carrying amount and fair value less costs to sell, and depreciation on such assets to cease. b) Assets that meet the criteria to be classified as held for sale to be presented separately in the statement of financial position and the results of discontinued operations to be presented separately in the statement of comprehensive income"(AASB 2015e, P11)
Financial Instruments: Disclosures	IFRS 7 and AASB 7 Financial Instruments: Disclosures, requires entities to provide disclosures in their financial statements that enable users to evaluate the significance financial instruments on	IFRS 7 "Financial Instruments: Disclosures, requires entities to provide disclosures in their financial statements that enable users to evaluate: the significance of financial instruments for the entity's financial position and performance. The	AASB 7 Financial Instruments: disclosures. "The objective of this Standard is to require entities to provide disclosures in their financial statements that enable users to evaluate: (a) the significance of financial instruments for the entity's financial position and

	financial position and performance and the extent of risk arising from the financial instrument and how the entity manage the risk.	nature and extent of risks arising from financial instruments to which the entity is exposed during the period and at the end of the reporting period, and how the entity manages those risks"(IFRS 2017c)	performance; and (b) the nature and extent of risks arising from financial instruments to which the entity is exposed during the period and at the end of the reporting period, and how the entity manages those risks" (AASB 2015d, P6).
Consolidated Financial Statements	The standard for consolidated financial statements under IFRS 10 and AASB 10 explains that the standard is to establish principles for the preparation and presentation of consolidated financial statement when an entity controls one or more other entities. Both defines principle of control and establishes control is the basis of consolidated financial statement and sets outs the exemptions for consolidation.	IFRS 10 defines, "consolidated financial statements are financial statements that present the assets, liabilities, equity, income, expenses and cash flows of a parent and its subsidiaries as those of a single economic. Requires an entity (the parent) that controls one or more other entities (subsidiaries) to present consolidated financial statements; defines the principle of control, and establishes control as the basis for consolidation; sets out how to apply the principle of control to identify whether an investor controls an investee and therefore must consolidate the investee; sets out the accounting requirements for the preparation of consolidated financial	AASB 10, Consolidated Financial Statements specifies that: "1) The objective of this Standard is to establish principles for the presentation and preparation of consolidated financial statements when an entity controls one or more other entities. 2) To meet the objective in paragraph 1, this Standard: (a) requires an entity (the parent) that controls one or more other entities (subsidiaries) to present consolidated financial statements; (b) defines the principle of control, and establishes control as the basis for consolidation; (c) sets out how to apply the principle of control to identify whether an investor controls an investee and therefore must consolidate the investee; (d) sets out the accounting requirements for the

		statements; and defines an investment entity and sets out an exception to consolidating particular subsidiaries of an investment entity" (IFRS 2017d).	preparation of consolidated financial statements; and (e) defines an investment entity and sets out an exception to consolidating particular subsidiaries of an investment entity. 3 This Standard does not deal with the accounting requirements for business combinations and their effect on consolidation, including goodwill arising on a business combination (see AASB 3 Business Combinations)."(AASB 2011, P8)
Fair value Measurement	Both the standards IFRS 13 and AASB 13 defines fair value, set out a standard frame work to measure fair value and require disclose of fair value measurement. Both the standards explain that fair value is a market based measurement and follows Fair value hierarchy in estimating fair value.	IFRS 13 Fair value Measurement "defines fair value, sets out a framework for measuring fair value, and requires disclosures about fair value measurements. It applies when another Standard requires or permits fair value measurements or disclosures about fair value measurements (and measurements based on fair value, such as fair value less costs to sell), except in specified circumstances in which other Standards govern. For example,	AASB 13 Fair Value Measurement This Standard: (a) defines fair value; (b) sets out in a single Standard a framework for measuring fair value; and (c) requires disclosures about fair value measurements. 2 Fair value is a market-based measurement, not an entity-specific measurement. For some assets and liabilities, observable market transactions or market information might be available. For other assets and liabilities, observable market transactions and market information might not be available. However,

		IFRS 13 does not specify the measurement and disclosure requirements for share-based payment transactions, leases or impairment of assets. Nor does it establish disclosure requirements for fair values related to employee benefits and retirement plans. IFRS 13 defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date (an exit price). When measuring fair value, an entity uses the assumptions that market participants would use when pricing the asset or the liability under current market conditions, including assumptions about risk. As a result, an entity's intention to hold an asset or to settle or otherwise fulfil a liability is not relevant when measuring fair value"(IFRS 2017e).	the objective of a fair value measurement in both cases is the same—to estimate the price at which an orderly transaction to sell the asset or to transfer the liability would take place between market participants at the measurement date under current market conditions (i.e. an exit price at the measurement date from the perspective of a market participant that holds the asset or owes the liability). 3 When a price for an identical asset or liability is not observable, an entity measures fair value using another valuation technique that maximises the use of relevant observable inputs and minimises the use of unobservable inputs. Because fair value is a market-based measurement, it is measured using the assumptions that market participants would use when pricing the asset or liability, including assumptions about risk. As a result, an entity's intention to hold an asset or to settle or otherwise fulfil a liability is not relevant when measuring fair value. 4 The definition of fair value focuses on

			assets and liabilities because they are a primary subject of accounting measurement. In addition, this Standard shall be applied to an entity's own equity instruments measured at fair value(AASB 2015b, P6).
Lease	Both IFRS and AASB require a faithful representation of lease transaction by providing information on the amount, timing and uncertainty of cash flows from lease assets. The standard also require the recognition of lease assets and liability for all with term more than 12 months.	IFRS 16 is effective for annual reporting periods beginning on or after 1 January 2019, with earlier application permitted (as long as IFRS 15 is also applied). The objective of IFRS 16 is to report information that (a) faithfully represents lease transactions and (b) provides a basis for users of financial statements to assess the amount, timing and uncertainty of cash flows arising from leases. To meet that objective, a lessee should recognise assets and liabilities arising from a lease. IFRS 16 introduces a single lessee accounting model and requires a lessee to recognise assets and liabilities for all leases with a term of more than 12 months, unless the underlying asset is of low value. A lessee is required to	AASB 16 "sets out the principles for the recognition, measurement, presentation and disclosure of leases. The objective is to ensure that lessees and lessors provide relevant information in a manner that faithfully represents those transactions. This information gives a basis for users of financial statements to assess the effect that leases have on the financial position, financial performance and cash flows of an entity. 2 An entity shall consider the terms and conditions of contracts and all relevant facts and circumstances when applying this Standard. An entity shall apply this Standard consistently to contracts with similar characteristics and in similar circumstances" (AASB 2016, P8).

		recognise a right-of-use asset representing its right to use the underlying leased asset and a lease liability representing its obligation to make lease payments(IFRS 2017f).	
Source: IFRS and AASB website			