

**THE PRACTICE OF CORPORATE GOVERNANCE AND
REAL EARNINGS MANAGEMENT ON
FINANCIAL STATEMENT FRAUD IN MALAYSIA**

Submitted by

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A thesis submitted in total fulfilment
of the requirements for the degree of
Doctor of Philosophy

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July 2013

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List of Abbreviations

Abbreviation	Meaning
ΔS_{ti}	Sales in year t less sales in year t_{-1} for firm i
AAER	Accounting and Auditing Enforcement Releases
AEXPERT	The percentage of audit committee with accounting or financial expertise
AFEE	Natural log of audit fees
AICPA	Auditing Standards Board of the American Institute of Certified Public Accountants
AINDEP	The percentage of independent directors on the audit committee
AINT	1 for outsourcing internal audit function, otherwise 0
AMEET	The number of audit committee's meetings yearly
A_{ti}	Total asset in year t for firm i
BIG4	1 for firms that appoint BIG 4 audit firms, otherwise 0
CCM	Companies Commission of Malaysia
CEO	Chief Executive Officer
CFO	Cash flow from operations
DEXPERT	The percentage of directors with accounting or financial expertise
DINDEP	The percentage of independent directors on the board
DINSIDE	The percentage of directors who serve on the management
DMEET	The number of board's meetings
DREMUN	Natural log of directors' remuneration
DUALITY	1 for Chairman who also serves as CEO, otherwise 0
ε	Error terms
EBIT	Earnings before interest and tax
FRS	Financial Reporting Standards
FSF	Financial Statement Fraud
GAAP	Generally Accepted Accounting Principles
GDP	Gross Domestic Product
IAS	International Accounting Standards
IASB	International Accounting Standard Board
IFRS	International Financial Reporting Standards
ISA	International Standard on Auditing

LEV	Total debts to total assets
LIFO	Last in, first out
MASB	Malaysian Accounting Standard Board
MCCG	Malaysian Code of Corporate Governance
MIA	Malaysian Institute of Accountants
MICG	Malaysian Institute of Corporate Governance
N	Total sample
NASDAQ	National Association of Securities Dealers Automated Quotations
NYSE	New York Stock Exchange
PERS	Private Entities Reporting Standards
PROD	Production costs
RM	<i>Ringgit Malaysia</i>
RMP	Royal Malaysia Police
RPT	Related party transaction to total assets
SAS	Statement of Auditing Standards
SCM	Securities Commission of Malaysia
SEC	Securities and Exchange Commission
SIC	Standard Industrial Classification
SIZE	Natural log of total sales
SOX	Sarbanes-Oxley Act
S_{it}	Total sales in year t for firm i
t_{+1}	One year after the financial statement fraud event
t_0	The year of financial statement fraud event
t_{-1}	One year prior to the financial statement fraud event
t_{-2}	Two years prior to the financial statement fraud event
t_{-3}	Three years prior to the financial statement fraud event
t_{-4}	Four years prior to the financial statement fraud event
UK	United Kingdom
US	United States

Abstract

This thesis examines the relationship between corporate governance structures and financial statement fraud in Malaysia. It also investigates the real earnings management activities of financial statement fraud firms prior to the fraud year. A total of 1604 firm-years are incorporated from the sample that comprises of 76 financial statement fraud and 76 non-fraud firms over a period of 8 years from 2001 to 2008. First, univariate and logistic regression model are employed in order to test hypotheses between the financial statement fraud firms and corporate governance structures. Second, the univariate mean tests are conducted on the sample firms to investigate the changes and improvement in corporate governance structures. Finally, this thesis examines the earnings quality on sample firms using the abnormal cash flow from operations (CFO) and abnormal production costs as the proxies for real earnings management. The results from the analyses indicate significant lower risk of financial statement fraud when firms have lower percentage of inside directors, higher directors' remuneration, higher percentage of audit committee members with accounting and financial expertise, higher number of audit committee meetings, appoint Big 4 audit firms for external audit, lower external audit fees and permanent internal audit function. Compared to the non-fraud firms, it is found that fraud firms significantly increase the percentage of independent directors on the board, increase the number of the board and audit committee meetings and reduce duality following the financial statement fraud year. This study fails to confirm that financial statement fraud firms engage in manipulating CFO prior to the fraud event. However, it is found that financial statement fraud firms engage in manipulating production costs during one year before the fraud event and two years before the fraud event. Additional tests show that financial statement fraud firms prefer to manipulate earnings using accruals relative to real earnings prior to the fraud year.

Statement of Authorship

“Except where reference is made in the text of the thesis, this thesis contains no material published elsewhere or extracted in whole or in part from a thesis submitted for the award of any other degree or diploma.

No other person’s work has been used without due acknowledgement in the main text of the thesis.

This thesis has not been submitted for the award of any degree or diploma in any other tertiary institution.”

Noorul Azwin binti Md Nasir



12 July 2013 ✓

Acknowledgement

In the name of Allah, the Most Gracious, the Most Merciful. Alhamdulillah for the completion of this thesis.

There are a number of people whose support has been invaluable in the completion of this thesis. I would like to express my deepest gratitude to my principal supervisor, Associate Professor Dr Muhammad Jahangir Ali. I feel privileged to have had the opportunity to work with him. He has been extremely patient and generous in giving me unlimited assistance in facing the challenges as a PhD candidate. He has continuously provided the right direction and guidance during my study in La Trobe University. I would like to thank my co-supervisor, Professor Kamran Ahmed for all comments and encouragement given to me. Thanks are also due to the participants of conferences organized by the La Trobe University's Department of Accounting, Accounting and Finance Association of Australia and New Zealand (AFAANZ) and Finance and Corporate Governance Conference (FCGC) for constructive feedbacks which greatly helped me in improving the quality of my thesis. I also like to pay my tribute to Mr Phil Thomas for his careful editing.

I dedicate my gracious thanks to a few other people whose support has been most important to me during the course of my study. Especially to my parents, *Ayah* and *Ibu*, their continuous prayers and love are the reasons I stand strong. The voices and love from all family members have also motivated me during

the hard times. I reserve my heartfelt thanks to my husband, Yus Hilal Azmi, who has sacrificed so much to be with me in Melbourne. To my wonderful daughter, Laiqa Az Zahra, you brought out the strength that I never knew I had.

I would also like to thank my sponsors, namely, the University Malaysia Kelantan and Ministry of Higher Education, Malaysia. This study will be impossible without their financial support.

Lastly, I would like to thank all my colleagues and friends for their support, friendship, and understanding. Because of them, the journey of completing this thesis has been so colourful and memorable.

Chapter 1

Introduction

1.1 Statement of the Problem

The rising number of cases involving financial statement fraud have received considerable attention following the collapse of a number of firms in Malaysia (Malaysian Institute of Accountants, 2012). In 2009, KPMG Malaysia estimated that financial statement fraud valued RM63.5 million each year. Financial statement fraud is a type of fraudulent financial reporting. This study incorporates firms that are convicted with fraudulent financial reporting as a primary measure of financial statement fraud. The main violations include delays in disclosing information, failure in disclosing information and fabrication of accounting details. Examples of high profile firms that are recently convicted for financial statement fraud in Malaysia are Gula Perak, MEMS Technology, Puncak Niaga, Golden Land and Actacorp. In addition to the direct impact on the financial statement fraud firms, Perols and Lougee (2011) state that financial statement fraud affects employees, creditors and investors. The incidence of financial statement fraud also weakens the reliability of corporate financial statements and confidence in financial markets. The severity of financial statement fraud in manipulating accounting information has influenced the ability of financial statement users in decision making processes. These concerns have generated social attention and economic concern in the country.

Prior research argues that the reasons for financial statement fraud are due to weak corporate governance structures and earnings management practices (García Lara, Osma, & Neophytou, 2009). Weak corporate governance structures may be described as lower proportion of independent directors on the board (Beasley, 1996), lack of directors with financial expertise on the board (Agrawal & Chadha, 2005), firms with the board members who are highly dominated by the management (Dechow, Sloan, & Sweeney, 1996) and infrequent number of board meetings (Xie, Davidson, & DaDalt, 2003). Furthermore, it is argued that directors' remuneration is positively related to a firm's financial reporting quality (Brown & Caylor, 2004). The audit committee also plays an important role in the corporate governance mechanisms to help detect financial statement fraud (Goodwin-Stewart & Kent, 2006). The lower proportions of independent audit committee on the board (Abbott, Parker, & Peters, 2002; Persons, 2005), lack of audit committee with accounting and financial expertise (Moyes & Hasan, 1996), few audit committee meetings (Owens-Jackson, Robinson, & Shelton, 2009) and higher amount of external audit fees (Srinidhi & Gul, 2006), signify weak corporate governance structures are in place. External auditors also play an important role in assisting corporate governance members to provide less risk of financial statement fraud. Lennox and Pittman (2010) find firms that appoint Big 5 external audit firms for external audit tasks are less likely to be involved in financial statement fraud. It is also argued that firms may increase the risks of financial statement fraud by outsourcing their internal audit services (Coram, Ferguson, & Moroney, 2008).

Extant literature on financial statement fraud has focused on developed countries such as the US, UK and Australia. While Malaysia is an emerging country, the Malaysian Code of Corporate Governance (MCCG) has been formulated following the context from the developed countries. It has been argued that imitating other countries' corporate governance practices from countries with different formation is inappropriate with Malaysia's unique framework (Ponnu & Karthigeyan, 2010). It may be insufficient for firms to implement the existing MCCG and can compromise the quality of financial reporting. With the increasing number of financial statement fraud cases in Malaysia, this study attempts to understand the underlying elements that lead to financial statement fraud through corporate governance structures.

Given the importance of corporate governance structures in enhancing financial reporting quality, it is essential to examine the efforts made by convicted firms on their corporate governance structures after financial statement fraud has occurred. Despite the fact that many financial statement fraud firms are still in operation, limited studies have been carried out to investigate the changes and improvements made in the financial statement fraud firms' corporate governance structures after the event of financial statement fraud. Farber (2005) states that little is known about the actions taken by the financial statement fraud firms to improve their corporate governance structures after committing financial statement fraud. Therefore, this study further investigates such changes in corporate governance structures made by the fraud firms subsequent to the financial statement fraud year.

Akers, Giacomino, and Bellovary (2007) argue that financial statement fraud has implications for earnings management. Previously, studies on earnings management have used accounting accruals as the proxy for earnings management. However, existing literature provides evidence that it is more favourable for firms to manipulate their real activities (Ball & Shivakumar, 2005; Graham, Harvey, & Rajgopal, 2005; Hashemi & Rabiee, 2011; Joosten, 2012). Zang (2011) and Pincus and Rajgopal (2002) also highlight that real earnings management activities occur prior to accruals earnings management. Real earnings management includes the alterations of activities through adjusting the timing and scale of underlying real business activities (Xu, Taylor, & Dugan, 2007). Examples of real earnings management include providing excessive sales discounts, offering too lenient credit terms and increasing production to manipulate the value of current earnings. Given these conditions, real earnings management is more difficult for outsiders to detect compared to accruals earnings management (Ball & Shivakumar, 2005; Graham et al., 2005; Schipper, 1989). Hence, this study examines the practice of real earnings management of fraud firms prior to the financial statement fraud year.

In Malaysia, the rapid growth of the capital market demands preparing of high quality corporate financial statements. So far, limited studies have examined the (i) structures of corporate governance and its relation to the occurrence of financial statement fraud, (ii) corrective actions made on the corporate governance structures after the financial statement fraud event, and (iii) real earnings management activities prior to the occurrence of financial statement

fraud. Therefore, this study examines corporate governance structures in the event of financial statement fraud and investigates real earnings management activities prior to the event of financial statement fraud. Given that financial statement fraud has the potential to occur due to the structures of corporate governance and real earnings management activities, it is important to examine the issues empirically. Overall, the evidence from this study will help to understand the corporate governance structures affecting financial statement fraud. Furthermore, this study may be used to identify the early warning signs for financial statement fraud by investigating real earnings management activities prior to the event of financial statement fraud.

1.2 Research Objectives and Research Questions

The principal purpose of this study is to examine the impact of corporate governance structures and real earnings management on financial statement fraud in Malaysia. This study also attempts to inspect whether corporate governance practices in firms improve after the detection of financial statement fraud. This study also aims to investigate the real earnings management activities in financial statements fraud firms prior to the fraud year. To achieve these objectives, three research questions underpin this study:

1. To what extent are corporate governance structures associated with financial statement fraud in Malaysia?
2. Have Malaysian financial statement fraud firms implemented better corporate governance structures after the financial statement fraud year?

3. Have Malaysian financial statement fraud firms engaged in real earnings management activities prior to the financial statement fraud year?

1.3 Motivation and Justification of the Study

This study is motivated by a number of reasons. This study is stimulated by the concerns for increased reports in financial statement fraud. Almost 30 per cent of enforcement actions taken by the Securities Commissions of Malaysia (SCM) are due to financial statement fraud activities. Through a survey report conducted in 2009, the KPMG Malaysia estimated that financial statement fraud were valued at RM63.5 million per year. Nevertheless, KPMG Malaysia indicates that the actual value of financial statement fraud is higher due to unreported fraud cases. It is likely that financial statement users have made numerous incorrect decisions due to false corporate financial statement reports. Financial statement fraud also leads to other issues such as weaken the reliability of corporate financial statements and confidence in the financial markets. It is therefore important to minimise the occurrence of financial statement fraud by managing the relevant factors, such as structure of corporate governance and real earnings management. Through the findings of this study, it is hoped that policy makers and regulators will consider improving the quality of corporate governance and reinforce enacted accounting rules and standards in improving financial reporting quality.

The justification for choosing firms in Malaysia as the context for this study is related to several reasons. Malaysia is one of the prominent growing

economies in the world. Malaysia's GDP has risen about 6 per cent per year, which is higher than the US, UK and Europe (Department of Statistics Malaysia, 2013). Malaysia's total trade has also increased from RM685 billion in 2000 to RM1,168 billion in 2010. Moreover, Malaysia's capital market has also grown rapidly in the last decade, for instance, the market capitalization per GDP has increased to RM938 billion in 2012 compared to RM350 billion in 2000. As an emerging country, the government has shown awareness by appointing a number of agencies to address the subject related to financial reporting quality such as the Companies Commission of Malaysia (CCM), Securities Commission of Malaysia (SCM), Bursa Malaysia and Malaysian Institute of Accountants (MIA). These agencies are formed to ensure that financial reporting in Malaysian firms reflect acceptable global standards in order to retain and attract potential investors.

Much of the literature on this study revolves around the awareness that stronger corporate governance is associated with better financial reporting quality. Knowing the importance of effective corporate governance structure in minimizing financial statement fraud as well as earnings management, this study explores the corrective actions taken by the firms after the financial statement fraud year. The study of post corporate governance structures in financial statement fraud firms is essential because previous studies provide evidence for the link between corporate governance structures and the occurrence of financial statement fraud and earnings management. Toon (2003) states that in the year 2000, Malaysia is the first country to establish a comprehensive code for corporate governance. Despite the entities set up to

improve financial reporting quality in Malaysia, little is known about the actions taken by financial statement fraud firms to improve their corporate governance structures. Thus, any corrective actions performed by the firm is a sign that the firm takes corporate governance matters seriously. The corrective actions also indicate that the awareness and proactive steps taken by the government in outlining the best practices of corporate governance is a much welcomed move.

This study further examines the prevalence of real earnings management activities in the period leading up to the financial statement fraud event. The motivation for conducting the analysis is to investigate whether the financial statement fraud firm can be characterised by real earnings management patterns. According to Perols and Lougee (2011), real earnings management precedes incidents of financial statement fraud. Previous studies on earnings management focused on accruals¹ and it is only recently that real earnings management activities became a new field of study. A recent study by Enomoto, Kimura, and Yamaguchi (2012) on earnings management activities across 38 countries provides evidence that real earnings management activities are preferred over accruals earnings management in countries with stronger investor protection, including Malaysia. Hence, this study explores the real earnings management activities by financial statement fraud firms prior to the financial statement fraud year.

¹See the following studies: Beneish (1999), Callen, Robb, and Segal (2008), Guidry, Leone, and Rock (1999), Jones, Krishnan, and Melendrez (2008), Kasznik (1999), McNichols and Wilson (1988), and Rosner (2003).

As most prior studies have separately concentrated on the role of corporate governance or earnings management on financial statement fraud, this study combines corporate governance and earnings management which arguably have a profound effect on the quality of financial reporting. Therefore, it is hoped that the investigations of corporate governance structures and real earnings management into the extent of financial statement fraud firms in Malaysia is valuable to key financial statement users.

1.4 Research Methodology

In order to accomplish the objectives and answer the research questions of this study, two sources of samples are incorporated from the Securities Commission Malaysia (SCM) and the Bursa Malaysia². The total sample comprises of 76 financial statement fraud and 76 non-fraud firms over a period of 8 years from 2001 to 2008. In total, the study uses 1604 firm-year of annual reports collected from the Bursa Malaysia. A number of statistical techniques are applied to address the research questions. For the first research question, logit regression model is employed in order to test hypotheses between the financial statement fraud firms and corporate governance structures. In the second research question, the univariate mean tests are conducted on the financial statement fraud and non-fraud firms to investigate the changes and improvements in corporate governance structures. For the third research question, this study examines the level of earnings quality on the sample firms.

²The stock exchange. It was formerly known as the Kuala Lumpur Stock Exchange.

The abnormal cash flow from operation and abnormal production costs are used as the proxy for real earnings management.

1.5 Contributions of the Study

This study demonstrates the influence of corporate governance structures and real earnings management activities on financial statement fraud in an environment which differs from prior studies. Therefore, this study contributes to the literature and practice in several ways.

First, this study fills the gaps in the literature on this topic. Much of the evidence on financial statement fraud pertains to developed countries where the capital markets are mature and the levels of awareness and demand for quality financial reports are high. Evidence from emerging economies, however, remains scant even though the growth in the capital markets has been unprecedented in the last decade. Secondly, it is anticipated that by undertaking this research, the changes and improvement in corporate governance practices after the financial statement fraud year can be shared by financial statement users. To the best of the researcher's knowledge, no study has examined both pre and post corporate governance practices concerning financial statement fraud, simultaneously. As financial statement fraud is becoming an important issue, prevention and controlling mechanisms need to be continuously enhanced. This study will demonstrate how firms value policies of corporate governance developed by the SCM.

Thirdly, this study improves the analysts' and investors' ability to detect early warning signs of financial statement fraud. This is a significant contribution since no research on the involvement of Malaysia's financial statement fraud firms in real earnings management activities prior to financial statement fraud event has ever been conducted. This study strengthens the understanding of real earnings management activities and its implications for financial statement fraud. This study is beneficial as it recognises potential financial statement fraud threat through the level of real earnings management.

Finally, this study benefits through a number of practical implications. The outcomes of this study may be used to assist regulators, especially the SCM and Bursa Malaysia, to improve the corporate governance structures and protect firms from financial statement fraud. Investors may also benefit from this study through a better investment decision made from a reliable corporate financial statement. As this study determines the characteristics of corporate governance structures that may lead to financial statement fraud, firms will be able to create awareness in the process of appointing directors on the board by hiring directors who are competent. According to Osma (2008), better monitoring roles may also be delivered with strong corporate governance structures in order to minimise the occurrence of real earnings management.

1.6 Organization of the Study

This study examines the practices of corporate governance and real earnings management on financial statement fraud in Malaysia. The remaining chapters are organised as follows.

Chapter 2 discusses the environment of the corporate governance, real earnings management and financial statement fraud in Malaysia. It emphasises the financial reporting framework including agencies and regulators that are authorised for corporate governance, earnings management and financial statement fraud issues in Malaysia.

Chapter 3 reviews empirical studies conducted on corporate governance, earnings management and financial statement fraud around the world. This chapter also describes the findings in the extant literature, as well as the methodology employed by prior studies.

Chapter 4 describes the conceptual framework of the study and then develops directions of hypotheses. This chapter also highlights that the agency theory and the positive accounting theory are suitable for establishing the theoretical basis of this study.

Chapter 5 justifies the research designs and methods used in this study. It details the sample selection procedures that include the selection of control

samples (the non-fraud firms). The definitions and measurements of dependent, independent and control variables are also illustrated.

Chapter 6 presents the empirical results of this study. The explanation of the findings is discussed in detail. The descriptive results of each variable are discussed, followed by the results of statistical analysis performed in this study. Further results for robustness tests and sensitivity analysis are also discussed in this chapter.

Chapter 7 concludes the study by summarising the whole thesis. This chapter also outlines the contributions of this study to the body of knowledge. Furthermore, implications for policies and practices that may be the interest of the regulators, policy makers, academic researchers and practitioners are discussed. Finally, the limitations of study are acknowledged and suggestions for future research are provided in this chapter.

Chapter 2

The Environment of Financial Statement Fraud, Corporate Governance and Real Earnings Management in Malaysia

2.1 Introduction

The purpose of this study is to examine the practice of corporate governance and real earnings management in relation to financial statement fraud in Malaysia. This chapter explains the local context of financial statement fraud, corporate governance and earnings management practices in Malaysia. This chapter is structured as follows: Section 2.2 is a brief overview of the country, Malaysia. Section 2.3 explains the importance of corporate financial statement. Section 2.4 highlights the current financial reporting environment, including the regulatory bodies and agencies responsible for overseeing corporate governance, earnings management and financial statement fraud in Malaysia. Sections 2.5, 2.6 and 2.7 explain the overviews of financial statement fraud, corporate governance and earnings management in Malaysia, respectively. Section 2.8 concludes the chapter.

2.2 Malaysia: A Brief Profile

Malaysia is located in South-East Asia and covers an area of about 329,750 square kilometres (*Constitution of Malaysia*, 1957; *The World Factbook* 2008, 2009). The country is separated by the South China Sea into two regions, Peninsular Malaysia and East Malaysia. Malaysia consists of 13

states and 3 federal territories, with Kuala Lumpur as the capital city and Putrajaya as the administrative centre. Malaysia shares borders with Thailand, Indonesia, Singapore, and Brunei. The Constitution of Malaysia in Article 3 (1) emphasises Islam as the federation's religion but still allows other religions to be practised. Furthermore, Article 152 (1) of the Constitution of Malaysia states that *Bahasa Malaysia* (Malay language) is the national language.

In 2010, the population of Malaysia grew to 28.3 million from 6.3 million in the year of independence, 1957 (*Statistics Yearbook Malaysia 2011, 2012*). Geographically, the population distribution in the country is uneven as 22 million citizens are concentrated in Peninsular Malaysia. The Malays and *Bumiputera*³ group constitute 67.4 per cent of the population, Chinese 24.6 per cent, Indian 7.3 per cent and 0.7 per cent are the unlisted ethnic groups (*Statistics Yearbook Malaysia 2011, 2012*). On average, the Malaysian population is growing at 2.9 per cent per annum. Table 2.1 shows the growth of Malaysia's population over the decades.

Formerly known as the Federation of Malaya, Malaysia attained its independence on August 31, 1957 after being ruled by the Portuguese (1511-1945) and British (1946-1957), respectively, for almost 450 years (*History of Malaysia, 2000*). Currently, it practices a federal constitutional elective monarchy where the Supreme Head of the Federation is the *Yang di-Pertuan Agong*, who is referred to as the King of Malaysia (Constitution of Malaysia, Article 32 (1)). The head of the government is the Prime Minister. Since

³ Translation in English is 'sons of the soil'.

Malaysia was part of the British empire the government system is closely modelled on the Westminster Parliamentary system. This democratic parliamentary system elects its government every five years through a general election process (*History of Malaysia*, 2000).

Table 2.1					
Malaysian Population from 1957 to 2010					
Year	Population (`000)	Growth (%)	Year	Population (`000)	Growth (%)
1957	6,279		1984	15,450	2.6
1958	6,505	3.6	1985	15,883	2.8
1959	6,703	3.0	1986	16,329	2.8
1960	6,919	3.2	1987	16,774	2.7
1961	7,147	3.3	1988	17,219	2.6
1962	7,384	3.3	1989	17,662	2.5
1963	8,920	20.8	1990	18,102	2.5
1964	9,168	2.8	1991	18,547	2.4
1965	9,437	2.9	1992	19,068	2.8
1966	9,733	3.1	1993	19,602	2.8
1967	10,007	2.8	1994	20,142	2.7
1968	10,253	2.5	1995	20,682	2.7
1969	10,500	2.4	1996	21,223	2.6
1970	10,882	3.6	1997	21,769	2.5
1971	11,160	2.5	1998	22,334	2.6
1972	11,441	2.5	1999	22,910	2.6
1973	11,720	2.4	2000	23,495	2.5
1974	12,001	2.4	2001	24,123	2.6
1975	12,300	2.5	2002	24,727	2.5
1976	12,588	2.3	2003	25,320	2.4
1977	12,901	2.5	2004	25,905	2.3
1978	13,200	2.3	2005	26,477	2.2
1979	13,518	2.4	2006	26,832	1.3
1980	13,879	2.6	2007	27,186	1.3
1981	14,257	2.7	2008	27,541	1.3
1982	14,651	2.7	2009	27,895	1.3
1983	15,048	2.7	2010	28,334	1.6
<i>Source: Department of Statistics Malaysia, 2013</i>					

The world economic recession in the late 1970s had an impact on the Malaysian standard of living in the mid-1980s (Mohamed, 2000). Subsequently, Malaysia enjoyed consistent GDP growth until the Asian financial crisis occurred in 1997-98 (Goldstein, 1998). The inflation rate,

however, has not changed radically and most of years experienced below GDP growth rate. Table 2.2 shows the Malaysian GDP at current market prices and inflation from 1980 to 2012.

Table 2.2							
GDP at Current Market Price and Inflation from 1980 to 2012							
Year	GDP at Current Market Price (RM'million)	Growth (%)	Inflation (%)	Year	GDP at Current Market Price (RM'million)	Growth (%)	Inflation (%)
1980	53,308		6.8	1997	281,795	11.06	2.7
1981	57,613	8.08	9.7	1998	283,243	0.51	5.3
1982	62,599	8.65	5.7	1999	300,764	6.19	2.8
1983	70,444	12.53	3.8	2000	356,401	18.50	1.6
1984	79,550	12.93	3.6	2001	352,576	-1.07	1.4
1985	77,470	-2.61	0.4	2002	383,213	8.69	1.8
1986	71,594	-7.58	0.6	2003	418,769	9.28	1.2
1987	81,085	13.26	0.8	2004	474,048	13.20	1.4
1988	92,370	13.92	2.5	2005	522,445	10.21	3.0
1989	105,233	13.93	2.8	2006	574,441	9.95	3.6
1990	119,081	13.16	3.1	2007	639,776	11.37	2.0
1991	135,124	13.47	4.4	2008	738,677	15.46	5.4
1992	150,682	11.51	4.7	2009	712,857	-3.5	0.7
1993	172,194	14.28	3.6	2010	795,037	11.5	1.9
1994	195,461	13.51	3.7	2011	881,080	10.8	3.0
1995	222,473	13.82	3.4	2012	937,532	6.4	1.3
1996	253,732	14.05	3.5				
Source: Department of Statistics Malaysia, 2013							

The Malaysian primary economy relied initially on tin and rubber before the government built up the agriculture and manufacturing industries. In the 1970s, timber and palm oil became the country's most important export products. Oil fields were discovered in Peninsular Malaysia's sea in 1971 and this led to the production of crude petroleum. Today, Malaysia's major exports are electrical and electronic goods, followed by palm oil, chemicals, liquefied natural gas, petroleum and machineries. Its principal imports are electrical and electronic products, followed by machinery, chemicals, transport equipment, petroleum and steel (Department of Statistics Malaysia, 2013). Table 2.3 shows Malaysian trade from 1980 to 2010.

Table 2.3 Malaysia's Trade from 1980 to 2010							
Year	Total Import (RM'million)	Import Growth (%)	Total Export (RM'million)	Export Growth (%)	Total Trade (RM'million)	Total Growth (%)	Balance in Trade (RM'million)
1980	23,451		28,172		51,623		4,721
1981	26,604	13.4	27,109	-3.8	53,713	4.1	506
1982	29,023	9.1	28,108	3.7	57,131	6.4	-915
1983	30,795	6.1	32,771	16.6	63,566	11.3	1,976
1984	32,926	6.9	38,647	17.9	71,573	12.6	5,721
1985	30,438	-7.6	38,017	-1.6	68,455	-4.4	7,579
1986	27,921	-8.3	35,721	-6.0	63,642	-7.0	7,800
1987	31,934	14.4	45,225	26.6	77,159	21.2	13,291
1988	43,293	35.6	55,260	22.2	98,553	27.7	11,967
1989	60,858	40.6	67,825	22.7	128,683	30.6	6,966
1990	79,119	30.0	79,646	17.4	158,765	23.4	528
1991	100,831	27.4	94,497	18.7	195,328	23.0	-6,335
1992	101,441	0.6	103,657	9.7	205,097	5.0	2,216
1993	117,405	15.7	121,238	17.0	238,642	16.4	3,833
1994	155,921	32.8	153,921	27.0	309,842	29.8	-2,000
1995	194,345	24.6	184,987	20.2	379,331	22.4	-9,358
1996	197,280	1.5	197,026	6.5	394,306	4.0	-254
1997	220,936	12.0	220,890	12.1	441,826	12.1	-45
1998	228,125	3.3	286,563	29.7	514,688	16.5	58,439
1999	248,477	8.9	321,560	12.2	570,036	10.8	73,083
2000	311,459	25.4	373,270	16.1	684,729	20.1	61,811
2001	280,229	-10.0	334,284	-10.4	614,513	-10.3	54,055
2002	303,091	8.2	357,430	6.9	660,521	7.5	54,340
2003	316,538	4.4	397,884	11.3	714,422	8.2	81,347
2004	399,632	26.3	481,253	21.0	880,885	23.3	81,621
2005	434,010	8.6	533,788	10.9	967,798	9.9	99,778
2006	480,493	10.7	588,949	10.3	1,069,442	10.5	108,456
2007	504,814	5.1	605,153	2.8	1,109,967	3.8	100,339
2008	521,611	3.3	663,494	9.6	1,185,105	6.8	141,883
2009	434,940	-16.6	553,295	-16.6	988,235	-16.6	118,355
2010	528,828	21.6	638,823	15.5	1,167,651	18.2	109,994
<i>Source: Department of Statistics Malaysia, 2013</i>							

In an effort to enhance and protect the country's national security, development and economic interests, Malaysia established diplomatic relations with other countries through formal bodies and unions. Currently, Malaysia is a member of the Association of Southeast Asian Nations, Organization of the Islamic Conference, Organization for Economic Corporations, United Nations, South-South Information Gateway and Non-Aligned Movement (*Ministry of Foreign Affairs*, 2010). As a former British

colony, Malaysia is also a member of the Commonwealth of Nations (Commonwealth Secretariat, 2010).

2.3 Financial Statement

A financial statement is used as a basis for corporate analysis because it is able to meet the different concerns of various parties (Tamari, 1978). A complete financial statement includes balance sheet, income statement, statement of owner's equity and cash flow statement for the purpose of disclosing the firm's financial position and financial performance (Kimmel et al., 2006). A financial statement may provide reasonable awareness on a firm's previous achievements or failures and future prospects enabling stakeholders to make the best decisions with the current information. This is achieved by comparing financial position and performances over the years and with other industries (Kimmel et al., 2006). In 1999, Bursa Malaysia introduced mandatory quarterly financial reporting after the financial crisis in 1997 to reduce information asymmetry (Ismail & Chandler, 2005). However, evidence from Ismail and Chandler (2005) suggests that the quarterly financial report is less reliable because it is not audited and more susceptible to manipulation. Nevertheless, it is still used for timely information and helps to reduce any uncertainties for decision-making processes. In addition, the quarterly financial report can minimise information asymmetry due to the lack of accounting information (Tayib, Coombs, & Ameen, 1999).

The financial statement is useful in assisting managers to understand the business and financial position through the summary of financial information on the balance sheet, income statement and cash flow statement (Jablonsky & Barsky, 1998). Pirie and Smith (2008) discover that managers in Asia use balance sheets and income statements as primary sources in valuation and monitoring financial performance. From the financial statement, managers have a better view in obtaining optimal return by utilizing resources efficiently (Gibson, 1992). In addition, managers can provide an overview of their firm's short-term and long-term position to prospective users of the financial statement.

The financial statement also provides the foundation for investors to earn future profit through buying, holding or selling shares (Gibson, 1992; Kimmel et al., 2006). Ismail and Chandler (2005) posit that investors in Malaysia are divided into three categories, namely trackers, scanners and sophisticated. In their study, the authors provide evidence that sophisticated investors rank the annual report as a major source of information. Pirie and Smith (2008) advocate investors extract relevant information from the financial statement to emphasise the power of firms' share prices. Cooper (1997) argues that investors use financial statement to identify dividend payout trends. Maxwell (1990) states the financial statement provides information on the stability of a firm and its ability to make repayments. Creditors such as suppliers, financial institutions and bankers use financial statement to assess credit worthiness by evaluating risks of money lending (Kimmel et al., 2006). These creditors also

have an interest in the financial statement to consider the possibilities of extending credit (Gibson, 1992).

A firm's employees require their employer's financial statement to have assurance on future prospects of salary increments, employment benefits and stability of employment (Cooper, 1997; Kimmel et al., 2006; Maxwell, 1990). Another user of the financial statement is the government, which relies on it to assess taxes and produce statistical information on the country's total trade productivity (Cooper, 1997).

As discussed earlier, a financial statement is widely used by internal and external entities. The information which is available in financial statement allows users to analyse the firm's current, short-term and long-term profitability, liquidity, leverage, equity and efficiency (Fridson & Alvarez, 2002; Gibson, 1992; Giroux, 2003; Jablonsky & Barsky, 1998; Tamari, 1978). Indirectly, a financial statement is useful to evaluate how well the management discharges its duties periodically. However, a financial statement has its own limitations which create opportunities for manipulation to maximise individual needs (Maxwell, 1990). The following section discusses the financial reporting environment in Malaysia in more detail.

2.4 Financial Reporting Requirements in Malaysia

Obtaining well-structured accounting standards is important and customary worldwide. In its early years, Malaysia adopted the accounting standards that

correspond to the International Financial Reporting Standards (IFRS) and International Accounting Standards (IAS) issued by the International Accounting Standard Board (IASB). During that time, there are no enforcement bodies to ensure that firms complied with these accounting standards (Tan, 2000). In circumstances where firms are found to ignore the requirement, a formal enquiry is held with appropriate action taken on those firms that are found guilty (Tan, 2000). These issues, however, focus on punitive measures instead of preventive ones. For that reason, the Malaysian Accounting Standard Board (MASB) is formed under the Financial Reporting Act (1997). The setting up of the MASB obliged the authority to issue, revise, review and adopt accounting standards in Malaysian businesses (Saleh, Iskandar, & Rahmat, 2005).

The most common types of firms in Malaysia are public and private ones. Easily distinguished by the designation of the firm's name through *Limited (Ltd.)* for public firms and *Private Limited (Pte. Ltd.)* for private firms, these firms also have different sources of capital. Private firms are not allowed to sell shares to the public, whereas public firms sell shares to obtain capital. With a minimum of 2 members for both types of firms, private firms have to operate with 50 or less members. There are no limits to the number of members for public firms. Due to these dissimilarities, the MASB produces two sets of approved accounting standards for registered firms called Financial Reporting Standards (FRS) and Private Entities Reporting Standards (PERS). The FRS contains financial reporting requirements for entities that are non-private, in other words, public firms. Therefore, it suggests that all public

firms must comply with FRS, as legislated under the Financial Reporting Act 1997 (s. 26D). Appendix 1 lists the FRS produced by MASB that are applicable to all public firms operating in Malaysia.

Over the years, accounting practices have changed in Malaysia, and the accounting regulatory bodies have to expand and/or remove standards that are not relevant to existing approaches. However, if the changes made are solely based on a country's unique environment, it may cause inconsistent accounting practices with other accounting standards around the world. These circumstances have complicated the process of producing financial reports that are acceptable worldwide. In August 2008, the MASB announced shifting FRS practices to IFRS as a response to the impact of globalization. According to Ball (2006), IFRS is a set of international accounting standards that can be used by public firms uniformly worldwide. As an emerging country, Malaysia will be more pronounced to be accepted at the international level through the same accounting requirements and are now able to assess potential risks more resourcefully.

Currently, financial reporting in Malaysia is already moving toward IFRS and this occurred on January 1, 2012. Primarily, the FRS outlined general accounting principles for firms to practice and the subjects they should not exercise. It is unlike IFRS and IAS which are filled with specific guidelines with rules and regulations that are compulsory (Saleh et al., 2005). Global business requires transparent accounting practice and this convergence has allowed Malaysia's businesses with standardised assurance. This change

reflects the best role of corporate governance practices in minimizing financial statement fraud and earnings management in Malaysia.

2.4.1 Authorised Regulatory Bodies concerned with Financial Reporting in Malaysia

Following the Asian financial crisis from 1997 to 1998, the MASB strengthened financial reporting quality requirements to meet international standards as well as protecting investors. In Malaysia, corporate financial reporting is primarily governed by the Companies Act 1965 (Act 125), the Bursa Malaysia Listing Requirements, the Malaysian Code of Corporate Governance (MCCG) and the International Standard on Auditing (ISA). These rules and regulations significantly contribute, influence and became controlling mediators to prevent financial statement fraud in Malaysia (Wahab, How, & Verhoeven, 2007). Respectively, these laws and regulations are authorised by the Companies Commission of Malaysia (CCM), the Bursa Malaysia, the Securities Commission of Malaysia (SCM) and the Malaysian Institute of Accountants (MIA). Being empowered as the authorised regulatory bodies, these agencies are responsible for ensuring strict compliance with the financial reporting standards. The following section describes the authorised regulatory bodies concerned with financial reporting in Malaysia.

(a) The Companies Commission of Malaysia

The Companies Commission of Malaysia (CCM) is a statutory body which regulates firms and businesses. The CCM officially began in April 16, 2002 after the merger of the Registrar of Companies and Registrar of Businesses in Malaysia. The main responsibilities of the CCM are to provide assistance to entities registering their business and ensure these entities operate in accordance to the legislation, including having a corporate governance team in its day-to-day operations. Furthermore, the CCM has the administrative and enforcement power of the Companies Act 1965 (Act 125). Since Malaysia is a former British colony, the Companies Act 1965 is based on the United Kingdom Companies Act 1948. The Companies Act 1965 under Schedule 9: Section 169 entitled *Profit and Loss Account, Balance Sheet and Directors' Report* requires all public firms to prepare financial reports annually. Moreover, the CCM provides a reliable platform for the public to retrieve company and business information. For example, the Company Act 1965 (Section 169: 15) also clearly stipulates that directors on the board are responsible for the financial statement produced to reflect a true and fair view of the affairs of the firm.

(b) The Bursa Malaysia

The Bursa Malaysia provides a policy for firms to raise capital legally from the interested public who want to invest and gain returns on their investment. Once a firm is registered with the Bursa Malaysia, it is either listed on the

Main Market or ACE Market. The Main Market provides a platform for established companies to raise capital. The ACE Market assists firms in finding a conducive growth platform. The Bursa Malaysia constructs the corporate governance regulatory framework to elevate the financial reporting standards of firms in Malaysia. According to the Bursa Malaysia, firms must obey all rules under the Security Laws, Companies Act 1965 and Bursa Malaysia listing requirements. However, as a hybrid approach, firms are not obliged to follow the MCCG. In 2001, the Bursa Malaysia produced 16 detailed chapters of listing requirements for the Main Market and ACE Market in enhancing the quality of financial reporting and minimizing financial statement fraud. In addition, the Bursa Malaysia also constructs two chapters for firms to specifically refer to in reducing information asymmetry and improving corporate governance practice, namely Chapter 9 entitled *Continuing Disclosure* and Chapter 15 entitled *Corporate Governance*.

(c) The Securities Commission of Malaysia

The Securities Commission of Malaysia (SCM) is established in 1993 with investigative and enforcement powers to protect investors. As the issuer of the Malaysian Code of Corporate Governance (MCCG), the SCM enabled shareholders and the public to assess and determine the standards of corporate governance by public firms. The SCM is also responsible for taking regulatory action on firms that are convicted with financial statement fraud. According to the SCM, issuance of the MCCG represents collaborative efforts between the government and the industry (2007, p. 2). The Code is based on the United

Kingdom's experience as set out in the Hampel Report in 1998. The MCCG ensures corporate governance structures meet the accepted quality level (2007, p. 2). Wahab et al. (2007) in their study on 440 firms in Malaysia report that corporate governance structures have improved and strengthens after the MCCG is released. However, it is revised to further enhance ethical governance. The amended version is released in October 2007 to meet global requirements. The MCCG is flexible in its approach and does not require a firm to strictly follow the Code (2007, p. 3). However, firms are still within the prescribed MCCG and must report if they fail to meet the code's requirements. The code is divided into three main parts. Part 1 sets out the broad principles of good corporate governance practices in Malaysia. Part 2 suggests the best practices to be implemented by the firms. Finally, Part 3 is the minor code of principles and best practices for other corporate participants including external auditors to follow.

(d) The Malaysian Institute of Accountants

The Malaysian Institute of Accountants (MIA) is responsible for providing education on quality assurance of professional accounting practices. The MIA produces the International Standard on Auditing (ISA) to promote adherence to professional accounting standards and practices. Appendix 2 lists the ISA produced by MIA that is applicable to all public firms operating in Malaysia.

The ISA 240 entitled *The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements* is developed to address financial statement

fraud matters. It began in January 2010, indicating financial statement fraud is a recent matter and requires attention. It provides detailed explanations on the characteristics of financial statement fraud and how auditors should respond to financial statement fraud incidence. ISA 240 states that ‘the distinguishing factor between fraud and error is whether the underlying action that results in the misstatement of the financial statements is intentional or unintentional’ (p. 4). Therefore, whether caused by fraud or error, it is the responsibility of the auditor to obtain reasonable assurance on the audited financial statement to be free from material misstatement.

To sum up, the enforcement bodies of the CCM, Bursa Malaysia, SCM and MIA are the agencies that develop and strengthen the accounting rules and regulations in Malaysia. Their presence helps to ensure corporate governance mechanisms assist investors and other stakeholders in seeking true, reliable and fraud-free financial statement information. Generally, firms in Malaysia have benefited from good laws and regulations through corporate governance reforms (CLSA Survey, 2005). Although the survey discovers that Malaysia is ranked number one in Asia for having the most rules and regulations for corporate governance, Malaysia is rated average when it comes to enforcement. This emphasises that by having well written rules and regulations for accounting practices is not sufficient in producing strong corporate governance structures. The presence of strong corporate governance is essential to further reduce financial statement fraud and earnings management activities. The next section discusses the factors contributing to financial statement fraud.

2.5 Financial Statement Fraud in Malaysia: An Overview

As mentioned earlier in Section 2.3, financial statements have the ability to meet the needs of various entities. A financial statement provides reasonable awareness of a firm's previous achievements or failures and future prospects which will enable stakeholders to make their best decisions. The reported firms' progress and growth in the financial statement may indicate the firms' efforts in achieving better performance. The financial statement is known as an inexpensive, simple to find and reliable source for determining a firm's performance. It is also easily accessible in the annual reports published each year. Therefore, financial statement is widely used by various types of people and organisations who are seeking information about a firm. These reasons are the rationale for financial statement contents being manipulated.

According to the SCM, financial statement fraud involves submitting misleading financial information to either the SCM or the Bursa Malaysia. Firms are involved in financial statement fraud based on the fact of offenses specified as (i) failure to ensure financial statement accuracy before annual report submission, (ii) failure to provide factual, clear, unambiguous, accurate, succinct and sufficient financial statement information, (iii) inaccurate related party transaction, (iv) concealment of share acquisition, (v) concealment of share disposal, (vi) concealment of sales agreement, and (vii) concealment of purchase agreement. In general, these are the firms that submitted false financial information to deceive the stakeholders in making informed decisions. On the other hand, the ISA 240 highlights that financial statement

fraud may be accomplished through (a) manipulation, falsification (including forgery), or alteration of accounting records or supporting documentation from which the financial statements are prepared, (b) misrepresentation in, or intentional omission from, the financial statements of events, transactions or other significant information, and (c) intentional misapplication of accounting principles relating to amounts, classification, manner of presentation, or disclosure.

In Malaysia, the government is confronting financial statement fraud issues seriously. The following sections discuss the context of financial statement fraud in Malaysia and its relationship to corporate governance and earnings management.

2.5.1 Perpetrators of Financial Statement Fraud

It is argued that the increasing number of financial statement fraud cases in Malaysia is occurring due to the presence of three essential elements (also known as the fraud triangle): opportunity, pressure and rationalisation (Albrecht, Albrecht, & Albrecht, 2004). Tillman and Indergaard (2007) discover that financial statement fraud is impossible to be undertaken by one person. The report identifies that on average, seven fraudsters from various positions are involved in any single case of financial statement fraud. The ISA 240 indicates that the top managers in a firm are more likely to manipulate financial records, present false accounting records and override control procedures that lead to financial statement fraud (2008, p. 5). KPMG Malaysia

reports that three-quarters of fraudsters are male and may come from any age group (2009, p. 30). Length of years in service is not relevant to the intention of conducting financial statement fraud. KPMG Malaysia also discovers that employees who received an income below RM15,000 (about AUD5,000) annually are more likely to be involved in financial statement fraud (2009, p. 31).

2.5.2 Confronting Financial Statement Fraud in Malaysia

Existing empirical research provides evidence for the importance of solving financial statement fraud issues. The incidence of financial statement fraud need to be minimised in order to allow proper capital market growth, raise economic development and increase investors' confidence. In Malaysia, the Royal Malaysia Police (RMP) place financial statement fraud as a white-collar crime activity. White-collar crime is defined as a crime committed by a respectable person with a high social status in the course of his/her occupation (Sutherland, 2002). According to the statistical records by RMP, white-collar crime cases have tripled in the last decade. Because of these increasing cases, it is acknowledged that financial statement fraud crimes are becoming serious problems which will affect local economic, physical and social relationships. If undetected, Sullivan (2004) argues that financial statement fraud will be highly profitable to fraudsters. Once financial statement fraud is discovered, severe losses affect the financial statement users as well as the country's financial reporting credibility. Sullivan (2004) outlines that the drastic rise of financial statement fraud cases has provoked the public and government.

The reputation of directors and wealth of shareholders will also decline if firms are facing lawsuits due to financial statement fraud conviction (Fich & Shivdasani, 2007). Reputational losses may also arise because directors need to devote a period of time to fraud investigation, thus, reducing contact with other stakeholders (Jarrell & Peltzman, 1985; Karpoff & Lott Jr, 1993; Klein & Leffler, 1981). Continuous delays by corporate environments also create opportunities for further financial statement fraud (Crutchley, Jensen, & Marshall, 2007). This section further discusses the responses from the internal and external perspectives in the event of financial statement fraud.

KPMG Malaysia finds that once fraud occurs in a firm, the proof of such an act has to be preserved (2009, p. 26). Because financial statement fraud cases involve human ethics and reputation, the way a financial statement fraud cases is investigated requires respect for human rights. This is also to reduce pressure and prevent further declining reputation of accused firms. KPMG Malaysia discovers that 62 per cent of survey respondents felt that financial statement fraud is a major problem for Malaysian industry (2009, p. 8). Financial statement fraud is also viewed as a key factor leading to business failure. Johl, Jubb, and Houghton (2007) state that firms in Malaysia are less transparent and have less exposure to fraud investigations compared to Western countries. Therefore, many financial statement fraud incidents are not reported to regulatory bodies and are settled within the firms. Fear of negative publicity is cited as the most common reason for not reporting fraud (KPMG, 2009, p. 28). Furthermore, low confidence in the ability of the judicial system

is another reason for not reporting financial statement fraud (KPMG, 2009, p. 28).

Perols and Lougee (2011) argue that financial statement fraud is a complex issue and involves earnings management. Therefore, the SCM encourages firms to establish strong internal controls by initially providing adequate training to their employees in recognizing the early warning signs of financial statement fraud and inadequate earnings management. Formal written documents on corporate conduct and ethical considerations are required to minimise financial statement fraud events. Enforcements and initiatives are required to ensure that financial statement fraud matters are under control. Apart from the SCM, other law enforcement agencies such as Bursa Malaysia, RMP and Inland Revenue Board can investigate financial statement fraud offences (Sullivan, 2004). Hee (2007) provides evidence that firms that are previously involved in financial reporting issues are more likely to repeat the same offense. The occurrence of financial statement fraud and continuous violation of the law may indicate that Malaysia is weak in enforcing its regulations. Therefore, financial statement fraud should be controlled while it is in the early stage.

2.6 Corporate Governance in Malaysia: An Overview

In Malaysia, the definition of corporate governance is provided by the High Level Finance Committee on Corporate Governance as follows:

The process and structure used to direct and manage the business and affairs of the company towards enhancing business prosperity and corporate accountability with the ultimate objective of realizing long-term shareholder value, whilst taking into account the interest of other stakeholders. (2003, p. 41)

Najmuddin (2008) contends that well implemented corporate governance enhances and delivers universal human values of honesty, integrity, responsibility and love. These can be achieved through directing and managing firms' operations towards corporate accountability with the objectives of realizing long-term shareholders' value, whilst taking into account the interests of other stakeholders. Apart from the regulatory bodies explained previously (CCM, Bursa Malaysia, SCM and MIA), independent institutes are also established to promote a highly transparent corporate governance constitution in a public firm.

The most recognised agency that is allied with corporate governance matters in Malaysia is the Malaysian Institute of Corporate Governance (MICG). Established in March 1998, the MICG is an independent corporate governance institute. Its main function is to raise awareness and ensure good corporate governance in Malaysia. Besides being an authoritative facilitator and providing continuous education programs for senior executives, investors and interested bodies, the MICG acts as an independent body for corporate governance ratings. Furthermore, the MICG handles corporate governance

issues that complement the CCM, Bursa Malaysia, SCM and MIA. The MICG supports the existence of the MCCG by insisting that every public firm's board of directors complies with the Code in all published annual reports.

2.6.1 Corporate Governance Structures

The government of Malaysia is determined to have a high quality corporate financial reporting system. This is evident in Chapter 15: *Corporate Governance*⁴ by the Bursa Malaysia and MCCG issued by the SCM. The existence of important codes and requirements enables stakeholders to assess and evaluate the standards of corporate governance structures practiced in a firm. Generally, corporate governance structures consist of two interdependent mechanisms: the board of directors and the audit committee. Both mechanisms are responsible for ensuring transparent and high-quality financial reports are produced (Rezaee, 2002). Effective corporate governance structures are essential to prevent financial statement fraud and earnings management (Beasley, 1996; Dechow et al., 1996; Farber, 2005; García Lara et al., 2009; Persons, 2005; Rezaee, 2004; Sharma, 2004). The following sections describe the regulatory requirements for corporate governance in Malaysia.

⁴ The Chapter 15 sets out the requirements that must be complied by the firms and its directors with regard to corporate governance.

2.6.1.1 Board of Directors

In order to deliver effective corporate governance practices, the SCM has outlined their characteristics of good corporate governance practices in firms through the MCCG. The MCCG asserts that an effective board will ensure that the duties discharged are covering the matters of planning, evaluating and implementing the best practices that improve a firms' performance (2007, p. 10). The board also needs to ensure that the firm complies with enacted laws, policies and standards produced by the regulators and policy makers.

The MCCG and the Bursa Malaysia require that members of the board have a balanced number of executive and non-executive directors (including independent) (2007, p. 7). This is to ensure no individual or small groups of individuals can dominate the board's decision-making. The MCCG and the Bursa Malaysia suggest that an effective percentage of independent non-executive directors should be one-third of the board membership. The MCCG requires that the selection of a board of directors should be based on skills, knowledge, expertise, experience and integrity to preserve and enhance professionalism and qualifications (2007, p. 11). After providing orientation and an education program to the new recruit, the board should also make an annual review of their performance and disclose it in the annual report. Compulsory attendance to training programs as prescribed by the Bursa Malaysia for all board members is also required to enable directors to discharge their duties effectively. Moreover, all attendance or absenteeism during training courses also needs to be disclosed in the annual report. This is

written in Practice Note 5 in pursuance of compulsory Main Board listing requirement. Inside directorship or a situation where a director performs as a manager in the same firm is also an important part of the board structure. The MCCG addresses the scenario of having the same person holding the position of Chairman and Chief Executive Officer (CEO), also known as duality, which may reduce the quality of financial reporting (2007, p. 10). Due to the possible conflict of interest, the MCCG encourages different people to hold this position to ensure a balance of power and authority (2007, p. 10). However, the decision to continue with duality is not prohibited by the MCCG and proper disclosure and explanation shall be provided to the stakeholders (2007, p. 10).

The MCCG also advises holding regular formal meetings by the board of directors and to provide advance notice on the issues to be discussed in facilitating diligence (2007, p. 12). All deliberations, conclusions and discharge of duties must be recorded for management documentation. The MCCG states that the number of meetings executed each year and the board's attendance should also be disclosed in the annual report (2007, p. 12). Lastly, the MCCG insists that the directors' remuneration must be sufficient, so as to deter any unethical activities as well as to maintain integrity (2007, p. 7). The remuneration value should also reflect the capabilities, experience and responsibilities of each board member. The MCCG also requires firms to disclose remuneration details of each director in the annual report (2007, p. 7).

2.6.1.2 Audit Committee

Financial statement fraud in Malaysia has long raised public concerns about professional ethics. After the failures of Bank Bumiputra Malaysia and Pan-Electric in the 1980s due to corporate scandals, accountants believe that audit committees should be established (Teoh, 1990). The Central Bank of Malaysia required all banks to establish audit committees as early as 1985. On November 1988, the MIA submitted a 263 page memorandum to the government which recommended public firms to establish audit committees to prevent fraud (Teoh, 1990). The memorandum concluded with the statement is:

Audit committees provide additional safeguards against fraud and malpractice by monitoring the effectiveness of record keeping, internal controls and internal audit. They also provide an assurance to regulatory authorities, investors and depositors of the objectivity, credibility and integrity of a company. (Malaysia Institute of Accountants, 1990, p. 27)

In August 1994, the Bursa Malaysia required public firms in Malaysia to establish audit committees in order to improve the monitoring system of financial reporting processes and corporate governance. A number of audit committee characteristics are proposed by the MCCG to improve a firm's corporate governance structures. The MCCG obliges a minimum of three non-executive directors while the majority of the audit committee members are

independent (2007, p. 14). To maintain independence the audit committee is required to respond directly to the head of the firm's internal auditors. The audit committee must also have the competence to read, analyse and interpret financial statements in order to justify their roles and responsibilities effectively. The MCCG also requires the audit committee to have diligence and that a firm should have a minimum of two audit meetings annually (2007, p. 15). It is also prescribed in the MCCG that the audit committee is responsible for deciding the audit fees, to establish internal audit functions and to appoint an external auditor for the firm (2007, p. 14).

The MCCG emphasises that the audit committee must undertake an in-depth review of the quarterly and year-end financial reports and to provide assurance that all accounting standards and legal requirements are complied with. Moreover, the audit committee is also responsible for issues regarding going concerns, changes or adjustments in an audit and accounting policies and practices in financial reporting. The ISA 240 on *The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements* highlights the accountability of the auditor for preventing and detecting financial statement fraud. The ISA 240 furthermore states that the auditor should be alert to potential earnings management activities which may lead to illegal accounting adjustment. Given the importance of audit committees, their tasks will help to strengthen the corporate governance structure especially in identifying any financial reporting threats.

2.7 Earnings Management in Malaysia: An Overview

According to Salleh, Stewart, and Manson (2006), high quality financial reporting is free from misstatements, omissions and biases that can help investors to make good investment decisions. Transparent disclosure and reliable accounting information may help current and potential shareholders minimise investment risks. In Malaysia the complex interactions between the managerial motivation, financial reporting standards and legal enforcement create motives to change financial records (Ho & Sia, 2009).

Previous studies that link the earnings management, corporate governance and financial statement fraud in Malaysia are minimal. These studies are more focused on the association between corporate governance and earnings management. It is evident that firms that are convicted in financial statement fraud in Malaysia are open to corporate governance ineffectiveness in controlling and monitoring earnings management practices. For example, Abdullah and Nasir (2004) indicate that a higher proportion of independent directors on the board and audit committee may reduce earnings management. Similarly, Saleh, Iskandar, and Rahmat (2007) contend that earnings management may decline when a fully independent audit committee is on the board. The authors also find that more audit committees with accounting experts and more frequent number of audit committee meetings are able to minimise earnings management. Saleh et al. (2005) also provide evidence that earnings management is positively associated with the practice known as duality. These studies have used abnormal accruals to indicate the level of

earnings quality in a firm. The following section discusses the potential evidence concerning real earnings management activities in Malaysia.

2.7.1 Real Earnings Management Practices in Malaysia

Only a few studies have explored real earnings management in Malaysia, especially, in the context of financial statement fraud. This may be due to the fact that the existing literature focuses on the abnormal accruals as the proxy of earnings management. Ball, Robin, and Wu (2003) argue that the structural system of the reporting process reduces the value of the end financial result, especially, with government intervention which encourages firms to moderately hide financial reports that are too large or give low returns to foreign creditors. Bhattacharya, Daouk, and Welker (2003) state that Malaysia's firms are more likely to manipulate their financial records to provide optimistic accounting reports and deceive financial statement users. Given these circumstances, Leuz, Nanda, and Wysocki (2003) suggest that Malaysia is one of several East Asian countries that have poor financial performance systems in place and is involved in earnings management. Bukit and Iskandar (2009) explain that earnings manipulation ranges from financial statement fraud to earnings management. Therefore, in order to prevent financial statement fraud, it is essential to start with minimizing earnings management. Over the years, the government of Malaysia has gradually improved its regulatory and enforcement measures in an effort to increase the confidence of foreign investors.

A study by Enomoto et al. (2012) on earnings management activities in 38 countries provides evidence that real earnings management activities are preferred over accruals earnings management in countries with stronger investor protection systems. Their results indicate that Malaysia has above average investor protection but weak legal enforcement. Consistent with their argument, they report that firms in Malaysia engage in higher real earnings management compared to accruals earnings management.

2.8 Conclusion

This chapter reveals that Malaysia is an emerging country that is striving to improve the quality of financial statement reporting through better policies, standards and enforcements. The CCM, Bursa Malaysia, SCM and MIA, are the regulatory bodies responsible for monitoring financial statement manipulation and corporate governance. Several standards and policies exist to enhance corporate governance structures and to minimise aggressive earnings management and financial statement fraud. They are the Companies Act 1965 (Act 125), the Security Laws, Companies Act 1965, the MCCG and ISA 240 entitled *The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements*. The corporate governance structures, earnings management practices and extent of financial statement fraud in Malaysia are also discussed in this chapter. The next chapter reviews the past literature on corporate governance, earnings management and financial statement fraud studies.

Chapter 3

Literature Review

3.1 Introduction

The objective of this chapter is to review the literature on the practice of corporate governance and real earnings management on financial statement fraud cases. This chapter reviews past studies in detail, in order to identify the gap in the literature and the scope of new knowledge to be explored. This chapter also covers the theories used by prior research to develop a rational answer for the expected findings on corporate governance, real earnings management and financial statement fraud. This chapter is organised as follows. Section 3.2 describes the financial statement fraud in general. Section 3.3 explains the existing theories behind the occurrence of financial statement fraud. Section 3.4 covers the empirical studies on corporate governance and occurrence of financial statement fraud. Section 3.5 discusses the corporate governance reforms following occurrences of financial statement fraud. Section 3.6 focuses on the general concepts of earnings management and financial statement fraud, while Section 3.7 explores the empirical studies of earnings management and financial statement fraud. Section 3.8 highlights the research gaps on corporate governance, real earnings management and financial statement fraud. Finally, Section 3.9 concludes the chapter.

3.2 The Concept of Financial Statement Fraud

In order to understand financial statement fraud, its basic concepts are discussed in more detail below.

3.2.1 Definition of Financial Statement Fraud

A number of agencies and studies define what financial statement fraud means. The first definition to explain financial statement fraud is formulated by the National Commission on Fraudulent Financial Reporting (1987) as, “intentional or reckless misconduct, whether act or omission, that resulted in materially misleading financial statement. It may entail gross and deliberate distortion of corporate records and the misapplication of accounting principles” (p. 2). This is later elaborated by the Association of Certified Fraud Examiners (1988) as, “intentional, deliberate, misstatement or omission of material facts, or accounting data, which is misleading and, when considered with all the information made available, would cause the reader to change or alter his or her judgement or decisions” (p. 12). Both reports explain that financial statement fraud occurs to deceive financial statement users by manipulating the exact figures and values that should be presented in financial statements.

Another important denotation for financial statement fraud is described in Statement of Auditing Standards (SAS) no. 99 issued by the Auditing Standards Board of the American Institute of Certified Public Accountants

(AICPA) in 2002. In this Standard, financial statement fraud is defined as an intentional act that causes material misstatements in financial transactions and reporting.

A study by Rezaee (2005) provides a more detailed view on financial statement fraud. The author describes that financial statement fraud is performed in “an attempt by corporations to deceive or mislead the users of published financial statements, especially investors and creditors, by preparing and disseminating materially misstated financial statements” (p. 279). Further, Rezaee (2005) offers a more specific definition by emphasising that fraudulent financial reporting is related to (1) falsification, alteration, or manipulation of material financial records, supporting documents, or business transactions, (2) material intentional misstatements, omissions, or misrepresentations of events, transactions, accounts or other significant information from which financial statements are prepared, (3) deliberate misapplication, intentional misinterpretation, and wrongful execution of accounting standards, principles, policies and methods used to measure, recognise, and report economic events and business transactions, (4) intentional omissions and disclosures or presentation of inadequate disclosures regarding accounting standards, principles, practices, and related financial information, (5) using aggressive accounting techniques through illegitimate earnings management, and (6) manipulation of accounting practices under the existing rules-based accounting standards. These definitions have become too detailed and too easy to circumvent as well as contain loopholes. These have allowed companies to

hide the economic substance of their business and marketplace performance (Rezaee, 2005).

Based on the definitions discussed above, the act of omitting and altering financial records is treated as financial statement fraud, whether it is intentional or unintentional. Intention is a subjective matter and impossible to be measured by others. Therefore it is important to deliver an accurate financial statement before it is submitted to users. These definitions also explain that financial statement fraud is deliberately performed to satisfy the fraudster's objective which is to deceive financial statement fraud users during the decision-making process.

3.2.2 Determinants of Financial Statement Fraud

It has been argued that financial statement fraud occurs to deceive financial statement users. Previous studies provide evidence that a financial statement is manipulated to achieve expected target earnings (Burgstahler & Dichev, 1997), maximise self-interest (Degeorge, Patel, & Zeckhauser, 1999) and fulfil individual desires for personal wealth, prestige and job security (Mak & Li, 2001). The SAS No. 99 notes that there are three factors that may cause financial statement fraud which are pressure, opportunity and rationalization. These factors are also known as the fraud triangle. Extant studies also concur that the presence of pressure, opportunity and rationalization are significant to financial statement fraud occurrences (see Albrecht et al., 2004; Hogan,

Rezaee, Riley Jr, & Velury, 2008; Lou & Wang, 2011; Stalebrink & Sacco, 2007; Turner, Mock, & Srivastava, 2003).

First, with reference to the pressure factor, the reason to commit financial statement fraud may be caused by the threat of economic performance, operating conditions or financial circumstances. For example, an excellent firm's economic performance reflects the manager's efforts and upcoming appraisal. Spathis, Doumpos, and Zopounidis (2002) report that managers want higher salaries and bonuses by deceiving investors and lenders via false profit increments. The second determinant for financial statement fraud, opportunity, is argued to begin in firms with poor internal controls, excessive complex systems, an unstable organization structure and ineffective monitoring. Fraudsters take advantage of the weaknesses in monitoring as an opportunity to commit financial statement fraud. This is where the presence of an effective corporate governance system is essential to eliminate the weakness (Albrecht, Albrecht, & Albrecht, 2008). The third determinant for financial statement fraud is rationalization. Here, the analyst is required to understand that the possibility of financial statement fraud may occur. The rationalization factor may be seen through ineffective communication of practices or standards, history of disobedience to laws and regulations as well as unreasonable demands. Given the determinants for financial statement fraud, it is important for a firm to minimise all three factors in the fraud triangle (i.e., pressure, opportunity, rationalization) in order to reduce the risk of financial statement fraud.

3.2.3 Detecting Financial Statement Fraud

The process of detecting financial statement fraud is a complicated task demanded by financial statement users. Investors, particularly, require a transparent and fully compliant system that complies with firm financial report regulations. Kaminski, Wetzel, and Guan (2004) find that accounting data are useful to identify financial statement fraud. Although financial statements have their own limitations (Maxwell, 1990), improved accounting standards and principles have increased the opportunities in determining loopholes in a complex financial statement (Kranacher, 2006). Furthermore, the establishment of a controlled system such as corporate governance structures with a monitoring role can prevent financial statement fraud (Noordin, 1997). The establishment of a good corporate governance structure is also one of the control mechanisms that may minimise financial statement and earnings management risks.

In modern times, new technologies have helped to detect financial statement fraud. Nevertheless it is argued that up-to-date computerised technology has also created new forms of financial statement fraud. It makes the process of furnishing and publishing false financial information much more difficult to detect. Zhou and Kapoor (2011) investigate financial statement fraud detection techniques using regression, decision tree and neural networks. Their results show that regression is commonly used to detect financial statement fraud followed by neural network and the decision tree. Their study demonstrates that the techniques used to identify fraud are important especially when fraud

detection software is available. It is argued that even though software assistance can be beneficial, specialised knowledge on financial statement fraud risk is relevant. Nevertheless, the method of detecting financial statement fraud is not the focus of the current study.

3.2.4 Consequences of Financial Statement Fraud

It is argued that the financial statement is manipulated to change the nature of information and mislead others (Perols & Lougee, 2011). The approach selected to present the financial report in a financial statement is to generate diverse perceptions regarding a firm's true financial state. By presenting unreal but desirable financial data, stakeholders may misinterpret the information received and fail to make accurate decisions.

Financial statement is one of the sources of information for investors in making investment decisions. Larson (2008) finds that investors invest in large portfolios before these firms are convicted with financial statement fraud. Given this situation, investors who insist on transparent disclosure will search for another reliable investment. This is due to the reliability of enforcement bodies and standards setters are now open to question. Consequently, Yusop (2008) posits that besides losing money, firms also lose their reputation through unprofessional and unethical conduct. Agrawal and Cooper (2007) opine that in financial statement fraud events, firms may experience earnings restatements, which might be negative in value, and cause their share price to fall.

Since financial statement fraud is a subject of concern, firms convicted with financial statement fraud need to face the authority and deal with the penalty. Fich and Shivdasani (2007) focus on firms facing lawsuits due to financial statement fraud. Using a 5 year sample period from 1998 to 2002, they include 685 litigation filings from 580 different firms. They find that in the situation where the directors misuse their power and engage in financial statement fraud, the directors risk losing their current position. Their findings emphasise that if directors are not professional in their jobs, committee members and stakeholders (especially investors) will lose confidence in them and find another potential investment. Therefore, it is important to preserve a high level of proficiency on the board structures to gain support and confidence from stakeholders.

While financial statement fraud incidents are increasing in Malaysia, studies on this issue are scarce. Over the last decade, financial statement fraud cases have risen worldwide. Enron, Parmalat, Global Crossing, Merrill Lynch, Morgan Stanley, WorldCom, Gula Perak, MEMS Technology, Puncak Niaga, Golden Land and Actacorp are good examples of firms that are affected by poor corporate governance practices and accounting manipulations. According to Aksu and Kosedag (2006), although some financial statement fraud cases occurred in the last decade, these incidents have seared investors' perceptions. For this reason, it is important for strong corporate governance structures to be exercised continuously to prevent the recurrence of financial statement fraud (Mensah, Aboagye, Addo, & Buatsi, 2003).

3.2.5 Existing Legislation for Financial Statement Fraud

In the USA specific standards and guidelines to manage the issue on financial statement fraud have been specifically outlined in SAS No. 99, entitled *Consideration of Fraud in Financial Statement Audit*. SAS No. 99 suggests best practices that should be implemented in minimizing financial statement fraud. This includes brainstorming sessions with the audited entity and to evaluate the information gathered for potential financial statement fraud risk (SAS No. 99, 2002, p. 168). In 2006 Taiwan issued SAS No. 43 on *The Auditor's Responsibility to Consider Fraud in an Audit of Financial Statements* to specifically provide standards and guidelines dealing with financial statement fraud.

Currently, all financial reporting regulations in Malaysia are administered by the Malaysia Institute of Accountants (MIA). Over the years, Malaysia has been following the standards and regulations of other developed countries such as the UK for its own Code of Corporate Governance. However, effective from January 1, 2010, MIA requires the International Standard of Auditing (ISA) 240 entitled *The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements* is applied for financial statement audit processes. Similar to other mentioned standards and guidelines, the objective of the ISA 240 is to improve the likelihood of financial statement fraud detection during the audit process.

3.3 Theoretical Considerations

Financial statement fraud is an offence where the intention is to deceive financial statement users. In this study, corporate governance structures and real earnings management in financial statement fraud firms are examined. This study adopts and invokes two relevant theories, namely agency theory and positive accounting theory, to understand the relationship between corporate governance and real earnings management in the event of financial statement fraud.

3.3.1 Agency Theory

The issue of agency theory has featured predominantly in corporate governance literature⁵. Agency theory explains the conflict of interest between the principal and the agent (Jensen & Meckling, 1976). In a firm's operations, the shareholders function as the principal, whereas the managers act as the agent. The differences in both positions create an imbalance with regard to access to information and this is referred as information asymmetry. This information asymmetry causes conflict of interest that needs to be controlled and monitored in order for both parties to gain equal benefit. This is emphasised by Kiel and Nicholson (2003) whereby firms must provide controls to establish an alignment of interest between managers and owners. Where appropriate, a firm may take advantage of information asymmetry and exercise financial statement fraud for the firm or personal advantage.

⁵ See Albrecht et al. (2004), Beasley (1996), Chen, Firth, Gao, and Rui (2006), Dunn (2004), Farber (2005), Rezaee (2005) and Shleifer and Vishny (1997).

However, if the right amount of information is released, all stakeholders can experience the benefit, especially, in preventing financial statement fraud (Kallas, 2005). Given these circumstances, additional controls need to be in place to ensure goal congruence between the principal and agent. Therefore, corporate governance is established in a firm to align the interests of the owners and managers by minimizing information asymmetry and consequently reduce financial statement fraud and earnings management.

3.3.2 Positive Accounting Theory

The motivation to be involved in fraud exists when it engages with unpredictable human behaviours (Cressey, 1953). Cressey (1953) conjectures that managing other peoples' capital may compromise objectives, especially, when greed emerges. Godfrey, Hodgson, and Holmes (2000) posit that managers execute their own wants at the expense of others, specifically, shareholders. Managers who are supposed to be responsible for handling shareholders' capital may act in ways that maximise their own benefit. These actions are influenced by factors that may affect the firm's financial performance. This scenario is explained in positive accounting theory that describes the debt covenant hypothesis and political costs hypothesis (Watts & Zimmerman, 1978). In debt covenant hypothesis, managers increase their current year bonus by choosing the business procedures that shift future earnings into current earnings. Managers implement the same method in a situation where the debt covenant is nearly violated. In avoiding any political costs, managers select the business procedures that reduce current earnings

and shift it into the next year's income. In the event of financial statement fraud, various motives are involved. Depending on the situations and needs, firms may manipulate financial records to report either a high or low earnings through earnings management and financial statement fraud.

3.4 Empirical Studies of Corporate Governance and Financial Statement Fraud

The debate on financial statement fraud and corporate governance structures began in the mid-1990s. The structures of corporate governance contain two important key components: the board of directors and audit committee. Both components need to work together in order for the whole corporate governance structure to be effective. It is argued that good corporate governance structures are able to minimise the risk of financial statement fraud (Nor, Ahmad, & Saleh, 2010; Smaili & Labelle, 2009). This is achieved when effective corporate governance improves the firm's efficiency through the integrity and quality of financial reporting (Rezaee, 2002). It is important to identify which corporate governance mechanisms fail and facilitate financial statement fraud so that improved corporate governance is structured. The pioneer study on corporate governance and financial statement fraud is conducted by Beasley (1996) who investigates the composition of board and audit committee with reference to financial statement fraud. Later, more studies examine the connection between corporate governance structures and financial statement fraud. Reviews of previous studies on corporate governance structures and financial statement fraud are discussed below.

3.4.1 Board of Directors and Financial Statement Fraud

Previous studies provide evidence that financial statement fraud is related to how the board of directors are structured. Rezaee (2002) states that board of directors are expected to oversee managerial plans, decisions and actions. The author posits that the board is responsible for safeguarding invested capital and delegate duties to senior managers. The board is also accountable as the proxy for the shareholders and independently assess management performance and strategies periodically. It is also the responsibility of the board to establish an audit committee team that will increase the firm's and shareholders' value. These indicate that the board has critically important responsibilities, including delivering financial reports that are within the required regulatory standards to assist stakeholders in making decisions. With recent financial statement fraud occurring in Malaysia, this study examines the board of directors' independence, expertise, insiders, duality, diligence, and remuneration as the proxy of the board of directors and its association with financial statement fraud.

3.4.1.1 Board of Directors' Independence

One of the important elements in corporate governance structure is the independence of directors. Independent directors are also known as outside directors and referred to as non-employee directors (Beasley, 1996). Comprehensively, public firms are required to have an adequate percentage of independent directors on their board. This is to minimise biased judgment if

the corporate governance structure consists of non-independent directors who can dominate the board's decision-making processes (Beasley, 1996). Beasley (1996) investigates the relationship between corporate governance structures and financial statement fraud, arguing that the presence of independent directors is important for reducing the likelihood of financial statement fraud. He performs a logit regression analysis using 75 financial statement fraud and 75 non-fraud firms. The results show that a higher percentage of independent directors are significantly related to less financial statement fraud. This study thus demonstrates that increasing the percentage of independent directors will improve the effectiveness of monitoring mechanisms and subsequently reduce financial statement fraud.

Following the rising number of cases of financial statement fraud in American public firms, the Committee of Sponsoring Organizations of the Treadway Commission (COSO) nominates Beasley, Carcello and Hermanson (1999) to examine the need for independent directors on the board. Financial statement fraud firms are selected from four sources that are the Accounting and Auditing Enforcement Releases (AAERs), Security Exchange Commissions (SEC), proxy statements and business press articles. With a study period of 11 years (1987 to 1997), their study involves 200 financial statement fraud firms. The results show that financial statement fraud firms have less independent directors on the board. Therefore, the findings suggest that it is important to have a high percentage of independent directors in order to mitigate financial statement fraud risks.

Later, Beasley, Carcello, Hermanson, and Lapides (2000) investigate financial statement fraud matters based on specific industries. They examine the corporate governance practices in technology, healthcare and the financial services industry from 1987 to 1997. These industries are considered prominent in financial statement fraud in the USA. Using data from 66 firms collected from the AAERs, security exchange commissions and proxy statements, Beasley et al. (2000) find that firms that commit financial statement fraud have low board independence. The results suggest that regardless of the industries involved, most industries (if not all) face financial statement fraud risks.

Chen, Firth, Gao, and Rui (2006) investigate the importance of having independent directors to reduce financial statement fraud in China. They use 169 financial statement fraud firms that face legal action by the Chinese Securities Regulatory Commission from 1999 to 2003. The financial statement fraud firms are also matched with 169 control samples. They employ probit regression to test their hypotheses and find that financial statement fraud can be minimised by increasing the number of outside directors. This indicates that more independent directors will enhance the monitoring power over managers and help reduce the possibilities of financial statement fraud.

Sharma (2004) examines the relationship between the directors' independence with the occurrence of financial statement fraud. The author examines financial statement fraud studies from US for the Australian context. It incorporates 31 firms in Australia that engage in financial statement fraud

from 1988 to 2000. The results suggest that as the percentage of independent directors on the board increases, firms are less likely to engage in financial statement fraud. This study supports the importance of enhancing corporate governance through independent directors regardless of contextual differences between countries.

It is also argued that firms with better corporate governance quality are able to restore market confidence. For example, Chapple, Ferguson, and Kang (2007) indicate that the independence level on a board may signal a firm's strength. They find that financial statement fraud can be reduced by increasing the number of independent directors on the board. Therefore, if the corporate governance structures strictly follow the definition of independent director as defined by the regulatory bodies, firms are better able to mitigate financial statement fraud and retain investors' confidence.

Nevertheless, not all studies on financial statement fraud find that increasing the number of independent director will improve the quality of financial reporting. For example, Persons (2005) examines the relationship between board independence and the occurrence of financial statement fraud. He uses 222 firms as total sample comprising of 111 financial statement fraud and 111 non-fraud firms from 1999 to 2003. The finding indicates that board independence is not significant in reducing financial statement fraud. This is due to the fact that other corporate governance attributes are also important to ensure the effectiveness of corporate governance structure.

In Malaysia, the MCCG requires the board's composition to be balanced so that no individual or small groups can dominate its decision-making (2007, p. 7). The MCCG suggests that an effective proportion of independent directors should be one-third of total board membership (2007, p. 11). However, Hashim and Devi (2007) provide evidence that 13.2 per cent of firms listed on the Bursa Malaysia do not meet the MCCG requirement. The percentage suggested by the MCCG is introduced to ensure adequate independence and efficiency is represented on behalf of the shareholders. However, Johari, Saleh, Jaffar, and Hassan (2008) find that this minimum composition is not sufficient to monitor the management in order to reduce earnings management practices, which may lead to financial statement fraud.

3.4.1.2 Board of Directors' Expertise

In this study, board members are considered experts when they are equipped with accounting and finance knowledge. It is argued that board expertise helps to improve financial reporting quality and increase investors' confidence. This is due to the understanding and experience that may assist the directors to understand the financial conditions and reporting of the firm. Therefore, directors with accounting and financial expertise can reduce the risk of financial statement fraud. Agrawal and Chadha (2005) examine the link between the percentage of directors with financial expertise on the board and the occurrence of financial statement fraud. They examine 159 firms that have restated earnings during 2001 and 2002. They select another 159 firms as the control sample. The control variables used is the firm size, profitability,

growth rates and financial leverage. Using logit regression, they find that the presence of financial expertise on the board reduces the likelihood of financial statement fraud. Their results suggest that the stakeholders demand board members to have relevant levels of competence.

Smaili and Labelle (2009) investigate corporate governance factors that help to prevent and detect accounting irregularities through the board expertise. They use a sample of 107 firms that are involved in issuing fraudulent financial reporting and 107 non-fraud firms from 2001 to 2005. They find that competence on the board is negatively associated with accounting irregularities by using multivariate logit regression model. Their results are consistent with prior studies which imply that the competence level on a company board can provide continuous financial reporting assurance.

Fich and Shivdasani (2007) look at firms that are facing lawsuits due to financial statement fraud. Using a 5 year sample period from 1998 to 2002, their study includes 685 litigation filings from 580 different firms. Their study draws attention to the importance of preserving a high level of proficiency on board composition. The expertise of the directors on the board is able to provide continuous assurance and retain support (monetarily) from stakeholders who are confident with the firm's financial reporting conditions. Their findings emphasise that if directors ignore professional demands on their jobs, then stakeholders, especially, the investors, will lose confidence in them.

To show that financial and account expertise is important if board members are to do their job properly, the MCCG requires formal and transparent procedures regarding the appointment of new board members (2007, p. 11). This is stated in Practice Note 5 in pursuance with a compulsory Main Board listing requirement. It stresses that selection should be based on skills, knowledge, expertise, experience and integrity to preserve and enhance professionalism and qualifications. After providing orientation and an education program to the new recruit, an annual performance review should be done and disclosed in the annual report. Compulsory attendance of training programs as prescribed by Bursa Malaysia for all board members will enable directors to discharge their duties effectively. In addition, all presence and absenteeism of board members at training courses need to be disclosed in the annual report.

3.4.1.3 Insiders on the Board

This section discusses the consequences of having insiders on the board and the impact on financial statement fraud. The insider on the board is defined as the directors who also serve as part of the management (Dunn, 2004). It is argued that having insiders on the board may improve corporate governance structures by improving managerial monitoring and reducing information asymmetry. An effective corporate governance structure will consequently reduce financial statement fraud and earnings management (Beasley, 1996; Lafond & Roychowdhury, 2008). However, some argue that insiders on the board may reduce firms' value (Dechow et al., 1996; Dunn, 2004) and impose

doubts on the reliability of accounting figures (Haniffa & Hudaib, 2006). It is argued that the presence of a director on the management team raises issues of conflict of interest and interferes with managerial decision-making. According to Ball et al. (2003), resolving information asymmetry through insider communication reduces accuracy in accounting records and decreases the quality of the financial reports and its disclosure. This section further explores studies on the association between having insiders on the board with the occurrence of financial statement fraud.

Dechow et al. (1996) examine the relationship between financial statement fraud and internal governance structure. They use 92 financial statement fraud firms that face AAERs enforcement action from 1982 to 1992. Their study indicates that firms that are highly dominated by insiders will increase the risk of financial statement fraud. This emphasises that it is important to ensure the optimum number of managers that can serve on the board to achieve effective monitoring level and consequently reduce the likelihood of financial statement fraud. Their findings are similar to Dunn (2004) who investigates the impact of insiders' power on financial statement fraud. Dunn (2004) uses matched sample of 103 firms that issue fraudulent financial statement from 1992 to 1996. The results show that financial statement fraud is more likely to occur if a higher percentage of directors are also managers. This is because firms with more insiders on the board issue less accurate and more optimistic financial results.

Beasley (1996) examines the association between percentage of insiders on the board and its relationship with financial statement fraud. The author uses the cumulative percentage of the insiders who also serve on the board as the proxy of insiders on the board. In the final analysis, it is discovered that insiders on the board does not significantly influence financial statement fraud. The results also demonstrate that independence on the board is more important than managerial monitoring in preventing financial statement fraud.

It is also found that the practice of insiders on the board differs between countries. For instance, Fan and Wong (2002) examine the relationship between having insiders on the board and the quality level of accounting report for East Asian countries, namely, Hong Kong, Indonesia, Malaysia, Singapore, South Korea, Taiwan and Thailand. The sample consists of 977 firms from 1991 to 1995. Fan and Wong (2002) argue that having insiders on the board has weakened the level of accounting informativeness in the reported earnings. However, they fail to verify the effect of insiders on the board structure with the level of accounting quality. Although Fan and Wong (2002) and Beasley (1996) do not find a significant relationship between insiders on the board and the occurrence of financial statement fraud, Summers and Sweeney (1998) argue that an insider will sell shareholdings when fraudulent activities occur as a tactic to strategically adjust their net position in the firms. Therefore, this is a good signal to investors to secure their investment from potential financial statement fraud risks.

In Malaysia, it is alleged that firms with many insiders on the board did cause economic problems during the 1997 financial crisis (Khatri, Leruth, & Piesse, 2002). Prior studies provide evidence that when corporate governance is efficiently structured, financial reporting quality may improve. Zulkafli, Samad, and Ismail (2005) contend that the structure of the board is one of the key components in corporate governance because it explains corporate control at different levels. In addition, with directors serving on the management, board members received a personal incentive to monitor managers in addition to their fiduciary responsibilities. Zulkafli et al. (2005) also argue that having a correct percentage of insiders on the board will help deliver effective monitoring. Thus, incorrect percentage of directors that serve on the management should be avoided to prevent preconceptions in judging and monitoring the managers. Furthermore, firms will be at risk of financial statement fraud activities.

The reviews on board insiders imply that although the level of managerial monitoring helps to converge the interests of owners and managers, up to a certain point, the managers may be entrenched as their power increases, resulting in agency conflict. Abdullah (2006) contends that the number of board members serving as managers should be neither too low nor too high, in order to deliver better financial reporting quality. According to Korczak and Korczak (2009), the best percentage suggested for insiders to be on the board is between 25 per cent and 50 per cent.

3.4.1.4 Duality

The position of Chairman of the board is another important element in corporate governance structures. It is argued that a person who is both Chairman and CEO raises agency costs (Boyd, 1995; Su, Xu, & Phan, 2008). This redundant position is also known as duality. Following the financial crisis in the late 1990s, a large number of studies focused on this subject as one of the causes of a firm's failure. Chen et al. (2006) argue that if the positions are acquired by the same person, it may decrease the quality of checks and balances on senior management. For example, one of the roles of a Chairman is to decide the CEO's remuneration and oversee board of director's performance. It is also unfavourable for a Chairman to decide his/her own salary for their CEO position. For that reason, it is not wise for the posts of Chairman and CEO to be held by the same person.

Chapple et al. (2007) argue that it is not advised for a CEO to be Chairman, and vice versa, because separate personal interests must be monitored. The authors examine 62 firms reported to be involved in financial statement fraud and another 62 non-fraud firms. Their findings show a positive relationship between financial statement fraud and having a duality position on the board. This result also suggests that firms that meet the strict separation of Chairman and CEO position can improve monitoring and consequently minimise financial statement fraud risk.

Dechow et al. (1996) investigate factors that cause financial statement fraud. They analyse firms that are accused by the Securities and Exchange Commission (SEC) for manipulating earnings. Their results confirm the hypothesis that firms which employ the same person as Chairman and CEO are more likely to manipulate earnings. Similarly, Beasley, Carcello, and Hermanson (1999) and Sharma (2004) find that in most financial statement fraud cases, the CEO is the Chairman of the firm as well. These studies indicate that it is impossible to avoid self interest in the duality position.

Uzun, Szewczyk, and Varma (2004) examine the practices of Chairman and CEO in financial statement fraud firms. They hypothesise that if both positions are held by the same person, it may cause ineffective monitoring practices. Using sample firms that are involved in financial statement fraud from 1978 to 2001, they provide evidence that duality affects the effectiveness of financial statement fraud monitoring.

Smaili and Labelle (2009) assess the possibility that combined Chairman and CEO positions compromise the process of detecting financial statement fraud. The authors develop a score board to proxy the level of effectiveness when the position of CEO is separated from the position of Chairman. The findings show that firms receiving enforcement action for financial statement fraud implement higher duality practices compared to the non-fraud firms. The results also indicate that financial statement fraud is more severe when the Chairman of the board is also the CEO.

In Malaysia, the MCCG favours the separation of Chairman and CEO's positions, and demands public disclosure if duality exists (2007, p. 10). A survey report by KPMG Malaysia states that the CEO is responsible for preventing financial statement fraud (2009, p.37). Previous studies provide evidence on the negative effect of practicing duality on the quality of financial reporting. For example, Johari et al. (2008) examine whether duality enhances the corporate governance monitoring roles for firms in Malaysia. The authors define CEO responsibility as determining a firm's operations and strategic implementation, whereas the function of Chairman is to monitor and evaluate senior executives, including the CEO. This situation causes conflict of interest and greater business risk (Abdullah, 2001). Johari et al. (2008) find firms practicing duality have lower financial reporting quality. Saleh et al. (2005) also conjecture that even though firms are comprised of more independent directorship, it does not eliminate conflict of interest that arises due to duality. Hence, the separation of Chairman and CEO is important for effective monitoring and mitigating financial statement fraud.

3.4.1.5 Board of Directors' Meetings

The number of board meetings conducted yearly may reflect the board commitment and diligence towards a firm. Chen et al. (2006) investigate the relationship of board meeting frequency and financial statement fraud. They argue that meetings reflect the board's awareness of potential financial statement fraud matters, therefore, more meetings are conducted. Similarly, Zulkafli et al. (2005) advocate that the number of board meetings is positively

associated with the presence of financial statement fraud and demonstrates a poor firm's performance. The findings by Chen et al. (2006) and Zulkafli et al. (2005) suggest that more board meetings are an indication that the directors are interested in improving the quality of corporate financial statements.

Vafeas (1999) states that board meetings indicate the board's diligence in its monitoring roles. He argues that in the event of poor firm performance, an increasing number of meetings may improve a firm's business condition. Using 307 sample firms from 1990 to 1994, the author uses the number of board meetings conducted annually as the proxy of board activeness. Results show that higher meeting frequency leads to better firm performance. Vafeas (1999) provides evidence that more frequent board meetings is a sign that the board members are not passive. Frequent board meetings also suggest that the board is attempting to resolve issues occurring within the firm, including financial statement fraud.

Later, Carcello, Hermanson, Neal, and Riley (2002) contend that more board meetings demonstrate that the board members are diligent in delivering their responsibilities. By having frequent board meetings, the board members are regularly informed of current issues that are circulating in the firm. Therefore, the board members may actively contribute during the decision-making process. Gao and Kling (2008) argue that an increment in the number of board meetings would indicate a stronger board structure and may prevent financial statement fraud. Their study demonstrates a positive relationship between the number of board meetings and financial statement fraud. It is argued that firms

that are experiencing problems conduct more meetings to discuss and solve this issue.

Evidence from the study by Xie et al. (2003) suggests that board meetings frequency can minimise alterations in financial figures by managers. They use a final sample of 282 firms-year observation for 1992, 1994 and 1996, finding that frequency of a board meeting is associated with a reduction in financial statement fraud. Their results thus specify that the number of board meetings can improve the effectiveness of the board of directors in preventing financial statement fraud.

3.4.1.6 Board of Directors' Remuneration

The value of directors' remuneration has risen over the years. Prior studies demonstrate the role of directors' remuneration is to minimise agency conflict by reducing information asymmetry between directors and managers and create interest alignment with shareholders (Becht, Bolton, & Röell, 2003). A study by Talha, Salim, and Masoud (2009) indicate that directors' remuneration is a positive reflection of corporate governance structures.

Majdi and Rahman (2010) examine the remuneration value of the directors on firms that are convicted with financial statement fraud. The authors use a sample of 68 financial statement fraud and 68 non-fraud firms. Using logit regression model, they report that financial statement fraud firms reduce the remuneration value in the second year after conviction, while the non-fraud

firms increase the remuneration value during the same period. The reduction in remuneration value of the financial statement fraud firms is treated as a method to discipline the board, whereas the increment of directors' remuneration in the non-fraud firms serves as a reward for good performance. According to Guerrero (2004), the board members may use their power to override the normal process and demonstrate unreal achievements. This is to maintain or increase current remuneration received by the board members. Thus, the increment in remuneration value as indicator for quality financial reports is considered to be ineffective because poor ethical conduct and misuse of powers may not be addressed. Studies by Spathis et al. (2002) and Degeorge et al. (1999) also confirm that most recent cases of financial statement fraud are due to corporate greed.

The directors' remuneration is considered to be an incentive for better responsibility as assessed by board members. Huang and Liang (2007) argue that the remuneration value should be paid correspondingly to the directors in order to increase the firm's performance. They perform logit regression analysis on 39 financial statement fraud and 39 non-fraud firms that are listed on the Shanghai and the Shenzhen Stock Exchange. The results show no evidence that the remuneration value is a factor leading to financial statement fraud.

With reasonable amounts of remuneration, directors may deliver their responsibilities efficiently. Brown and Caylor (2004) investigate the underlying factors for a firm to perform resourcefully. Their findings

demonstrate that the value of directors' remuneration is positively related to a firm's performance when the amount is reasonable. With a coherent value of remuneration, the board is motivated to improve firm's performance by performing their duties as directors.

3.4.2 Audit Committee and Financial Statement Fraud

Apart from the board of directors, the audit committee is another essential component in the corporate governance structure. Beasley (1996) investigates the possibility of audit committee composition in reducing the occurrence of financial statement fraud. The author includes the effects of audit committees and board composition when inspecting the effectiveness of total corporate governance system in minimizing financial statement fraud. Beasley (1996) emphasises that the audit committee provides more detailed knowledge and understanding of financial statement issued by the firm. However, the findings demonstrate that the presence of an audit committee is not likely to reduce financial statement fraud. This is due to the fact that the audit committee members may fail to understand their exact duties and leave the board to be responsible for audit committee.

For this reason, Cohen, Krishnamoorthy, and Wright (2002) emphasise the importance of collaboration between the board of directors and audit committee to improve the quality of financial reporting. The function of the audit committee is to improve the monitoring system of financial reporting and corporate governance (Saad et al., 2006). The audit committee is there to

enhance firms' value. The audit committee helps to detect and be aware of conditions that might lead to financial statement fraud (Goodwin-Stewart & Kent, 2006; Loebbecke, Eining, & Willingham, 1989). Thus, it is important that the audit committee is well structured. The next section describes the conclusions of earlier studies on the audit committee and its relationship with financial statement fraud. Audit committee measures that are the focus of this study are: audit committee independence, competence, diligence, external audit quality, internal audit source and audit fees.

3.4.2.1 Audit Committee's Independence

Due to accounting scandals in the US, Sarbanes-Oxley Act 2002 has mandated audit committees to be fully independent. Audit committee independence is defined as independent directors who served on the audit committee. As argued by Abbott et al. (2002), audit committees that are entirely constituted of independent directors are more prepared to confront managers on financial reporting issues. The authors examine 41 firms that issued fraudulent financial statements from 1991 to 1999 and find that higher levels of audit committee independence reduce the likelihood of financial statement fraud. Furthermore, a higher percentage of independent audit committee on the board reduces financial statement fraud risks. Similarly, monitoring the activities of managers is one of the tasks of an audit committee. To deliver an unbiased audit judgement, it is essential for the audit committee to be independent. Persons (2005) investigates the relationship between audit committee independence and the likelihood of financial statement fraud. Their results

indicate that the likelihood of financial statement fraud is less when an audit committee consists only of independent directors. This scenario is significant in reducing the likelihood of financial statement fraud.

Persons (2009) argues that financial statement fraud indicates that the directors lack ethical values. Furthermore, the independence of an audit committee is positively related to earlier ethics disclosure. The sample for the study consists of firms engaged in financial statement fraud from 1999 to 2003. The sample includes 77 financial statement fraud and 77 non-fraud firms. Using the logit regression model, it emerges that firms with a higher percentage of independent audit committees made earlier voluntary ethics disclosures. Firms with more independent audit committees also experience less financial statement fraud risks. Likewise, another study investigating the importance of having an independent audit committee is Crutchley et al. (2007). They examine corporate governance structures that affect accounting practices which may lead to financial statement fraud. The authors employ univariate analysis and logit regression models for 97 financial statement fraud firms investigated by the SEC between 1990 and 2003. By matching the financial statement fraud sample with the control firms, they find that firms operating with a small percentage of independent directors on the audit committee are more likely to become involved in financial statement fraud.

Smaili and Labelle (2009) investigate whether audit committee independence is a competent aspect to prevent and detect accounting irregularities. Their results show that a smaller percentage of independent audit committee

members on the board can potentially lead to accounting irregularities. Their findings highlight that independent audit committee members are essential to retain market confidence by showing efforts in minimizing the risk of financial statement fraud. Thus, by having higher percentage of audit committee independence, firms illustrate that they are making efforts to increase the quality of financial reporting. Beasley et al. (2000) report that low independence levels on an audit committee leads to financial statement irregularities in many industries. Here, non-fraud firms have higher independence level on the audit committee. It is found that audit committee independence is relatively low in financial statement fraud firms compared to non-fraud firms.

Owens-Jackson et al. (2009) examine the importance of having independent audit committees in preventing financial statement fraud. They investigate 50 firms from the SEC lists for financial statement fraud from 1994 to 2001. They found that the level of audit committee independence is negatively associated with financial statement fraud. However, based on their findings, it is possible that financial statement fraud may occur in firms with a fully independent audit committee. This suggests that audit committee independence is not the only mechanism that can be used to prevent financial statement fraud. Many other important corporate governance mechanisms need to complement each other in order to minimise the risk of financial statement fraud.

Many studies show evidence that independent audit committee members will improve the quality of financial reporting (Bédard & Gendron, 2010). Avoiding this may put firms and their stakeholders at risk of financial

statement fraud. In Malaysia, however, the MCCG does not oblige audit committees to be fully independent (2007, p. 14). The MCCG requires a majority of at least three audit committee members to be independent (2007, p. 14). In contrast, SOX 2002 mandates audit committees to solely be consist of independent audit committee members.

3.4.2.2 Audit Committee's Expertise

It is argued that audit committee members with accounting and financial expertise are able to reduce the risk of financial statement fraud. This is because audit committee members understand how financial systems work and what has to be reported in financial statements. For the purpose of this study, audit committee members are considered to be experts because they are equipped with accounting and finance knowledge and expertise.

Moyes and Hasan (1996) conduct a survey on 357 audit committees to investigate the importance of having financial expertise as the ability to detect financial statement fraud. The results show that experience and reputation are constantly significant and have an impact on financial reporting. In their study, respondents evaluate the effectiveness of 218 auditing techniques in detecting financial statement fraud. They find that experienced auditors able to detect financial statement fraud better than inexperienced auditors. This is due to the fact that previous experiences in detecting financial statement fraud improved awareness and alertness when fraud emerged. The survey also reveals that directors, shareholders and managers often argue who is the appropriate party

responsible for detecting financial statement fraud, whether it is the audit committee, internal auditor or external auditor.

Alleyne and Howard (2005) in their research concerning Barbados, analyse 19 auditors and 24 financial statement users. This study discovers that audit committees consider that it is the management's task to detect financial statement fraud, and vice versa. Financial statement fraud, however, is not a major issue in Barbados because the existence of an effective internal audit team, audit committee and internal controls work very well and are effective in mitigating financial statement fraud. Regardless of this situation, it is the responsibility of the audit committee to select the internal and external auditors. In the first place, the audit committee is accountable for describing in detail the specific objectives of audit work for both internal and external auditors.

Persons (2009) provides experimental evidence that the competence of audit committees is positively related to their ethical values. This study explains the importance of establishing good ethical values to each director. As a result, the directors who serve on the audit committee make own efforts to ensure the good quality of financial statement. These findings are supported by Bedard, Chtourou, and Courteau (2004) and Felo, Krishnamurthy, and Solieri (2003), which highlight that the expertise of audit committee members improves financial reporting quality and reduces earnings management activities. Similarly, Smaili and Labelle (2009) and Abbott et al. (2002) detect a negative

relationship between audit committee expertise and the occurrence of financial statement fraud.

Cohen et al. (2002) inspect the impact of audit competence on the audit process. They conduct a semi-structured interview with 36 auditors regarding the audit process and its connection to corporate governance. Their study indicates that on-job-experience is critical for sensitiveness in detecting financial statement fraud.

These studies indicate that audit committee members' expertise does not develop in a short period of time. Expertise requires practice and understanding in order to detect any possibilities of financial statement fraud. The ability of an audit committee to understand and raise appropriate questions in revealing potential issues requires skills, knowledge and experience.

3.4.2.3 Audit Committee's Meetings

A number of studies use the number of audit committee meetings to measure the audit committee diligence and activeness. In the case of financial statement fraud, it is argued that firms have inactive audit committees with few meetings. Beasley et al. (1999) find that firms convicted with financial statement fraud have less audit committee meetings. This study shows that if audit committee is not diligent and active in ensuring the quality of financial statement, firm face higher financial statement fraud risks. The responsibility

of audit committee to exert their monitoring role requires them to meet regularly. Bédard and Gendron (2010) argue that the function of audit committee is to strengthen the financial reporting system in firms. They suggest that audit committee meetings should be conducted privately between internal and external auditors because intervention by other directors on the board and management may affect the quality of audit results.

An active audit committee is likely to exert a positive influence on financial reporting. Owens-Jackson et al. (2009) find that the frequency of audit committee meetings is negatively associated with financial statement fraud. Their findings suggest that if audit committee meetings are held more frequently, firms have better financial reports and this will likely reduce the possibility of financial statement fraud. Persons (2009) argues that the number of audit committee meetings is positively related to earlier voluntary ethics disclosure. He proposes that financial statement fraud firms delay their voluntary ethics disclosures compared to non-fraud firms. He finds that firms which make later voluntary ethics disclosures are more likely to have frequent audit committee meetings. This suggests that these firms are more likely to engage in financial statement fraud.

However, the appropriate number of yearly audit committee meetings that should be held is not exactly known. Abbott et al. (2002) examine audit committee characteristics and their association with financial statement fraud. Their findings indicate that financial statement fraud risk falls when the audit committee meets at least four times a year. Sabia and Goodfellow (2005)

suggest that larger firms should meet more often. Nevertheless, firms must ensure that audit committee meetings need to be properly scheduled for timeliness of audit cycles and the issuance of financial statements (Rahmat, Iskandar, & Saleh, 2009). Saleh et al. (2005) emphasise that audit committee meetings need to be arranged accordingly to ensure meetings are effective and productive. In Malaysia, the MCCG suggests a minimum of two audit committee meetings with external auditors and not attended by the executive board members. This will encourage a greater exchange of free and honest opinions between audit committee members and the external auditor.

3.4.2.4 External Audit Quality

The audit committee is authorised by the board of directors to obtain external professional advice, namely from external auditors. The external auditor is an independent party who inspects financial matters and ensures that financial transactions are accurate and reliable. Fan and Wong (2002) investigate the ability of external auditors in improving corporate governance practices in emerging countries. The finding shows that the external auditor plays an important role in assisting corporate governance by reducing financial statement fraud. In another study, Nieschweitz, Schultz, and Zimbelman (2000) conduct an intensive literature review on the ability of external auditors to detect financial statement fraud. They emphasise the importance of understanding the strategic plans of the client in order to determine potential financial statement fraud. Mutual understanding enables the external auditor to create an efficient strategic auditing plan and make informed judgements on

firms being audited. Strategic auditing enhances early identification of circumstances that may lead to financial statement fraud being conducted.

Since 1989, the high profile external audit firms have been known as the Big 8. Later this became the Big 6 and then Big 5 after several mergers during the 1990s. In 2002, one of the Big 5 audit firms is involved in an accounting scandal in one of its audited firms⁶. Currently, the high profile external audit firms are known as the Big 4. Many studies use the rankings of audit firms as the proxy for audit quality. Michael and Shaw (1995) posit that the Big 5 audit firms are more likely to disclose transparent audit opinions because they have a reputation to maintain. According to Fich and Shivdasani (2007), the failure to detect financial statement fraud may damage the reputation of an external auditor. In addition, failure to do so will incur litigation costs (Palmrose, 1987). Given the pressure and responsibility, it is argued that firms being audited by the Big 5 auditing firms have better and more credible financial reports and less financial statement fraud risks.

It is argued that Big 5 audit firms are stricter in identifying accounting manipulations. Lennox and Pittman (2010) investigate the links between financial statement fraud and appointing any one of the Big 5 audit firms. Using AAERs information, the authors conduct a probit regression analysis on a sample between 1981 and 2001. They find that firms that appoint Big 5 audit firms for external audit tasks are less likely to be involved in financial

⁶ Arthur Anderson is found guilty for being part of the Enron accounting scandal.

statement fraud. This is probably due to the stringent auditing process and eagerness to identify accounting manipulation.

In many cases of financial statement fraud, it is argued that the external auditor fails to notice the presence of financial statement fraud. Nor et al. (2010) propose that the Big 4 audit firms in Malaysia are of high quality compared to the non-Big 4 audit firms. They use 396 unlisted firms which have undergone a complete tax audit by the Inland Revenue Board of Malaysia. They find a negative relationship between firms that are audited by the Big 4 audit firms and the occurrence of financial statement fraud. Their results suggest that selecting a highly reputable external auditor plays an important role in delivering reliable and accurate financial statement. It is also argued that Big 4 audit firms have better techniques to identify fraudulent financial statements and can respond to the matter efficiently due to their experience of external auditing work. In contrast, Chen et al. (2006) find external audit rank does not contribute to the ability to detect financial statement fraud in China. This is due to the fact that external audit prestige is ignored in China. In that country, external auditors are nominated by the corporate governance structure, a mechanism that is not yet welcomed in China.

3.4.2.5 External Audit Fees

Audit fees are the payments made to the external auditor for doing their external audit tasks. The studies on audit fees and financial reporting quality have resulted in mixed findings. It is argued that low audit fees may cause auditors to take shortcuts when doing their jobs. Caramanis and Lennox (2008) argue that audit firms are not motivated if they are being underpaid and therefore deliver less effort in performing their audit duties. They find that when audit effort is poor, firms are more likely to engage in financial statement fraud. Generally, when firms demand better auditing practices, the external auditors spend more time conducting audit work. Consequently, the audit firms request higher audit fees to match their auditing time and effort. Carcello et al. (2002) posit that in the case where firms demand higher audit assurance, audit fees will be higher because more audit work is required. Their survey finds that firms are willing to pay higher audit fees for higher audit quality. Similarly, Salleh et al. (2006) examine the association between audit fees and the quality of financial reporting. They focus on 100 firms in the Industrial Products sector listed on the Bursa Malaysia Main Board for 2002. The findings show that higher audit fees reflect better audit quality. They also discover that firms try to minimise potential financial statement fraud by delivering better financial reports by paying higher audit fees

In contrast, some studies find that audit fees are positively related to financial statement fraud. Geiger and Rama (2003) conjecture that the amount of audit fees may influence audit judgment. When audit fees are higher, the auditor is

more inclined to follow the client's need. Srinidhi and Gul (2006) consider excess value of audit fees as a form of 'soft' bribery, especially, when the audited firm contributes to a large percentage of the audit firm's income. In this situation, the true and fair view by the auditors is compromised by the fees they receive. Conflict of interest between audit firm and the firm is therefore evident, resulting in the failure to notice financial statement fraud.

According to Yatim, Kent, and Clarkson (2006), if the audit committee is focused and determined in delivering their responsibilities, the audit fees may be reduced because the auditor has less fraud risk to monitor. In other words, low audit fees indicate that the firm has delivered their best in ensuring financial reporting is true and accurate. Consequently, firms are not required to have an extensive auditing process that requires higher audit fees. As discussed earlier, the audit quality may be affected when the amount of audit fees are underpaid or overpaid to the external auditor. Choi, Kim, and Zang (2010) investigate whether the magnitude of absolute abnormal accruals is associated with abnormal audit fees during 2000 to 2003. However, they do not find an association between audit fees and financial statement fraud. Further, they find that when an auditor does not encounter issues during the auditing process, the amount of audit fees is irrelevant.

3.4.2.6 Internal Audit Function

The MCCG requires the audit committee of a firm to establish an internal audit function (2007, p. 16). The function of an internal audit team is to

continuously provide assurance that firms comply with financial reporting rules. In the circumstances where the firms are unable to establish their own internal audit functions, they have to justify the assurance provided to their stakeholders. For instance, firms may hire an outside audit agency to perform the internal audit tasks. It is highlighted that an effective internal audit function can minimise and prevent financial statement fraud (Abbott, Park, & Parker, 2000).

Beasley et al. (2000) examine the relationship between financial statement fraud and the existence of internal audit functions. They find that firms that commit financial statement fraud are more likely to implement weak internal audit functions compared to the non-fraud firms. It is argued that regardless of the decision to either outsource or have permanent internal audit function, it is important that firms have excellent internal audit functions to minimise financial statement fraud. For this reason, Abbott et al. (2000) advocate that audit committees should have two methods to overview financial reporting quality, that is through the external auditing process and internal audit function. For internal auditing tasks, a firm may decide to have a permanent internal audit function, or outsourcing the tasks. It is the authority of the audit committee to either establish a permanent audit function or outsource this service (Urbancic, 1996).

An internal auditor plays an important role in identifying accounting errors in a firm. Asare, Davidson, and Gramling (2008) explore the responsibilities of internal audit function in preventing and detecting financial statement fraud.

The authors examine 60 internal auditors who are assigned with several case studies. The study assesses the feedback from participants in order to explore internal auditors' fraud risk decisions. The results suggest that, regardless of the management performance and intention to manipulate financial statement, a high quality internal audit team that is able to effectively deliver monitoring and oversight over the financial reports is more likely reduce any opportunities for financial statement fraud.

In recent times, many external audit firms have provided contractual internal auditing services. It is offered to operating firms who believe that outsourcing the internal audit function is more efficient compared to a permanent internal audit function. In general, outsourcing the internal audit team from the external audit team can benefit a firm in terms of space and costs despite greater exposure to financial statement fraud experience (Pelfrey & Peacock, 1995; Petravick, 1997). Devos (2008) finds that firms are more likely to allow external auditors to do the internal audit works. Glover, Prawitt, and Wood (2008) report that firms tend to have more confidence with outsourced internal audit function in terms of minimizing the inherent risks, or manageable risks. Because financial statement fraud is a type of risk that can be avoided by controlling the fraud triangle⁷, the decision to outsource internal audit function is still appropriate.

An effective audit committee hires an outstanding internal audit team to ensure financial reporting reliability. However, James (2003) argues that although

⁷ The term fraud triangle explains the three major factors that contribute to fraud, namely opportunity, pressure and rationalization (Albrecht et al., 2004).

outsourcing the internal audit function benefits from additional auditing experience, including experience in detecting financial statement fraud, the survey results can be explained differently. It is found that financial statement users suspect that financial statement fraud will occur because the outsourced internal audit function has less knowledge about the audited firm compared to permanent the internal audit function. In another study, Coram et al. (2008) posit that it is important for firms to have their own internal audit function. The authors describe that when firms outsource internal audit function, they increase the risks of financial statement fraud. This is due to the decline in the ability to continuously monitor their own environment and improve the control mechanisms within the firms.

According to Abbott, Parker, Peters, and Rama (2007), an effective audit committee is less likely to outsource its internal audit service. This is to preserve the independence, activeness and expertise in auditing tasks. The authors also raise concerns when the internal audit is outsourced from the external audit firm itself. In this case, it is argued that the external auditor is auditing its own audit work. Under this circumstance, it is the audit committee's responsibility to monitor the internal audit outsourcing procedures (Abbott et al., 2007). According to Swanger and Chewning (2001), whether firms choose to select a different internal audit firm from the external audit firm or to use different audit personnel in the same audit firm, the level of independence is still uncertain. Table 3.1 below summarizes the major studies on the relationship between corporate governance structures and financial statement fraud.

Table 3.1**Summary of Selected Literature on Corporate Governance Structures and Financial Statement Fraud**

Studies	Country	Purpose of Study	Data and Method	Findings
Michaely and Shaw (1995)	US	Investigate the effect of reputation on auditor business decisions	884 firms 1984-1988 Univariate test	The Big 5 audit firms are more likely to disclose transparent audit opinion because they have a reputation to maintain.
Beasley (1996)	US	Examines the relation between board of director composition and the occurrence of financial statement fraud	75 fraud, 75 non-fraud firms 1982-1991 Logit regression	High outside directorship reduce likelihood of financial statement fraud. Insiders on the board do not give effect to the occurrence of financial statement fraud.
Dechow et al. (1996)	US	Explore the relationships between financial statement fraud and internal governance structure.	92 fraud firms 1982 and 1992 Regression analysis	Firms with board members that are highly dominated by insiders will increase the risks of financial statement fraud. Firms which employ same person for both Chairman and CEO position are more likely to manipulate earnings.
Moyes and Hasan (1996)	US	Investigate the importance of having experience auditor to have the ability to detect financial statement fraud.	Survey on 357 auditors Logit regression	Experienced auditors are able to detect fraud better than inexperienced auditor.
Summers and Sweeney (1998)	US	Investigate the relationship between insider trading and fraud	51 fraud firms and 51 non-fraud 1980-1987 Logit regression	Insider will sell shareholdings in the occurrence of fraudulent activities.
Beasley et al. (1999)	US	Provide an extensive updated analysis of financial statement fraud occurrences	200 fraud firms 1987 to 1997 Literature reviews	Financial statement fraud firm consists of low board independence. In most financial statement fraud cases, the CEO is discovered to be functioning as the Chairman of the firm. Less frequent audit committee meeting is conducted in firms that are involved with fraudulent financial reporting.
Vafeas (1999)	US	Examine the board meeting frequency and firm performance	307 firms 1990-1994 Multiple regression	More frequent meeting is an indication that the firm is trying to improve issues that exist within the firm.

Beasley et al. (2000)	US	Investigate the corporate governance differences between fraud companies and no-fraud benchmarks on an industry-by-industry basis	66 firms from technology, health care and financial service industry 1987 to 1997 Univariate test	Low independence of the board's composition in an event of fraudulent financial reporting. All three industries show low levels of independence in audit committee composition, which turns to be one of the factors of the high number of financial statement fraud in this three particular industries. Financial statement fraud firms a more likely to implement a poor internal audit function in the firm.
Nieschwietz et al. (2000)		Previews literatures on the external auditors' relations in detecting financial statement fraud	Literature reviews	Well-equipped knowledge of the handled-firms helps external auditors to understand the client strategic plans. In advantage, this relation will create threats and barriers to fraudulent financial reporting possibilities.
Coles et al. (2001)	US	Draw together the corporate governance structures that have been examined in the extensive literature	144 firms 1986 to 1887 Multiple regression	Incentive to monitor managers' behaviour will increase with management tasks given to board members.
Abbott et al. (2002)	US	Investigate the impact of certain audit committee characteristics that effect the likelihood of financial misstatement	41 fraud, 41 non fraud firms 1991 to 1999 Logit regression	Higher level of audit committee independence and higher level of financial expertise on audit committee reduces the likelihood of financial statement fraud. A minimum of four times audit meeting in a year reduces financial misstatement risk.
Carcello et al. (2002)	US	Examine the board characteristics and audit fees	Fortune 1000 companies 1992-1993 Multiple regression	High frequencies of board meeting demonstrate board members are diligent in delivering their responsibilities. If the board demand higher audit assurance, audit fees will be higher because more audit work is required.
Cohen et al. (2002)	US	Assess the impact of corporate governance mechanisms in the audit process	Interview with 36 auditors	On-job-experience is critical for sensitiveness in detecting fraud.

Fan and Wong (2002)	East Asian	Examine the relationship between having insiders on the board and the level of information delivered in the accounting report	977 firms 1991-1995 Multiple regression	Fails to verify the effect of inside directors practiced with the accounting quality, probably due to the differences in the proportion of inside directors among the analyzed countries. External auditor plays an important role in assisting corporate governance through assurance of reducing accounting manipulation by the audited firm.
Haniffa and Cooke (2002)	Malaysia	Investigate the Malaysian cultural characteristics on corporate governance and corporate disclosure level	167 listed firms 1995-1996 Multiple regression	Fails to confirm that board that is dominated by the Malays able to provide better disclosure.
Khatri et al. (2002)	Malaysia	Measure corporate sector performance (efficiency) and empirically examines the roles of corporate governance	31 firms 1995-1999 Multiple regressions	Insiders on the board has been one of the causes on the economic vulnerabilities in the 1997 financial crisis
Geiger and Rama (2003)	US	Examine the association between the magnitude of audit and non-audit fees and auditor report modification decisions for financially stressed manufacturing firms	66 firms Year 2001 Logit regression	High amount of audit fees may influence audit judgment because conflict of interest between audit firm and the firm become present, resulting a possibility of failing to notice financial statement fraud.
James (2003)	US	Inspects whether internal audit reporting structure and internal audit sourcing arrangement affect financial statement users' perceptions of ability of the internal audit function to prevent financial statement fraud	63 respondents Survey ANOVA	Outsourced internal audit function has less knowledge about the audited firm compared to in-house internal audit function.
Khoo (2003)	Malaysia	Reviews corporate governance practices during the financial crisis	Literature reviews	Most firms in Malaysia have different persons holding post of Chairman and CEO as recommended by the MCCG.
Xie et al. (2003)	US	Examine the role of the board of directors, the audit committee, and the executive committee in preventing earnings management	282 firms-year observation 1992, 1994 and 1996 Multiple regression	Frequency of the board meeting is associated with reduction of earnings management activity.

Sharma (2004)	Australia	Investigate the relationship between the directors' independence and duality with the occurrence of financial statement fraud.	31 fraud, 31 non-fraud firms 1988 to 2000 Logit regression	As the percentage of independent directors on the board increase, firms are less likely to be involved in financial statement fraud. The importance of enhancing corporate governance through independence level of directors on the board and duality practices is similar among the countries.
Brown and Caylor (2004),	US	Examine corporate governance and firm performance	2327 firms Year 2002 Corporate Governance Index	Remuneration is positively associated with a firm's performance.
Dunn (2004)	US	Determine the impact on insiders' power on fraudulent financial reporting	103 fraud firms 1992 to 1996 Logit regression	Financial statement fraud is more likely to occur in the presence of higher insiders on the board.
Guerrero (2004)	US	Identify the causes of board of directors' involvement in fraudulent financial reporting	Survey	Executives use their power to override the normal process and demonstrate unreal progressive achievements to maintain or increase current remuneration received.
Uzun et al. (2004)	US	Examine how characteristics of the board of directors and other governance features affected the corporate fraud	133 fraud, 133 non-fraud firms 1978 to 2001 Logit regression	Fails to prove CEO duality will affect the effectiveness of fraud monitoring.
Agrawal and Chadha (2005)	US	Examine whether certain corporate governance mechanisms are related to the probability of accounting scandals	159 fraud , 159 non-fraud firms 2001 and 2002 Logit regression	Presence of financial expertise on the board reduces the likelihood of accounting scandals.
Alleyne and Howard (2005)	Barbados	Investigate how auditors and users perceive the auditors' responsibility for uncovering fraud	Survey: 19 auditors and 24 financial statement users	Auditors believe it is the management task to detect fraud, and vice versa.
Persons (2005)	US	Explores the relation between financial statement fraud and certain corporate governance requirements of the SOX and the new rules of the NYSE and the NASDAQ stock markets	111 fraud, 111 non-fraud firms 1999 to 2003 Logit regression	Auditors' independence is more profound than directors' independence in minimizing financial statement fraud.

Saleh et al. (2005)	Malaysia	Assess the effectiveness of some board characteristics to monitor management behaviour with respect to their incentives to manage earnings	561 firms Year 2001 Multiple regression	Presence of independent directorship does not limit dishonest actions by duality positions.
Zulkafli et al. (2005)	Malaysia	Examine corporate governance in Malaysia	Literature reviews	Numbers of board meeting advocate the presence of financial statement fraud and demonstrate poor firm's performance.
Abdullah (2006)	Malaysia	Examine the influence of board independence, CEO duality and inside directors on the firm financial distressed status	86 distressed and 86 non-distressed firms 1999-2001 Logit regression	The number of board members to serve in management should be neither too low nor too high, in ensuring better financial reporting quality.
Chen et al. (2006)	China	Investigate whether inside directors and boardroom characteristics have an effect on corporate financial fraud	169 fraud, 169 non-fraud firms 1999 to 2003 Probit regression	Fraud occurrence can be minimised by increasing the proportion of outside directors. If the Chairman and CEO position is filled by the same person, it may decrease the quality of top management. Higher number of board meetings is a signal of fraud, due to corporate governance practitioners sensing the presence of fraud to be discussed. External audit prestige is ignored in China because they are selected by the corporate governance, a mechanism that is not yet welcomed in China.
Coram et al. (2006)	Australia & New Zealand	Examine the occurrence of misappropriation-type fraud	KPMG Fraud Survey (2004)	Important for a firm to have their own internal audit function. When a firm uses an outsourced internal audit, they increase the risks of financial statement fraud.
Haniffa and Hudaib (2006)	Malaysia	Investigate the relationship between the corporate governance structure and performance	347 firms 1996-2000 Multiple regression	CEO-Chairman duality is not common in Malaysia.
Yatim et al. (2006)	Malaysia	Examine the association between external audit fees, and board and audit committee characteristics	736 listed firms 2003 Multiple regression	<i>Bumiputera</i> controlled firms have better governance. High audit fees may indicate that the audited firm is being more cautious as they sense presence of accounting manipulation.
Abbott et al. (2007)	US	Investigate the internal audit outsourcing to the external auditor	287 questionnaires Year 2000 Logit regression	Effective audit committee is less likely to outsource internal audit service.

Bozec and Bozec(2007)	Canada	Analyse the relation between having insiders on the board and corporate governance practices	270 firms Year 2002 Multiple regression	Firms that comprise with high insiders on the board reduce the quality of corporate governance structures.
Crutchley et al. (2007)	US	Investigate the corporate governance mechanisms that affect the accounting practices that may lead to accounting fraud.	97 firms 1990 and 2003 Logit regression	Small portion of outsiders on the audit committee are more likely to involve in accounting fraud.
Fich and Shivdasani (2007)	US	Investigate the reputational impact of financial statement fraud for outside directors based on a sample of firms facing shareholder class action lawsuits	580 firms 1998 to 2002 Binary and multinomial logit regression	If a director has ever misused its position through affiliation with financial statement fraud matters, the directors will lose his/ her current position because the committee members and stakeholders (especially investors) lose their confidence. Failure of detecting financial statement fraud will damage auditors' reputation.
Srinidhi and Gul (2007)	US	Inspect linkages between the audit and non-audit fees and accruals quality	4282 firms 2000-2001 Multiple regression	High audit fees are a form of soft bribery, especially if the audited firm contributes to a large percentage of the audit firm income.
Caramanis and Lennox (2008)	Greece	Test the effect of audit efforts on accounting manipulation	9738 audit work 1994-2002 Multiple regression	Audit firms feel unmotivated when being underpaid and therefore deliver less effort.
Gao and Kling (2008)	China	Analyse asset appropriation by principal shareholders	4559 observations 1998-2002 Multiple regression	Positive relation between number of meetings and financial statement fraud occurrence.
Huang and Liang (2008)	China	Exploratory study of corporate governance and corporate fraud in China	30 fraud and 39 non-fraud firms 1997-2002 Logit regression	Find no evidence that board remuneration value is a factor for financial statement fraud. The result is likely driven by other corporate governance structures.
Glover et al. (2008)	US	Examine the effects of internal audit sourcing arrangement on the external auditor's reliance decision in the presence of different levels of inherent risk and task subjectivity	127 external auditors Experimental studies	Firms tend to have more confidence with outsource internal audit function in terms of minimizing the inherent risks, or the manageable risk.

Chapple et al. (2009)	Australia & New Zealand	Examine the occurrence of misappropriation-type fraud	KPMG Fraud Survey (2004)	Financial statement fraud can be reduced by increasing the number of independent directors. Positive relationship between financial statement fraud and having duality position on the board. Firms that meet the strict separations of Chairman and CEO positions are able to improve monitoring expect and consequently minimise financial statement fraud.
Owens-Jacksons et al. (2009)	US	Assess the relation between audit committee structure and the likelihood of fraudulent financial reporting	50 fraud and 50 non-frauds 1994 to 2001 Logit regression	Audit committee independence is negatively associated with financial statement fraud. Frequency of audit committee meeting is negatively associated with financial statement fraud.
Persons (2009)	US	Examines the Audit committee characteristics and earlier voluntary ethics disclosure among fraud and non-fraud firms	77 fraud, 77non-fraud firms 1999 to 2003 Logit regression	Audit committee independence is significant in reducing the likelihood of fraud occurrence. Expertise of audit committee member improves financial reporting quality and reduces earnings management. Firms which make later voluntary ethics disclosure are likely to have frequent audit committee meetings which suggest that the firms are more likely to engage in financial statement fraud.
Smaili and Labelle (2009)	Australia	Determine the corporate governance factors that help to prevent and detect accounting irregularities	107 fraud, 107 non-fraud firms 2001 to 2005 Multinomial logit regression	Competence of the board is negatively associated with accounting irregularities. Firms that are charged for financial statement fraud implement more duality compared to the non-fraud firms. Fewer independent audit committee members on the board will lead to non-compliance audit irregularities in a firm. Negative relationship between audit committee competence and the occurrence of financial statement fraud.
Talha et al. (2009)	Malaysia	Examine the directors' remuneration and board committee	120 firms Year 2006 Multiple regression	Remunerations have positively reflected to uphold good governance practices. Directors in Malaysia received lower remuneration compared to the Singaporean board members.

Asare et al. (2010)	US	Explore internal auditors' fraud risk decisions in response to variations in audit committee quality and management performance incentive	60 auditors Experimental studies	Regardless of the management performances and intention to manipulate financial statement, a high quality internal audit that effectively deliver monitoring and oversight over the financial reports will likely reduce the opportunities of financial statement fraud
Bedard and Gendron (2010)		Review literature on the effectiveness of the audit committee, and to identify research opportunities	Paper reviews 1994-2008	Audit independence ensures a certain financial reporting quality level. Audit committee meetings should be conducted privately between external and internal auditor. Intervention by the board and management in the meeting will affect the quality of audit results.
Choi et al. (2010)	US	Investigate how audit quality proxied by the magnitude of absolute abnormal accruals is associated with abnormal audit fees	7061 observations 2000-2003 Multiple regression	No association between audit fees and financial statement fraud
Lennox and Pittman (2010)	US	Determine the relative performance of the Big 5 and non-Big 5 audit firms in preventing companies from engaging in financial statement fraud	1109 firms 1981-2001 Probit regression	Firms that appoint Big 5 audit firms is less likely involve in financial statement fraud
Majdi and Rahman (2010)	Malaysia	Examine the remuneration value of the board after firms are convicted of financial statement fraud	68 fraud, 68 non-fraud firms 2001-2006 Univariate test	Fraud firms reduce the remuneration value in the second year after conviction
Nor et al. (2010)	Malaysia	Assess fraudulent financial reporting and firms' characteristics	396 unlisted firms Year 2004 Multiple regression	Selecting highly reputable external auditor plays an important role in delivering reliable and accurate financial statement

3.5 Corporate Governance Reforms after Financial Statement Fraud

Globally, prior research acknowledges importance of corporate governance mechanisms in improving the relationship between shareholders and managers as well as preventing financial statement fraud. Recent studies have demonstrated that weak corporate governance is one of the reasons for financial statement fraud occurrence. This implies why regulators and policy makers are continuously amending the principles and practices of corporate governance to make it more effective. Hee (2007) provides evidence that firms previously involved in financial reporting issues are more likely to repeat the same offense.

A study associated with the importance of corporate governance quality is conducted by Farber (2005). This study examines the corporate governance structures in the post-financial statement fraud period by firms suspected with financial statement fraud. Farber (2005) indicates whether fraud firms make changes and improve their corporate governance structures after financial statement fraud has occurred. The author use the AAERs issued by the SEC for violating SEC Rule 10b-5 occurred during 1982 to 2000. The issuance is used as the proxy of financial statement fraud firm and date of fraud occurrence. The number of AAERs issues during the period is 1357 cases. After excluding non-financial statement fraud cases, duplicate firms and firms with unavailable data, the study generated a final sample of 87 U.S. public firms. The author selects the final samples that are able to be analysed for the next three years after the suspected firms are convicted with financial statement fraud. In order to make data collection more organised, the author restricted the analysis period to five years.

Farber (2005) conducted a pair-matched control firm using a four-digit SIC code when possible, and three and two-digit SIC code for other controlling firms. Matching firms are selected from the same stock exchange and approximately 25 per cent are within the fraud firm's net sales during the fraud year. The study also includes control firms that are free from financial statement fraud conviction.

Farber (2005) finds fraud firms have weak corporate governance practices prior to fraud detection. He also finds evidence that after three years of the fraud declaration by the SEC, corporate governance practices in the financial statement fraud firms have similar or better corporate governance characteristics compared to control firms. This includes an improvement in the percentage of independent directors on the board and the number of audit committee meetings held. These changes lead to a better stock performance for these firms. This suggests that investors value the corrective actions taken to improve the quality of corporate governance practices. It is supported by Bauer, Guenster, and Otten (2004) and Brown and Caylor (2004) who contend that a good corporate governance structure will improve a firms' performance and subsequently generate higher returns to shareholders.

3.6 Earnings Quality and Financial Statement Fraud

The previous sections have discussed the corporate governance characteristics that lead to financial statement fraud occurring. The findings of the empirical studies confirm that poor corporate governance structures increase the risk of financial statement fraud. This is due to financial statement fraud firms having lower

earnings quality compared to the non-fraud firms (Dechow, Ge, Larson, & Sloan, 2011). Previous studies have used earnings management as the proxy for earnings quality. Therefore, it is impossible to separate the issues on earnings management and financial statement fraud.

3.6.1 The Concept of Earnings Management

It is important to emphasise that financial statement fraud and earnings management are two distinct concepts (Beasley et al., 1999). Perols and Lougee (2011) opines that earnings management is a way to commit financial statement fraud. A commonly used and widely accepted definition of earnings management is provided by Schipper (1989) and Healy and Wahlen (1999). Schipper (1989) defines earnings management as:

A purposeful intervention in the external financial reporting process, with the intent of obtaining some private gain (as apposed to, say, merely facilitating the neutral operation of the process)...A minor extension to the definition would encompass “real” earnings management, accomplished by the timing investment or financial decision to alter reported earnings or some subset of it. (1989, p. 92)

According to Healy and Wahlen (1999), earnings management:

Occurs when managers use judgement in financial reporting and in structuring transactions to alter financial reports to either mislead some

stakeholders about underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers. (1999, p. 368)

One key perspective that can be understood from the above definitions is that earnings that are recorded in the financial statement are a sum of accruals and real earnings. According to Xu et al. (2007), financial reporting is subject to accruals earnings management and real earnings manipulation. Therefore, it is important to know that earnings in this study reflect the accounting number in the financial statement. Both definitions of earnings management provided by Schipper (1989) and Healy and Wahlen (1999) also look at the possibilities of earnings being managed using existing standards and real business operations. One could also say earnings can be managed using accruals and/or real activities adjustment. Managing accruals occurs when executives or managers manipulate the accounting discretions permitted by the Generally Accepted Accounting Principles (GAAP) (Xu et al., 2007). Xu et al. (2007) describe real activities earnings management as “management attempts to alter reported earnings by adjusting the timing and scale of underlying business activities” (p. 196). Although the major focus of this study will be on real earnings management activities, the general concept of accruals earnings management and its context are also discussed.

According to Vinciguerra and O'reilly-Allen (2004), earnings management is a difficult concept to intentionally define and measure. Fong (2006) conjectures that determining whether earnings management is a legal or illegal conduct it is a

complex task. This is due to the fact that earnings management is perceived differently from person to person. When it comes to individual perspectives and personal judgement, it is difficult to distinguish one's sincerity or dishonesty. It is argued that the motivation for earnings management is not much different from financial statement fraud. The intention for financial statement fraud and earnings management is unclear, and may only be known by the fraudsters themselves. Nelson, Elliott, and Tarpley (2002) argue that earnings management reduces the earnings quality of a firm. However, Lo (2008) claims that a low level of earnings management does not guarantee high quality earnings. Although Lo (2008) agrees that earnings management reduces the earnings quality of a firm, he believes other factors also contribute to the earnings quality level such as quality of standards being used.

3.6.2 Determinants of Earnings Management

Healy and Wahlen (1999) mention the motive of earnings management is to mislead the stakeholders about a firm's true state and change the contractual outcome. Degeorge et al. (1999) imply that earnings are managed to meet the analysts' and shareholders' expectation. Furthermore, Dechow et al. (1996) argue that the role of accounting information is the key factor for earnings management. As stakeholders refer to financial statement information as one of the determinants of a firm's value, it is posited that firms use this reasoning to manage their earnings information. Thus, firms manage earnings to demonstrate good performance. This can be achieved by avoiding the reporting of losses or decline in profit (Burgstahler & Dichev, 1997; Degeorge et al., 1999).

Managers also manage earnings to report that the firms are making profit (Myers, Myers, & Skinner, 2007). This is to show that the firms have consistent earnings growth and successfully managed their risks. Income is managed to show steady growth over time and to hide any dramatic fall. The firm chooses to execute this method to avoid negative reaction from the stakeholders for the declining performance. This way, the firms hope to please investors and maintain high market value (Perols & Lougee, 2011). It is also indicated that earnings are managed to reduce tax. In this scenario, earnings are managed to reduce the actual current year profits. This is known as 'big bath behaviour' (Healy, 1985). For example, a study by Roubi and Richardson (1998) suggest that Malaysia is involved in managing its abnormal accruals for a reduced corporate tax rate. This is supported by Adhikari, Derashid, and Zhang (2005) who contend that firms in Malaysia use accounting choices to influence the government's tax policy.

3.6.3 Differences between Earnings Management and Financial Statement Fraud

The Malaysian Institute of Accountants (2002) states that financial statement fraud includes intentional omission and misstatement of published financial reports. Earnings management, however, is a misstatement of financial record and misapplication of accounting principles. Nevertheless, the intention to deceive is not impossible in earnings management practice (Aman, Iskandar, Pourjalali, & Teruya, 2006). For example, Argenti (1976) argues that a firm will commit financial statement fraud when there is less earnings to manipulate.

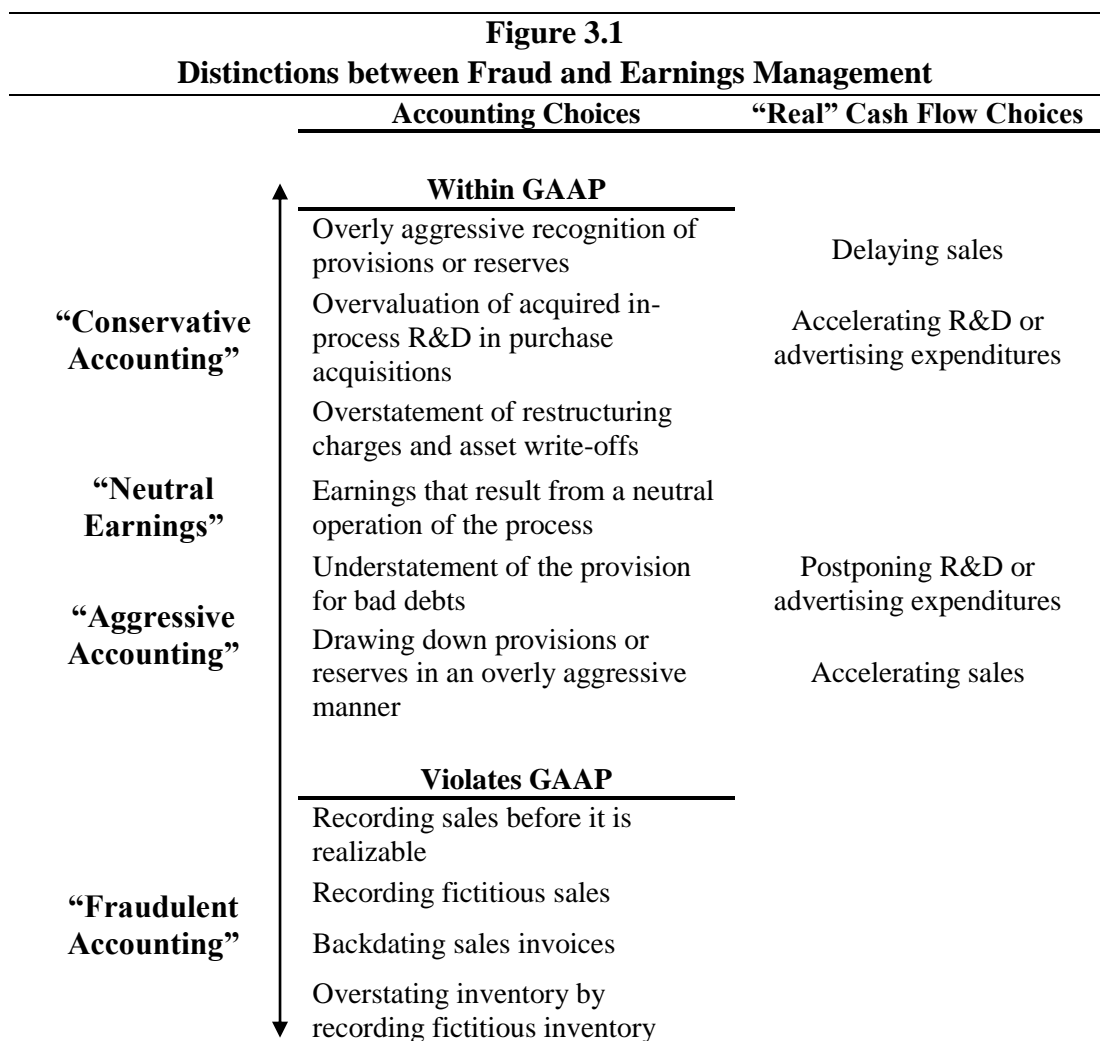
Ronen and Yaari (2007) classify earnings management as white (beneficial), gray (manipulation within boundaries) and black (misrepresentation and fraud). The authors add that when earnings are managed for personal benefit, this means the management takes advantage of the flexibility in the accounting choices for signalling accurate information of firms' overall performance. In contrast, when earnings is manipulated within boundaries, (i.e., GAAP), it is about choosing the accounting treatment that maximises the utility of management and be economically efficient. Lastly, the black classification of earnings management is the evident intention to misrepresent a firm's financial reports. It is argued that not all earnings management are misleading (Chung, Firth, & Kim, 2002). However, Akers et al. (2007) propose that financial statement fraud is an indication of earnings management. Similarly, Soltani (2009) contends that financial statement fraud often starts with earnings management. Bukit and Iskandar (2009) explain that earnings manipulation ranges from financial statement fraud to earnings management.

In China, legal accounting choices or earnings management is argued to be common to be violated and lead to financial statement fraud (Noronha, Zeng, & Vinten, 2008). The authors conjecture that financial statement fraud is an extreme form of earnings management. Davis-Friday and Frecka (2002) conclude that, overall, earnings management is illegal. This is because whether earnings management conduct is deliberate or not, it all starts with intentional planning. In this case, the author is equalizing earnings management with financial statement fraud. The authors suggest good financial statement reporting should involve transparent disclosure of accounting numbers.

Magrath and Weld (2002) find that unclear definitions of earnings management cause regulators and accounting professionals to define some earnings management techniques as correct. Bearing in mind that earnings management can make firms' performance to look more efficient, instances of abusive and extreme earnings management have transformed it into financial statement fraud. This leads to the deceiving of financial statement users. Earnings management is an opportunity to benefit firms and users as a whole. In this situation, mistakes and omissions are treated as unintentional errors, unlike financial statement fraud. In the event of financial statement fraud, firms either aim to reduce or to increase income (DiGregorio, Stallworth, & Braun, 2004). In their study, they find that sample firms acknowledge their primary intention is to modify earnings to meet projected incomes and stakeholders' expectations.

Parfet (2000) proposes that earnings management can be performed with good or bad intentions. Earnings management is considered good when it is practiced in day-to-day operations without ignoring external factors, such as economic factor. The end result for earnings is also reliable and considers the threat and opportunity factors. Bad earnings management, however, involves hiding real information and producing unreasonable earnings results. Even if the conduct of earnings management is not considered to be a form of financial statement fraud, the managed earnings add no positive value to the firm. In this scenario, Stallworth and Digregorio (2004) write that the auditor plays a critical role in ensuring that clients are not accused of earnings alteration. Auditors need to be sensitive to the limits of shifting in accounting standard practices that can lead to financial

misstatements. In other words, earnings are allowed to be changed but this must be conducted within the acceptable boundaries. If the changes made are beyond these limits, then financial reports are considered to be misleading.



Adopted from Dechow and Skinner (2000)

Dechow and Skinner (2000) illustrate the difference between financial statement fraud and earnings management (refer to Figure 3.1). Figure 3.1 shows that earnings management can constitute a form of financial reporting abuse. However, there are accounting standards established to control earnings management. Not all material misstatements or omissions are a result of financial statement fraud. They can be an unintentional error or misinterpretation of standards and regulations. The ambiguousness of accounting practices has extended the

preliminary intention of earnings management into financial statement fraud (Ronen & Yaari, 2007).

For this study, it is important to note that financial statement fraud and earnings management are not the same. Although there are some overlaps in both concepts, application of earnings management is not always related to financial statement fraud. Earnings management can occur for a number of reasons, including unintentional errors and legitimate disagreement over GAAP. In other words, it is accepted for financial numbers to be changed and altered within limits. However, if the financial reports are altered across the restricted limits, financial statement fraud takes place. With financial statement fraud, it is certain that the actor has the intention and desire to hide manipulations and actual financial performance from financial statement users. This study will investigate the possibility of real earnings management activities being undertaken by financial statement fraud firms.

3.7 Empirical Studies on Earnings Management and Financial Statement Fraud

It is posited that failed firms are involved in earnings management up to four years prior to a firm's failure (García Lara et al., 2009). Dechow et al. (1996) write that financial statement fraud firms have higher abnormal accruals in the first three years prior to fraud conviction. This indicates that firms are involved in manipulating their income to present false financial statement reports. Other studies on earnings management have focused on accruals (Beneish, 1999; Callen,

Robb, & Segal, 2008; Guidry, J Leone, & Rock, 1999; Jones, Krishnan, & Melendrez, 2008; Kasznik, 1999; McNichols & Wilson, 1988; Rosner, 2003). It is only recently that real earnings management activities have been acknowledged as a new field of research. Many questions are being raised on real earnings management activities. For this reason, this study focuses on real earnings management activities by financial statement fraud firms. A brief explanation of accruals earnings management is shown below because these two concepts are sequentially related.

3.7.1 Accruals

Healy and Wahlen (1999) draw attention to popular wisdom that earnings management does exist, but is rarely confirmed. A number of widely discussed models to detect abnormal accruals in earnings management are explained in empirical studies in the 1980s and 1990s (see Beneish, 1999; DeAngelo, 1981; Dechow, Sloan, & Sweeney, 1995; Healy, 1985; Jones, 1991). This section explains the studies that demonstrate earnings management activities.

McNichols and Wilson (1988) investigate whether firms with higher bad debt provisions manipulate their accrual-based earnings. Using abnormal accruals as a proxy to earnings management, the study indicates that managers implement income decreasing accruals when firms' income is extremely low. DeFond and Jambalvo (1994) analyse abnormal accruals of firms that violate the debt covenant. They find substantial evidence that earnings are modified one year before the violation. Beneish (1999) uses sample of 2406 firms that manipulate

earnings from 1982 to 1992. The author develops a model for detecting earnings management and discovers that approximately half of the sampled firms are involved in earnings management prior to public discoveries.

Later, Guidry et al. (1999) prove managers use abnormal accruals to maximise personal short-term bonuses due to the advantage of information asymmetry with upper level executives. Kasznik (1999) finds evidence that managers increase their earnings after over-estimating their forecast incomes. Callen et al. (2008) investigate the probability of firms' manipulating revenues using 1990 to 1994 restatement data concerning 1954 firms. The study emphasises that firms are more likely to manipulate revenue from GAAP if firms are in deficit or forecasting losses. Another study by Rosner (2003) investigates the manipulation of earnings in failing firms. Here, failing firms are defined as businesses that are previously engaged in financial statement fraud to conceal the distress condition. A total of 586 sample firms which are identified as bankrupt from 1985 to 1998 are used. The author proves the hypothesis that failing firms are more likely to manipulate their accruals by engaging in income increasing earnings manipulation.

A study by Jones et al. (2008) examines the relationship between financial statement fraud and abnormal accruals. They evaluate the ability of 10 accruals models used in prior studies to detect financial statement fraud. A 118 sample firms are collected from the SEC for financial statement fraud conducted from 1988 to 2001. The findings show that it is not sufficient to solely rely on abnormal accruals models to detect earnings management. Roychowdhury (2006) notes that firms are unlikely to rely on accruals earnings management to manage earnings. In

the next section, discussion will be on the substitute for accruals, which is the real earnings management activity.

3.7.2 Real Earnings Management

Reported earnings in financial statement are subjected to accruals and real earnings management (Xu et al., 2007). However, the literature on earnings management through real earnings management is fairly recent. The pioneer study for real earnings management is conducted by Roychowdhury (2006). Roychowdhury (2006) defines real earnings management as “management actions that deviate from normal business practices, undertaken with the primary objectives of meeting certain earnings threshold” (p.336). Another explanation of real earnings management is suggested by Ewert and Wagenhofer (2005) as changes of timing or structuring of real transactions by the managers. The next section discusses studies discussing the existence of real earnings management activities.

3.7.2.1 Evidence of Real Earnings Management

Empirical studies explain that firms manage earnings using real activities. In real earnings management activities, alteration is made on cash flow from operations, production costs and discretionary expenses (Roychowdhury, 2006). A total of 17,338 firm years' data from 1987 and 2001 are collected to investigate earnings management through real earnings management activities. The excessive price discounts and overproduction are measured by abnormally low cash flow from

operations and abnormally high production costs, respectively. The author discovers that firms manage their earnings through price discounting, lenient credit terms and overproduction to meet analysts' forecasts.

The cash flow from operations' section in cash flow statement of the financial statement explains the details of cash generated from operating business transactions. It provides details of the real value of cash in hand for the transaction sale made with the customers and purchases from the suppliers. During the real earnings management activities in operating cash flow, earnings manipulation is made on the selling price of the business items. In this scenario, the firm gives sales discounts or changes the credit terms to increase sales income. Although the earnings increase during the current year, lower cash per sale item causes a decline in profit margins. As a result, firms that manipulate cash flow from their operations by offering excessive sales and lenient credits terms will incur an abnormally lower cash flow.

In connection with managing the production cost, Dhaliwal, Frankel, and Trezevant (1994) examine the determinants of last in first out (LIFO) method with regard to taxation and book income. Firms that are identified using the LIFO as a primary method in inventory management from 1979 to 1988 are included in the analysis. The study generates a sample consisting of 1,864 firm years and reports that firms are more likely to use the LIFO to avoid debt covenants and minimizing their tax liability. Thomas and Zhang (2002) also provide evidence that firms report lower cost of goods sold (COGS) by absorbing the production costs. They argue that in order to decrease COGS that resulted in higher earnings, firms are

required to produce more in quantity to meet expected sales and normal inventory levels. In doing this firms succeed in improving their profitability margins but at the same time cause production costs to be abnormally high.

3.7.2.2 Consequences of Real Earnings Management

A study of real earnings management is important because changes made in real transactions may be costly (Ewert & Wagenhofer, 2005) and may cause firms to collapse (Yu, 2008). Graham et al. (2005) posit that managing earnings by adjusting current income may reduce firm value in the long term. Furthermore, the alteration may lead to poor subsequent performance (Gunny, 2005; Roychowdhury, 2006). In addition, real earnings management may simultaneously reduce business performance and impose higher financial obligations (Demski, 2004). For instance, if real earnings manipulation succeeds and firms are able to meet their expected earnings, then they are obliged to deliver financial rewards to their managers (Yu, 2008). Furthermore, the time and effort spent by executives to manipulate real earnings activities are better focused on improving other valuable issues that may increase their firms' value. Real earnings management activities also have real economic costs (Bar-Gill & Bebchuk, 2002). For example, in managing cash flow, firm offers customers sales discounts and lenient credit terms. In the long run, the customers may expect the same offers from the firms. Therefore, it is possible that cash flows in future periods are affected negatively by the actions taken in the current year to increase earnings.

3.7.2.3 Real Earnings Management and Financial Statement Fraud

To date, only a few studies have examined the prevalence of real earnings management in financial statement fraud firms. Therefore, this study attempts to investigate the potential of real earnings management activities in financial statement fraud firms based on the existing literature. In recent years, the incidence of real earnings management has increased significantly as firms are switching from accruals-based earnings management to real earnings management (Cohen, Dey, & Lys, 2008; Gunny, 2010). Chi, Lisic, and Pevzner (2011) argue that this could be due to the strengthening of accounting policies and standards which have minimized firms' ability to manipulate accruals transactions. According to Ewert and Wagenhofer (2005), tightening accounting standards has had little effect on real earnings management.

Zang (2011), posits that managers use real earnings management activities as a substitute of accruals discretion. Real earnings management is preferred by the managers because managing earnings through real activities are less noisy (Ball & Shivakumar, 2005). In addition, real earnings management activities are also more difficult for outsiders to observe or detect (Schipper, 1989) by the auditors, compared to accruals. Roychowdhury (2006) argues that accruals earnings models ignore direct cash flow consequences, unlike real earnings management activities.

Hashemi and Rabiee (2011) focus on production costs as the proxy of real earnings management. They use financial data from Iranian firms listed on the Tehran Stock Exchange over the sample period 2000 to 2010. They report that

auditors should focus on real earnings management activities in determining early signs of fraudulent financial reporting. This is due to the findings on their study that indicate that accruals earnings management occur subsequent to real earnings management activities. Zang (2011) and Pincus and Rajgopal (2002) also conjecture that real earnings management activities is a conduct that precedes the intention to manage accruals. This indicates that the real earnings management model is a significant tool for detecting the early warning signals of financial statement fraud.

Joosten (2012) examines publicly listed firms in 13 European countries during 2008. The author argues that firms are likely to manipulate earnings using production costs and discretionary expenses if the economic consequences are less compared to using accruals earnings management. The author also posits that the decision to be involved in either real earnings management or accruals earnings management is associated with the type of industry involved. Furthermore, Joosten (2012) mentions that accruals earnings management is not preferable because managing accruals are constrained by a firms' accounting flexibility and it is easily detected by the auditors.

Concerning investors, Enomoto et al. (2012) examine the differences between real earnings management and accruals practice in 38 countries. The study involves data consisting of 289,055 firm years observations from 1991 to 2010. Their study indicates that real earnings management activities are preferred over accruals earnings management in countries with stronger investor protection. This is due to

the fact that accruals earnings management is more of a constraint in countries with stronger investor protection legislation.

In another study, Sun (2011) investigates whether firms experiencing distress are involved in meeting earnings forecasts by manipulating their underlying business operations. Using a sample of 7,852 fiscal quarters of publicly traded U.S. firms, the author finds evidence that managers manipulate real activities to avoid reporting losses and to meet analysts' earnings forecasts.

Although studies on real earnings management activities in financial statement fraud firms are relatively few, some analyses are relevant to the objective of this study, that is, to examine whether financial statement fraud firms are engaged in real earnings management prior to the event of financial statement fraud. Table 3.2 below summarizes the selected relevant literature on real earnings management activities and financial statement fraud.

Table 3.2**Summary of Selected Relevant Literature on Real Earnings Management Activities and Financial Statement Fraud**

Studies	Country	Purpose of Study	Methodology	Findings
Thomas and Zang (2002)	US	To understand how inventory changes linked to subsequent abnormal returns	39,315 firm-year 1970 to 1997 Pooled regression	Firms report lower COGS by absorbing the production costs.
Dhaliwal et al (1994)	US	Examine the potential determinants of LIFO liquidations	2,140 firm years 1979-1988 Multivariate tobit model	Increasing production helps firm to maintain targeted earnings.
Roychowdhury (2006)	US	Find evidence of earnings management through real earnings management activities	17,338 firm years 1987-2001 Multiple regression	Firms manage earnings by price discount, lenient credits terms and overproduction to meet analysts' forecast.
Hashemi and Rabiee (2011)	Iran	Investigate a relation between real earnings management and accounting earnings management to smooth Earnings	1670 observations 2000-2010 Multiple regression	Auditor should focus on real earnings management activities in examining accruals because their findings show that accruals occur after real earnings management activities.
Sun (2011)	US	Examine whether firms in distress are involved in meeting earnings forecasts through manipulating underlying business operations	7,852 fiscal quarters 1996-2007 Multiple regression	Managers manipulate real activities to avoid reporting losses and to meet analysts' earnings forecasts.
Zang (2011)	US	Tests whether managers use real activities manipulation and accrual based earnings management as substitutes in managing earnings	820 industry-years 1987-2008 Probit regression	Managers are using real earnings management activities as a substitute of accruals discretion.
Enomoto et al. (2012)	38 countries	Examine the differences between accrual –based and real earnings management	289,055 firms years 1991-2010 Multiple regression	Real earnings management is preferred over accruals earnings management in countries with stronger investors' protection.
Joosten (2012)	Europe	Explores the extent to which the relative costs of real earnings management and accrual-based management affect the trade-off between both strategies to manage earnings	869 firms Year 2008 Multiple regression	Firms are likely to manipulate earnings using production costs and discretionary expense if the economic consequences are lowered compared to using accruals. Accruals are not preferable because accruals are constrained by a firms' accounting flexibility and easily detected by the auditors.

3.8 Research Gaps

Existing empirical literature provides evidence that corporate governance structures are associated with financial statement fraud. It is discovered that the majority of research conducted on financial statement fraud has concentrated on developed countries such as the US, UK and Australia. The rising number of financial statement fraud cases in Malaysia may be attributed to the lack of empirical evidence in financial statement fraud research in Malaysia and limited guidance about corporate governance characteristics in preventing financial statement fraud. Interestingly, financial statement fraud studies whether in developed or emerging countries do not differ much in terms of the operationalization of corporate governance variables. It is possible that the mixed results of the previous studies are due to differences in sample size, testable variables, statistical methods and country settings (Wallace, Naser, & Mora, 1994).

The studies on corporate governance and financial statement fraud highlight the importance of having strong corporate governance structure in producing credible corporate financial statements. Surprisingly, little is known about the improvements made by the financial statement fraud firms on their corporate governance structures subsequent to financial statement fraud incident. The evidence of improvements in the corporate governance structures of financial statement fraud firms is important because the quality of corporate governance is a concern to investors. It also indicates that firms value the efforts of regulators and

policy makers in assisting them to implement strong corporate governance structures.

Prior studies also provide evidence that financial statement fraud is adversely affected by the practice of earnings management. According to Perols and Lougee (2011) and Dechow et al. (1996), financial statement fraud firms are more likely to engage in earnings management prior to the event of financial statement fraud. Therefore, it is possible to detect potential financial statement fraud before it occurs through earnings management activities. In order to do this, it is essential to minimise earnings management conduct during its early phase. Previous studies on earnings management have used accounting accruals as the proxy for earnings management. However, some studies provide evidence that it is more favourable for firms to manipulate real activities transactions (Ball & Shivakumar, 2005; Graham et al., 2005; Hashemi & Rabiee, 2011; Joosten, 2012). While other studies support the prediction that firms with lower quality financial reporting are related to earnings management activities, none has examined real earnings management in the context of financial statement fraud. There are also limited studies that consider examining real earnings management activities in firms prior to financial statement fraud occurring. In fact, while a number of studies have examined various issues on financial statement fraud, they reveal a lack of substantive research on (i) the association between corporate governance structures and financial statement fraud incidence in Malaysia, (ii) whether financial statement fraud firms changed their corporate governance structures subsequent to financial statement fraud year, and (iii) whether financial statement

fraud firms engage in real earnings management activities prior to the financial statement fraud year.

3.9 Conclusion

This chapter has extensively reviewed prior literature on the topic of this study. The reviews indicate that corporate governance, real earnings management and financial statement fraud have been a topic of interest among researchers around the world. This chapter also explains the relevance of associating the agency theory and positive accounting theory with financial statement fraud studies. Prior studies demonstrate mixed findings regarding corporate governance and financial statement fraud as well as real earnings management and financial statement fraud. The extant studies are different in terms of time frame and geographical locations, indicating that business environment and local circumstances do influence their findings. Therefore, this study attempts to investigate the practice of corporate governance and real earnings management on financial statement fraud in Malaysia. The next chapter discusses the framework and hypotheses developed for this research.

Chapter 4

Conceptual Framework and Hypotheses Development

4.1 Introduction

The previous chapter reviews prior studies on corporate governance structures and real earnings management practices in firms perpetrating financial statement fraud. This chapter demonstrates the conceptual framework for the study. The variables and proxies exhibited in the conceptual framework are further linked to relevant theories. Next, this chapter develops the hypotheses for the study. The structure of this chapter is as follows: Section 4.2 describes the conceptual framework, while Section 4.3 draws attention to the developed hypotheses with regard to: firstly, corporate governance and financial statement fraud; and secondly, real earnings management and financial statement fraud. Finally, Section 4.4 concludes this chapter.

4.2 Conceptual Framework

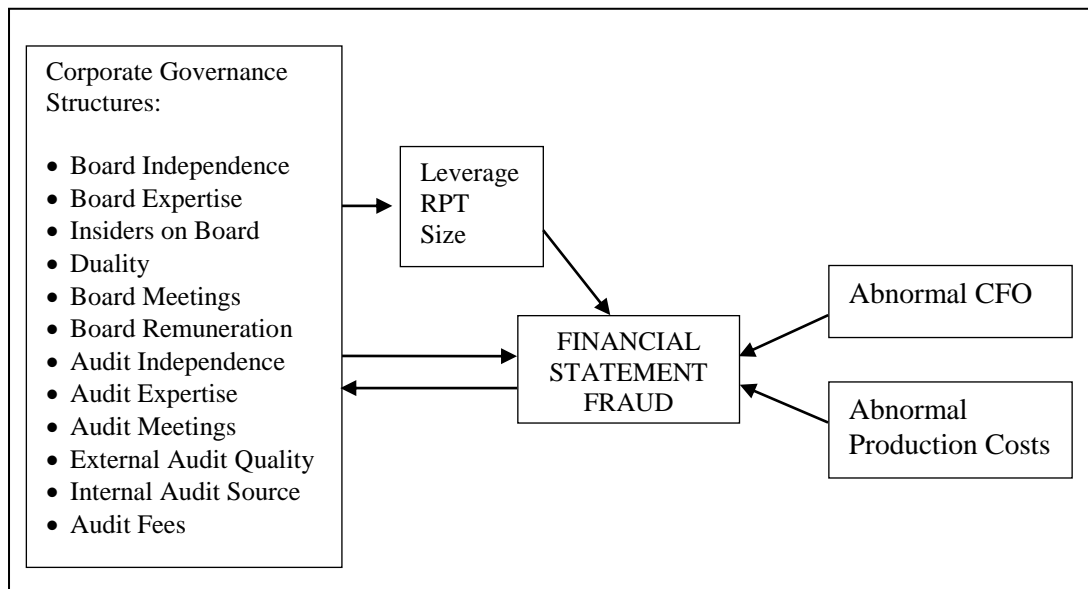
This study incorporates firms that are convicted with fraudulent financial reporting as a primary measure of financial statement fraud. Agency theory and positive accounting theory are used to describe the relationship between corporate governance characteristics, real earnings management activities and financial statement fraud. Through agency theory, this study includes the corporate governance characteristics to provide evidence of their relationship to financial statement fraud. The agency theory developed by Jensen and

Meckling (1976) outline the conflict of interest between the managers and the shareholders, which causes the need for corporate governance. The conflict of interest in agency theory is also supported by positive accounting theory which advocates that managers and shareholders want to maximise their own wealth. Positive accounting theory as stipulated by Watts and Zimmerman (1986), proposes the debt and political cost hypothesis. In debt hypothesis, managers are more likely to show higher income and profits to indicate better firm performance to potential creditors and investors. With reference to political cost hypothesis, managers are more likely to indicate smaller earnings in order to deflect political and government attention. The decision regarding which financial report to disclose involves discussion and agreement between the managers and shareholders. The manager may manipulate financial recording process and cause earnings management and financial statement fraud. These circumstances make the monitoring role of corporate governance essential in minimizing the manipulation of financial statement.

The conceptual framework highlights the approach employed to answer the research questions in this study. Based on the number of literature reviews, the factors that are expected to relate to the occurrence of financial statement fraud are selected. These factors include corporate governance structures and real earnings management activities. Firstly, the attributes of the board of directors and audit committee in the corporate governance structures are examined to identify its association with financial statement fraud. Control variables namely the firm size, leverage and related party transactions are also included

in the first analysis because they have been shown to impact on financial statement fraud

Figure 4.1
Conceptual Framework of the Study



occurrence (Agrawal & Chadha, 2005; Chapple et al., 2007; Sharma, 2004). Secondly, to demonstrate good corporate governance practice as an important element proposed by the Securities Commission of Malaysia (SCM), the post-fraud corporate governance structures of financial statement fraud firms are also investigated. This determines whether financial statement fraud firms seek to improve the quality of their financial reporting through better corporate governance practices. Thirdly, this study proposes that financial statement fraud starts from real earnings management activities. Therefore, this research examines the involvement of financial statement fraud firms in real earnings management activities prior to the financial statement year. Following Roychowdhury (2006), the proxies for real earnings management activities are

the abnormal cash flow from operations and abnormal production costs. Figure 4.1 displays the overall concept of this study, where the financial statement fraud occurs due to corporate governance structures and real earnings management activities. The following section discusses the hypotheses that corporate governance and real earnings management characteristics contribute to financial statement fraud.

4.3 Development of Hypotheses

The development of hypotheses helps to test the relationships in the conceptual framework. This study examines the link between corporate governance structures and real earnings management practices with financial statement fraud. The proxies for corporate governance and real earnings management identified in previous studies are likely to influence the cause of financial statement fraud. The following section begins with the hypotheses for corporate governance structures and financial statement fraud in Section 4.3.1, and hypotheses for real earnings management and financial statement fraud in Section 4.3.2. All hypotheses are stated in the alternate form.

4.3.1 Corporate Governance Structures and Financial Statement Fraud

In this study, the context of the corporate governance structures includes the analysis of board of directors and audit committees in firms. The proxies for board of directors incorporated are their independence, expertise, insiders on the board, duality, number of board meetings and remuneration. For audit

committee, the operationalised proxies are the independence, expertise, number of audit committee meetings, external audit quality, internal audit function and audit fees. Since Research Question 1 and Research Question 2 designate the same corporate governance variables that relate to financial statement fraud, the hypotheses for both research questions are discussed simultaneously. Research Question 1 measures the relationship between corporate governance structures and financial statement fraud, and the hypotheses are denoted as H1a to H1l. Research Question 2 determines the changes and improvements made in the corporate governance structures after the event of financial statement fraud and the hypotheses are denoted as H2a to H2l.

4.3.1.1 Board of Directors' Independence

The board of directors is considered to be more independent with a higher percentage of outside directors (Beasley, 1996; Carcello et al., 2002). A number of studies (see Beasley, 1996; Beasley et al., 1999; Beasley et al., 2000; Chapple et al., 2007; Chen et al., 2006; Sharma, 2004) find that a low level of independence of the board is a contributing factor to financial statement fraud. This is due to the improvement in monitoring management (Helland & Sykuta, 2005) that ensures no individual or small groups of individuals can dominate the board's decision-making. As emphasised by Haniffa and Cooke (2002), the presence of independent directors on the board enhance corporate governance's effectiveness through balancing inside directors' influence. This suggests that outside directors are a reliable tool to

reduce agency conflict by encouraging transparent decision-making (Fama & Jensen, 1983). In Malaysia, the MCCG states that an effective percentage of independent non-executive directors should be one-third of board membership (2007, p. 11). However, a study by Hashim and Devi (2007), discovers that 13.2 per cent of firms listed on Bursa Malaysia's Main Board do not meet this MCCG requirement. Having one third of independent directors on the board is to ensure adequate independence and efficient representation of shareholders. However, Johari et al. (2008) find this minimum composition is not sufficient to monitor managers or executives from fraudulent financial reporting practices. Hence, the following hypotheses are formulated.

H1a: Firms with higher percentage of independent directors on the board are less likely to engage in financial statement fraud.

H2a: Financial statement fraud firms are more likely to have higher percentage of independent directors on the board relative to non-fraud firms subsequent to the fraud year.

4.3.1.2 Board of Directors' Expertise

Carcello et al. (2002) argue that the expertise of directors on the board is essential for effective corporate governance. This is supported by Fich and Shivdasani (2007) who propose that firms should employ directors with relevant knowledge and ability to detect any fraud. As indicated by Smaili and Labelle (2009), board proficiency helps to minimise financial statement fraud. Johari et al. (2008) find that a director's long tenure in accounting and finance

does not affect earnings management practices. Other scholars recommend that the combination of outside directors with accounting and financial expertise will help minimise financial statement fraud and deter earnings manipulation (Agrawal & Chadha, 2005; Chen et al., 2006; Fich & Shivdasani, 2007).

The MCCG requires formal and transparent procedures in appointing new directors (2007, p. 11). The MCCG also stresses that the selection should be based on skills, knowledge, expertise, experience and integrity to preserve and enhance professionalism and qualifications (2007, p. 11). After providing orientation and education programs to new personnel, their performance should be reviewed annually and disclosed in the annual report. Compulsory attendances to training programs as prescribed by Bursa Malaysia for all board members will enable directors to discharge their duties effectively. This requirement is written in Practice Note 5 in pursuance of compulsory Main Board listing requirement. Moreover, the board of directors must disclose all attendance or absenteeism in training courses in the annual report. Given the circumstances and the strict requirements of the authorised agencies, the following hypotheses are formulated:

H1b: Firms with higher percentage of directors with accounting and financial expertise are less likely to engage in financial statement fraud.

H2b: Financial statement fraud firms are more likely to have higher percentage of directors with accounting and financial expertise relative to non-fraud firms subsequent to the fraud year.

4.3.1.3 Insiders on the Board

The insiders on the board may be defined as a situation where directors work as managers in the firm. In other words, having many insiders on the board means that the ratio of directors on the management team is high. Zulkafli et al. (2005) conjecture that assigning directors as managers may increase directors' incentives to monitor managers. Coles, McWilliams, and Sen (2001) also posit that having insiders on the board will improve corporate governance structures by improving managerial monitoring and reducing information asymmetry. Nevertheless, Abdullah (2006) emphasises that the number of directors to serve in management should be neither too low, nor too high to ensure better financial reporting quality. If managers dominate the board, transparency is doubtful and disclosure is debatable because managers will only illustrate positive achievements. Therefore, some studies argue that having board members as insiders may weaken corporate governance structures and reduce the quality of corporate financial reporting (Dechow et al., 1996; Dunn, 2004). Having an excessive numbers of directors in management team may raise conflict of interest and interfere with the decisions made by the management team, which may result in financial statement fraud. Hence, the hypotheses generated are as follows:

H1c: Firms with higher percentage of insiders on the board are more likely to engage in financial statement fraud.

H2c: Financial statement fraud firms are more likely to have lower percentage of insiders on the board relative to non-fraud firms subsequent to the fraud year.

4.3.1.4 Duality

Board duality is defined as a same person holding the posts of Chairman and CEO. Since the financial crisis in the late 1990s in Asia, many studies have looked into the duality situation as one of the causes of firms' failures. For instance, Chen et al. (2006) argue that if the positions are filled by the same person, this may decrease the quality of checks and balances at the senior management level. Jensen (1993) adds that it is impossible to avoid self-interest in any duality position. Dechow et al. (1996) suggest that firms which employ the same person for both Chairman and CEO are more likely to manipulate earnings. Similarly, Smaili and Labelle (2009) find that financial statement fraud firms have more duality in their management structures compared to non-fraud firms. Uzun et al. (2004) argue that duality may cause ineffective monitoring in a firm. According to Chapple et al. (2007), firms that strictly separate Chairman and CEO are able to improve their monitoring mechanisms and consequently minimise financial statement fraud.

In Malaysia, the MCCG advises firms to separate the CEO and Chairman and to publicly disclose the reason if duality is practiced (2007, p. 10). Johari et al.

(2008) opine that the CEO is responsible for determining the firm's operations and strategic business implementation, whereas a Chairman's function is to monitor and evaluate senior executives, including the CEO. Abdullah (2001) suggests that duality causes conflict of interest and higher business risk. Therefore, separation of the positions is important for effective monitoring of financial practices. KPMG Malaysia finds that CEOs are responsible for preventing financial statement fraud (2009, p. 39). However, Johari et al. (2008) report that duality does not influence earnings management practices, which contradicts the findings of Saleh et al. (2005). Nevertheless, this study concurs with the MCCG's recommendation that the separation of CEO and Chairman will likely minimise the occurrence of financial statement fraud. Hence, the following hypotheses are formulated:

H1d: Firms that practice CEO-Chairman duality on the board are more likely to engage in financial statement fraud.

H2d: Financial statement fraud firms are more likely to have less CEO-Chairman duality relative to non-fraud firms subsequent to the fraud year.

4.3.1.5 Board of Directors' Meetings

Board meetings are conducted for directors to discuss progress and issues arising in the organisation. Through board meetings, directors show their commitment to a firms' development. According to Chen et al. (2006), more board meetings is a signal of fraud, which leads to more meetings to discuss

any suspected financial statement fraud issues. The MCCG also advises regular formal meetings for board members and disclose all directors' attendances in the annual report (2007, p. 12). Due to the frequent number of meetings, Vafeas (1999) argue that the board is able to increase the firm performance and improve the quality of its financial reporting systems. For example, Xie et al. (2003) provide evidence that more board meetings are associated with less financial statement fraud occurrence. Furthermore, Carcello et al. (2002) advocate that more board meetings demonstrates that board members are diligent in executing their responsibilities. The findings from the extant literature lead to the following hypotheses:

H1e: Firms with higher number of board meetings are less likely to engage in financial statement fraud

H2e: Financial statement fraud firms are more likely to have higher number of board meetings relative to non-fraud firms subsequent to the fraud year.

4.3.1.6 Board of Directors' Remuneration

Prior studies demonstrate the roles of directors' remuneration in reducing the conflicts of interest and information asymmetry between shareholders and managers. It is argued that remuneration values help to create interest alignment between directors and shareholders (Becht et al., 2003) and reflect better quality financial reporting (Brown & Caylor, 2004). Talha et al. (2009) indicate that less attention is given to shareholders when the directors are

underpaid. Spathis (2002) and Degeorge et al. (1999) claim they have evidence that directors on the board are more likely to manipulate financial reporting because directors perceived their remuneration is not sufficient. To avoid this, the MCCG has insisted directors' remuneration must be sufficient in order for them to operate the firm successfully (2007, p. 7). The remuneration value should reflect the capabilities, experience and responsibilities undertaken by the directors. Brown and Caylor (2004) claim that a reasonable amount of directors' remuneration is positively associated with firm performance. With this argument, the following hypotheses are formulated:

H1f: Firms with higher directors' remuneration are less likely to engage in financial statement fraud.

H2f: Financial statement fraud firms are more likely to have higher directors' remuneration relative to non-fraud firms subsequent to the fraud year.

4.3.1.7 Audit Committee's Independence

Apart from the board of directors, the corporate governance system also comprises the audit committee. The presence of an audit committee is required to consolidate corporate governance practices (Saad et al., 2006). As directors' independence is translated as a higher percentage of outsiders on the board, the same applies to audit committee independence. In other words, when an audit committee has mainly outside directors, it is perceived as practicing higher

independence. Due to recent accounting scandals in US, the Sarbanes-Oxley Act 2002 mandated all audit committee members to be fully independent and consist of at least one financial expert. In contrast, the MCCG requires the minimum composition of the audit committee to be three persons and only encourages the majority to be outsiders in order to preserve its independence (2007, p. 14).

Audit committee independence is very important as it reflects the reliability of financial statements published by a firm (Firth, 1980). Prior studies designate higher audit committee independence is significant in reducing the likelihood of financial statement fraud (Abbott et al., 2002; Beasley et al., 2000; Crutchley et al., 2007; Owens-Jackson et al., 2009; Persons, 2005; 2009; Smaili & Labelle, 2009) and earnings management (Choi, Jeon, & Park, 2004; Saleh et al., 2007; Xie et al., 2003). Enforcing the creation of an audit committee in a Malaysian publicly listed firm is found to have a strong and positive impact on enhancing auditor independence (Teoh & Lim, 1996). This is similar to Bradbury, Mak, and Tan (2006) who report that the presence of an independent audit committee on the board in Malaysia improves financial reporting. Therefore, the following hypotheses are proposed:

H1g: Firms with higher percentage of independent directors on the audit committee are less likely to engage in financial statement fraud.

H2g: Financial statement fraud firms are more likely to have higher percentage of independent directors on the audit committee relative to non-fraud firms subsequent to the fraud year.

4.3.1.8 Audit Committee's Expertise

One of the main functions of the audit committee is to ensure that the financial reporting executed by the firms meet certain accounting standards and principles. It is essential for an audit committee to be literate in financial matters and accounting practices to deliver their role effectively. Acquiring audit competence requires much effort and experience. Cohen et al. (2002) argue that on-job-experience is critical for sensitiveness in detecting fraud. Moyes and Hasan (1996) find that an experienced audit committee can detect fraud better than an inexperienced audit committee, since prior experience in detecting financial statement fraud improves awareness and attentiveness to the possibilities of financial statement fraud occurrence. Smaili and Labelle (2009) also find evidence for the negative relationship between audit committee expertise and the occurrence of financial statement fraud. According to Bedard et al. (2004) and Felo et al. (2003), the presence of an audit committee with accounting and financial expertise is able to improve the quality of financial reporting. The MCCG insists on a minimum of three audit committee members, consisting at least of one member from a professional, recognised and qualified accounting body (2007, p. 14). This reasoning highlights that audit committee expertise is critical to enhance the ability to sense potential financial statement fraud. As such, the next hypotheses are set out below:

H1h: Firms with higher percentage of audit committee members with accounting and financial expertise are less likely to engage in financial statement fraud.

H2h: Financial statement fraud firms are more likely to have higher percentage of audit committee members with accounting and financial expertise relative to non-fraud firms subsequent to the fraud year.

4.3.1.9 Audit Committee's Meetings

One of the important reasons for conducting audit committee meetings is to address problems that may affect a firm's business performance. The establishment of the audit committee helps to ensure continuous communication between the board of directors, internal auditor and external auditor (Rahman & Ali, 2006), which can be achieved through discussions. Audit committee meeting is a mechanism where the audit committee shows its commitment and devotion to the firm. The American Bar Association states that if the audit committee meetings are held less than two times a year, this indicates poor audit diligence (1978, p. 44). Abbott et al. (2002) maintain that four audit committee meetings a year may reduce the risk of financial statement fraud.

It is argued that the audit committee rectifies possible financial statement fraud issue through discussions. Xie et al. (2003) emphasise that more audit committee meetings signal that the audit committee members are active and

helping to reduce the practice of earnings management. Other studies support the contention that having more audit committee meetings are able to minimise earnings management practices (Saleh et al., 2007) and reduce financial statement fraud (Beasley et al., 1999; Owens-Jackson et al., 2009). In order to effectively discharge the audit committee's functions, the MCCG suggests that a firm should have a minimum of two audit committee meetings annually (2007, p. 15). Since most studies lean towards the benefit of conducting more frequent audit committee meetings, the following hypotheses are developed:

H1i: Firms with higher number of audit committee meetings are less likely to engage in financial statement fraud

H2i: Financial statement fraud firms are more likely to have higher number of audit committee meetings relative to non-fraud firms subsequent to the fraud year.

4.3.1.10 External Audit Quality

It is the responsibility of the audit committee to appoint the external auditor to perform the audit. In the selection process, the audit committee has to consider the capability of the external auditor to ensure the audit objectives are achieved. Fan and Wong (2005) examine the skill of external auditors in improving corporate governance practice in emerging countries. Their findings show that the external auditor plays an important role in assisting corporate governance by reducing accounting manipulation carried out by the audited

firm. Michael and Shaw (1995) argue that the Big 5 audit firms are more likely to disclose transparent audit opinions because they have to maintain their professional reputations, which will result in minimizing any intention to commit financial statement fraud.

Moyes and Hasan (1996) posit that established audit firms are more proficient in detecting financial statement fraud. This is due to the fact that established audit firms are more likely to provide better training programs, well recruited audit teams and better financial statement fraud detection experience. According to Nieschweitz et al. (2000), it is important for external auditors to have a good understanding of their clients' strategic plans. They argue that the relationship will minimise financial statement fraud risk because the complexity of the affiliation is reduced. Further evidence also suggests that firms being audited by established audit firms have better quality financial reporting standards (Francis, Maydew, & Sparks, 1999). This is supported in Lennox and Pittman (2010) who demonstrate firms that appoint Big 5 audit firms are less likely to be involved in financial statement fraud. Nor et al. (2010) also find that the Big 4 audit firms in Malaysia have better quality audits compared to the non-Big 4 audit firms because the Big 4 audit firms use better techniques to identify financial statement fraud. As a result, the external auditor may respond to the matter effectively due to their experience of external auditing work. Based on the above discussion, it can be argued that the selection of an external auditor has an impact on financial statement fraud. Thus, the following hypotheses are developed:

H1j: Firms that appoint Big 4 audit firm for external audit are less likely to engage in financial statement fraud.

H2j: Financial statement fraud firms are more likely to appoint Big 4 audit firm for external audit service relative to non-fraud firms subsequent to the fraud year.

4.3.1.11 External Audit Fees

The responsibility of the audit committee includes deciding the amount of audit fees to be paid to the external auditor. The amount of audit fees to be paid will depend on the workload of the external auditor needs to carry out. In a case where the board demands higher audit assurance, audit fees will be higher because the external auditor needs to provide more audit work (Caramanis & Lennox, 2008; Carcello et al., 2002). The higher audit fees set by external audit firms may also be influenced by other factors. For example, Gul (2003) indicates that firms affiliated with political influence may charge higher audit fees due to greater audit risks.

It is argued the amount of audit fees may influence audit judgment (Geiger & Rama, 2003), especially, when the audited firm contributes a large percentage of the audit firm's income (DeAngelo, 1981). This is also supported by Srinidhi and Gul (2006) who highlight that too many audit fees are viewed as a form of 'soft bribery'. In this situation, the independence factor is affected and audit quality performed by the external auditor is questionable. Conflict of interest between the audit firm and the firm becomes apparent, resulting in the

possibility of financial statement fraud being ignored. In Malaysia, reporting audit fees is mandatory (Fan & Wong, 2005). Yatim et al. (2006) suggest that if the audit committee does execute its responsibilities, then audit fees can be reduced because the auditor has less risk to monitor and examine the possibility of financial statement fraud. This means lower audit fees are charged because monitoring by the audit committee has been effective. Given the findings that there is a positive relationship between financial statement fraud and audit fees in prior studies in Malaysia, the following hypotheses are formulated:

H1k: Firms with higher amount of audit fees are more likely to engage in financial statement fraud.

H2k: Financial statement fraud firms are more likely to have lower amount of audit fees relative to non-fraud firms subsequent to the fraud year.

4.3.1.12 Internal Audit Function

Abbott et al. (2000) advocate that the audit committee has at least two methods to overview the quality of financial reporting: firstly, through the external auditing process; and secondly, using internal audit function. Devos (2008) contends that firms are more likely to allow external auditors to do internal audit work. He argues that firms may benefit from outsourcing the internal audit function through cost efficiency by having an immediate internal auditor. Besides reducing the cost of wages and assets, the firm does not have

to incur training and development expenses for the internal auditors and can focus more on the firms' core operations. Moreover, it is possible that a permanent internal audit function has less time to perform internal audit effectively due to other job commitments. In nature, an outsourced internal audit function is more exposed to financial statement fraud detection experience compared to the permanent internal audit function, resulting in higher sensitivity to financial statement fraud signals. Scarbrough, Rama, and Raghunandan (1998) opine that the performance of internal audit function is influenced by audit committee characteristics. For example, the internal auditor is considered effective when it is fully independent. By outsourcing the internal audit function, bias and interference from the management team can be avoided, thus, preserving auditor independence. The Sarbanes Oxley Act (2002) also prohibits outsourcing internal audit services from the same external auditor due to the concern of being biased.

James (2003) states that a permanent internal audit function is essential to strengthen the reliability of financial reporting in a firm. Abbott et al. (2007) argue that an effective audit committee is less likely to outsource an internal audit function. According to Coram et al. (2008), it is important for a firm to have their own internal audit function to reduce the risks of financial statement fraud. This is because, outsourced internal audit function has less understanding about the operationalisation of the audited firm compared to permanent internal audit function (James, 2003). Asare et al. (2008) assert that an efficient internal will effectively monitor and oversee the financial reports,

regardless of management performance or intention to manipulate financial statement.

In Malaysia, the MCCG recognises the importance of internal audit function in reducing financial statement fraud risks. It is stated in the MCCG that if the firm is unable to establish its own internal audit function, the firm has to give justification for not having the internal audit department (2007, p. 16). This highlights the importance of why a firm should consistently be operated under the monitoring of internal audit service. In the case of financial statement fraud, it is hoped that financial statement fraud can be detected earlier. Hence, the following hypotheses are constructed:

H11: Firms that outsource the internal audit function are more likely to engage in financial statement fraud.

H21: Financial statement fraud firms are less likely to outsource internal audit function relative to non-fraud firms subsequent to the fraud year.

4.3.2 Real Earnings Management and Financial Statement Fraud

In addition to the corporate governance variables, this study examines whether financial statement fraud firms are involved in real earnings management prior to the fraud conviction. Extant literature provides evidence that financial statement fraud firms are involved in accruals earnings management prior to fraud occurring (Dechow et al., 1996; Perols & Lougee, 2011). However, it is

argued that apart from managing accruals, firms are also engaged in real earnings management to manipulate the reported earnings (Roychowdhury, 2006). Existing literature also provides evidence that it is more favourable for firms to manipulate real activities compared to the accruals (Ball & Shivakumar, 2005; Graham et al., 2005; Hashemi & Rabiee, 2011; Joosten, 2012).

Perols and Lougee (2011) argue that firms are involved in financial statement fraud because fraudulent firms are limited in their earnings flexibilities due to preliminary aggressive earnings management activities. Joosten (2012) and Zang (2011) advocate that firms in such cases engage in higher real earnings management. Although there are limited studies that examine real earnings management activities in financial statement fraud firms, previous findings may be beneficial in developing the hypotheses on real earnings management activities in financial statement fraud firms. For example, Sun (2011) finds that firms engage in real earnings management activities in an attempt to meet analysts' earnings forecasts and avoid losses. Furthermore, Enomoto et al. (2012) emphasise that real earnings management activities are preferred over accruals earnings management in countries with stronger investor protection, such as, Malaysia. Based on previous studies' findings, it is expected that financial statement fraud firms in Malaysia have higher level of real earnings management activities. This study focuses on two types of real earnings management, which are the cash flow from operation and production costs. The hypotheses for real earnings management proxies and financial statement fraud are denoted as H3a and H3b.

4.3.2.1 Abnormal Cash Flow from Operation and Financial Statement Fraud

It is argued that firms are involved in financial statement fraud because they fail to achieve the earnings benchmark (Graham et al., 2005; Jungeun, Jaimin, & Jaehong, 2012). Therefore, it is possible that financial statement fraud firms intend to report higher income through higher sales revenue. Dechow et al. (2011) conclude that the amount of sales will significantly increase towards the financial statement fraud year. Roychowdhury (2006) demonstrates that firms attempt to boost their current earnings by offering sales discounts and/or lenient credit terms.

By giving discounts on the selling price, the firm accelerates the sales volume from the next fiscal year, which causes the earnings for the current year to increase. However, this occurs at the expense of declining profit margins because the cash inflow per sale item is now decreasing. The low profit margins cause the cash flow relative to sale and change of sales to be relatively low. For example, assume a product normally sells for a price of \$150 per item, where the cost per item is \$100. The decision to provide a sales discount by selling at \$130 per item has increased the sales volume to 10 units. Following the sale of the 10 items, the firm has increased their net income and cash inflow by \$300⁸. However, the cash inflow is lower than the normal cash

⁸ $(\$130 - \$100) * 10 \text{ units} = \300 .

inflow of \$500⁹ on the additional \$1,300¹⁰ worth of sales. The similar concepts occur during an offer of lenient credit terms.

The example given above shows that firms involved in real earnings management activities by manipulating their sales will have less abnormal cash inflow than normal cash inflow. Therefore, as the financial statement fraud year approaches, any excessive sales discount and lenient credit terms will consequently result in lower abnormal CFO level in financial statement fraud firms. The lower level of abnormal CFO means that the earning quality level is less in financial statement fraud firms compared to non-fraud firms. This leads to the following hypothesis:

H3a: Prior to the financial statement fraud year, financial statement fraud firms are likely to have lower abnormal cash flow from operations compared to non-fraud firms.

4.3.2.2 Abnormal Production Costs and Financial Statement Fraud

Apart from managing cash flow from operations, Roychowdhury (2006) and Gunny (2010) classify manipulating production costs as a another form of real earnings management activity. Production costs are measured as the sum of cost of goods sold (COGS) and change in inventory. In managing the production costs, the firm increases the volume of production more than normal inventory levels. Firms that implement real earnings management

⁹ $(\$150 - \$100) * 10 \text{ units} = \$500.$

¹⁰ $\$130 * 10 \text{ units} = \$1,300.$

through manipulating the volume of production has to have higher inventories than it normally has. This activity causes production costs to increase but the fixed cost per item reduces because it is spread to the larger volume of productions. Consequently, the COGS and profit margin per sale item will increase (Thomas & Zhang, 2002). As a result, overproduction will lead to higher production costs than normal production costs for a given level of sales. By doing this, firms succeed in improving their profitability margins but at the same time cause production costs to be abnormally high.

Charitou, Neophytou, and Charalambous (2004) argue that healthy firms have less intention to manipulate earnings compared to unhealthy firms. Since it is argued that firms will engage in financial statement fraud to achieve targeted earnings, financial statement fraud firms are likely to report higher corporate income by spreading their fixed costs and expenses. Therefore, the following hypothesis is generated:

H3b: Financial statement fraud firms are likely to have higher abnormal production costs compared to non-fraud firms.

4.4 Conclusion

This chapter has outlined the development of the study's conceptual framework in terms of examining the practice of corporate governance and real earnings management on financial statement fraud in Malaysia. This chapter also develops its hypotheses based on the findings made in other

important studies. Research Question 1 and Research Question 2 each contain 12 hypotheses, whereas Research Question 3 consists of 2 hypotheses. There are in total 26 hypotheses to be tested in this investigation of the practice of corporate governance and real earnings management in the occurrence of financial statement fraud in Malaysia. The next chapter describes the methodology used to test the hypotheses developed for this study.

Chapter 5

Research Methodology

5.1 Introduction

The aim of this chapter is to discuss the research methods employed in the study which investigates the practice of corporate governance and real earnings management on financial statement fraud in Malaysia. This chapter also explains in detail the variables and models applied in this study. Quantitative methods are employed to test the hypotheses which follow the extant research on corporate governance, earnings management and financial statement fraud. This chapter is divided into three main sections. Section 5.2 describes the data collection process while Section 5.3 explains the sources for sample used in this study. Section 5.4 provides a detailed explanation on the statistical methods used to examine the research questions of the study. Section 5.5 concludes the chapter.

5.2 Data Collection

This study uses secondary data in order to investigate the effect of corporate governance practice and earnings management in financial statement fraud in Malaysia. Secondary data are widely used in previous accounting research. In the analysis using secondary data, information is gathered from the archival source. According to Cooke and Wallace (1990), data from annual reports helps to explain the characteristics and relationships between certain variables.

Persons (2011) argues that financial data is a useful source for examining financial statement fraud. In Malaysia, annual reports are used as an important source of corporate analysis (Muhamad, Shahimi, Yahya, & Mahzan, 2009). The main samples of this study are firms that commit financial statement fraud between 2001 and 2008. By integrating all three research questions, a study period of 14 years (1996 to 2009) is involved. Information on corporate governance structures and financial data is required to run the analysis. The details for corporate governance structures are manually retrieved from annual reports, while financial information is collected from the OSIRIS database. Annual reports from 2001 to 2009 are downloaded from the Bursa Malaysia's website. However, annual reports for financial year 1996 to 2000 are not available online. Therefore, the hard copies of required annual reports are scanned and photocopied from the Bursa Malaysia's library in Kuala Lumpur, Malaysia.

5.3 Sample

This section outlines the sample selection procedure used in this study. The sample for this study is the firms that are convicted with financial statement fraud cases. Details on the sampling procedures for investigating the practices of corporate governance and earnings management with reference to financial statement fraud in Malaysia are further explained below.

5.3.1 Sampling Procedures

This study examines financial statement fraud firms registered as public firms with the Company Registrar of Malaysia. This is similar to Agrawal and Chadha (2005) where their sample firms are listed and unlisted public firms. For this study, two sources are used to identify these firms. First, the data is retrieved from the Securities Commissions of Malaysia (SCM). Preliminarily, the list of firms that are involved in financial statement fraud is retrieved from the SCM enforcement releases. Since the information from the SCM is only available starting from 2001, this study incorporates year 2001 to 2009 to retrieve the firms charged with financial statement fraud. Based on the information of the charges, the study selects the firms that commit financial statement fraud from 2001 to 2008. This is essential because the variables used in this study are based on the year the fraud occurred. Later, a list with more financial statement fraud firms is collected from SCM press releases. In most cases, the firms identified in the SCM press release are also reported in the SCM enforcement release. Consequently, the financial statement fraud firms reported in the SCM press release, but not in SCM enforcement release, are added to the sample of financial statement fraud firms.

The second source list of financial statement fraud firms list is from the Bursa Malaysia enforcement release. For the purpose of this study, each announcement made by the Bursa Malaysia from 2001 to 2009 is reviewed to identify firms that are convicted with financial statement fraud. Similar to the method used regarding the SCM data to retrieve the sample, the Bursa

Malaysia enforcement releases are examined to identify firms that commit financial statement fraud from 2001 to 2008.

Table 5.1
Identification of Financial Statement Fraud Firms from 2001-2008

<u>Source 1: Securities Commissions of Malaysia (SCM)</u>			
Number of firms in SCM enforcement releases		63	
<i>Less:</i>			
Private listed firms	(22)		
Financial institutions/ Banks	(4)		
Non-fraud cases	(22)	(48)	
		<hr/>	15
<i>Add:</i>			
FSF reported in SCM press released, but not in enforcement released		10	
Total number of FSF firms identified by SCM		<hr/>	25
<u>Source 2: Bursa Malaysia</u>			
Number of firms in Bursa Malaysia enforcement releases		896	
<i>Less:</i>			
Financial institutions/ Banks	(10)		
Non-fraud cases	(806)	(816)	
Total number of fraud firms identified by Bursa Malaysia		<hr/>	80
			<hr/>
<i>Less:</i>			
FSF reported in both SCM and Bursa Malaysia enforcement releases (<i>redundant cases</i>)			(8)
Total number of FSF firms identified			<hr/>
			97
<i>Less:</i>			
Unavailable/ Incomplete data			21
Final Financial Statement Fraud (FSF) Sample			<hr/>
			76

This study cautiously examines each SCM and the Bursa Malaysia report to ensure the sample firms fit the definition of financial statement fraud as used in this study (refer to Table 5.5). Similar to Beasley (1996), in the case where a firm is found to commit financial statement fraud more than once in the

study period, only the first case is counted as the sample. In other words, this study uses firms convicted of only one financial statement fraud during the study period. Following Feroz, Park, and Pastena (1991) and Farber (2005), if the year of fraud committed is not indicated, this study then used the SCM and Bursa Malaysia reporting date as the proxy for the detection date. This study also excludes samples with incomplete variables or no matching controlling firms. The list of financial statement fraud firms is shown in Appendix 3. Table 5.1 shows 76 firms that are identified as final financial statement fraud sample.

Table 5.2				
Number of Financial Statement Fraud Firms: Based on Year Commit in Fraud				
Year	SCM	Bursa Malaysia	Total	%
2001	2	5	7	9.2
2002	1	4	5	6.6
2003	2	6	8	10.5
2004	3	7	10	13.2
2005	0	4	4	5.3
2006	2	5	7	9.2
2007	2	17	19	25.0
2008	1	15	16	21.1
Total	13	63	76	100.0

Table 5.2 shows the number of financial statement fraud firms that commit financial statement fraud between 2001 and 2008. This study identifies 76 firms that are involved in financial statement fraud from 2001 to year 2008. The table also shows that financial statement fraud incidents increased towards the final year of this study. The year 2007 marks the highest number of financial statement fraud cases in Malaysia. It is possible that the information systems employed today are better and are able to detect financial statement

fraud. However, the information system may also be considered to be an opportunity to commit financial statement fraud opportunity by a fraudster. Nevertheless, this factor is not the focus of the study.

Table 5.3									
Financial Statement Fraud Firms by Industry and Year									
Industry	2001	2002	2003	2004	2005	2006	2007	2008	Total
Agriculture, forestry and fishing	1	0	0	1	1	0	2	2	7
Construction	1	1	1	0	1	2	2	1	9
Manufacturing	4	2	3	5	1	1	10	9	35
Services	0	0	1	3	1	1	3	1	10
Wholesale trade	1	1	0	0	0	3	1	1	7
Real estate	0	1	3	1	0	0	1	2	8
Total	7	5	8	10	4	7	19	16	76

Table 5.3 summarises the financial statement fraud sample based on the industry and fraud year. The table shows that the manufacturing industry is closely linked to financial statement fraud cases. According to KPMG Malaysia, this sector generates annual revenues ranging from RM100 million to RM500 million, which is the highest annual turnover compared to other industries examined in this study (2009, p. 7). For that reason, it is expected that financial statement fraud is higher within the manufacturing sector because it relates to significant amounts of wealth being used for financial manipulation activities.

The sample size of this study is almost similar to the previous studies¹¹. The small sample size is a common feature of financial statement fraud studies.

¹¹ Listed are the financial statement fraud sample used in earlier studies: Perols and Lougee (2011) incorporate 54 financial statement fraud firms; Farber (2005) incorporates 87 financial

The small sample is probably due to sensitiveness of fraud matters where the convicted firm normally attempts not to expose the financial statement fraud issue to the public. It is perceived that financial statement fraud firms attempt to manage and resolve the issue within the firm itself. Following Agrawal and Chadha (2005), this study minimises the issue of unavailable data by collecting all possible sources through manual hand collection in order to not further eliminate the number of sample firms. This study also uses 76 control firms as a matching sample, which is described below.

5.3.2 Control Samples

This study employs a purposive sampling method (i.e., financial statement fraud firms) and involved a one-to-one matching process. Each financial statement fraud firm is matched with firm that are not convicted in financial statement fraud. The control sample or the matching firms are developed to examine the association between corporate governance structures and financial statement fraud occurrence. Furthermore, the control samples are used in the analysis of real earnings management activities by the financial statement fraud firms prior to the year of fraud. Following Beasley (1996), the control samples are identified as follows:

1. Industry code: If no four-digit SIC code firm match is identified, the three-digit SIC code is used followed by a two-digit SIC code.

statement fraud firms; Sharma (2004) incorporates 31 financial statement fraud firms; Abbott et al. (2000) incorporate 78 financial statement fraud firms; and Beasley (1996) incorporates 75 financial statement fraud firms.

2. Firm size: Firms are considered similar in size if the total assets are within ± 30 per cent of the total assets for the fraud firm in the year preceding the financial statement fraud.
3. Listing group: The common stock of the financial statement fraud firm and its matched non-financial statement fraud firm trade on similar listing group (public or non-public) and the same stock exchange (Main Market or ACE Market).
4. Time period: Each non-financial statement fraud firm identified in steps 1 to 3 is matched with the year of the fraud firm commit in financial statement fraud.

In addition to the above criteria, the control firms are only selected if they have no record of a financial statement fraud offense. However, there are concerns with the possibilities of selecting non-financial statement fraud firm with an undetected financial statement fraud cases. To overcome this problem the study further excludes distressed firms from the control samples.

Firms in distress are argued to have financial problems that lead to a greater tendency to manipulate financial reports (Summers & Sweeney, 1998) and are suspected of implementing more aggressive earnings practices (García Lara et al., 2009). Over the decades, researchers use financial ratios as a tool for predicting firm in distress. The most commonly used models for predicting bankruptcy are developed by Altman (1968), Beaver (1966), Charitou et al. (2004), (Ohlson, 1980) and Zmijewski (1984). In particular, the multivariate discriminant analysis by Altman (1968) provides a high predictive accuracy of

95 per cent in determining firm failure. Altman's model is also known as the Z-score model, and it has been used extensively in prior research in Malaysia to examine firms in distress (see Abdullah & Ahmad, 2008; Sori, Hamid, Nassir, & Mohamad, 2001; Sulaiman, Jili, & Sanda, 2001). The objective of Altman's model is to examine the power of financial and economic ratios in identifying the possibility of failing firms. Z-score model employs a multiple discriminant analysis approach and incorporates the context of liquidity, profitability, leverage, efficiency and market dimension. However, the Altman (1968) test requires information regarding market capitalization in order for the model to succeed.

It is found that OSIRIS database does not provide the market value of some sample firms because a number of financial statement fraud firms have been delisted from the listing group. Therefore, it is initiated that Charitou et al. (2004) failure prediction model is more appropriate for this study. Their model is designed as follows:

$$P_{it}(Y=1) = \frac{1}{(1 + e^{-z})}$$

$$-z = -7.1786 + 12.3826 * \frac{Liability_{it}}{Asset_{it}} - 20.9691 * \frac{EBIT_{it}}{Liability_{it}} - 3.0174 * \frac{CFO_{it}}{Liability_{it}}$$

where:

- $P_{it}(Y=1)$ = probability of failure in year t for the firm i ;
 EBIT = earnings before interest and tax in year t for the firm i ;
 CFO = Cash flow from operations in year t for the firm i .

The failure prediction model by Charitou et al. (2004) uses a logit function in determining the probability of a firm's failure. This study uses the score created by Charitou et al. (2004) to determine whether a firm is healthy or weak in the selected fraud year and the year before. In the final analysis of Charitou et al. (2004)'s model, only healthy firms are selected as the matched control firm. The list of financial statement non-fraud firms is shown in Appendix 4.

Table 5.4
Matching of Total Assets, Revenue and SIC Code between Financial Statement Fraud and Non-Fraud Firms

<i>Ringgit Malaysia (RM) in thousands</i>			
	76 Fraud Firms	76 Non-Fraud Firms	
	Mean (Median) {Standard Deviation} <i>Min</i> [Max]	Mean (Median) {Standard Deviation} <i>Min</i> [Max]	t-stat <i>z-value</i>
Total Assets	399,834 (213,293) {387,197} 56,105, [1,251,526]	375,555 (95,217) {368,664} 71,166 [1,271,439]	0.396 0.440
Revenue	166,159 (88,020) {183,659} 7,076 [642,702]	211,488 (149,741) {222,115} 13,019 [848,248]	1.371 0.201

Financial statement fraud firms are matched with control firms on the basis of year, total assets, SIC code, and listing group. The t-statistic is for the difference between the means of the matched pairs. The z-value is for the Mann-Whitney signed rank test to evaluate differences in medians.

Match based on

USSIC Codes:	No. of Firms
4 digit	37
3 digits	17
2 digits	22
Total	76

Table 5.4 profiles the financial statement fraud firms and matching control firms. The 76 financial statement fraud firms are matched with 76 firms free from financial statement fraud charges and risks. As mentioned earlier, these firms are matched closely based on the national stock exchange, firm's size, industry and time period. Table 5.4 shows that the financial statement fraud and non-fraud firms do not differ significantly based on the total assets and revenue.

5.4 Research Design

The conceptual framework described in Chapter 4 is divided into three research questions for systematic study on the practice of corporate governance and real earnings management on financial statement fraud in Malaysia. This section provides detailed explanations on the methods applied to answer all three research questions developed for this study. Different statistical techniques are applied for each research question and are explained in the following sections.

5.4.1 Corporate Governance Structures and Financial Statement Fraud

This study addresses the following research question to examine corporate governance practices in financial statement fraud firms:

Research Question 1: To what extent are corporate governance structures associated with financial statement fraud?

Model (1)

$$\begin{aligned} FSF = & \alpha + \beta_1 DINDEP_i + \beta_2 DEXPERT_i + \beta_3 DINSIDE_i + \beta_4 DUALITY_i + \beta_5 DMEET_i \\ & + \beta_6 DREMUN_i + \beta_7 AINDEP_i + \beta_8 AEXPERT_i + \beta_9 AMEET_i + \beta_{10} ABIG4_i \\ & + \beta_{11} AFEE_i + \beta_{12} AINT_i + \beta_{13} LEV_i + \beta_{14} RPT_i + \beta_{15} SIZE_i + \varepsilon_i \end{aligned}$$

A binary-logit regression is employed in Model 1 to test the hypothesised relationship between corporate governance structures and the occurrence of financial statement fraud. A logit analysis is used because the dependent variable which is the financial statement fraud is dichotomous. Maddala (1991) argues that a logit regression analysis is suitable for a study that experience disproportionate from two populations (i.e., financial statement fraud and non-financial statement fraud). For instance, to date, there are no readily available numbers of public firms that are convicted with financial statement fraud. However, based on the definition of financial statement fraud classified in this study, it is very likely that the exact rate of public firms that are involved in financial statement fraud is less than 50 per cent from the total public firms in Malaysia. In Model (1), the samples are comprised of 50 per cent firms that committed financial statement fraud and 50 per cent of the firms are not involved with financial statement fraud.

5.4.1.1 Operationalisation of Variables

The explanatory variables used in this study are selected based on prior research. Nevertheless, the operationalisations of variables are selected to reflect the situation in Malaysia. These are expected to be the major influencing factors on occurrences of financial statement fraud.

(a) Dependent Variable

Financial Statement Fraud (FSF)

This refers to financial statement fraud which is quantified as a binary variable that is 1 if the firm is subject to financial statement fraud, and 0 if the firm is not subjected to financial statement fraud. This information is retrieved from the Securities Commissions of Malaysia and the Bursa Malaysia. Financial statement fraud is a type of fraudulent financial reporting. The main violations here include (i) delays in disclosing information, (ii) failure to disclose information, and (iii) fabrication of accounting details. Firms are classified as delaying information disclosure when they are involved in late announcement of purchase and sales activity and also fail to disclose significant transactions within the stipulated period. Failure to disclose information refers to activities such as concealment of share acquisitions and disposal as well as concealment of purchasing and sales activity. In the matter of fabricating accounting details, firms fail to provide factual, clear, unambiguous, accurate, succinct and sufficient financial statement information. The firms are also suspected of

providing inaccurate related party transactions. Table 5.5 summarises the nature of financial statement fraud activities in Malaysia.

Table 5.5 The Nature of Financial Statement Fraud Activities in Malaysia	
Delays to disclose information	Late announcement of purchase and sales activity. Fail to disclose significant transaction within the stipulated period.
Failure to disclose information	Concealment of share acquisition and disposal. Concealment of purchasing and sales activity.
Fabrication of accounting details	Fail to provide factual, clear, unambiguous, accurate, succinct and sufficient financial statement information. Inaccurate related party transaction.

(b) Independent Variables

Board of Directors' Independence (DINDEP)

This refers to the percentage of directors who held the position of independent non-executive directors in the firms. The ratio of independent non-executive to the number of directors on the board is converted into a percentage value.

Board of Directors' Expertise (DEXPERT)

This denotes the percentage of directors with accounting or financial expertise. The ratio of directors with accounting or financial expertise to the number of directors on the board is converted into a percentage value.

Insiders on the board of Director (DINSIDE)

This means the percentage of directors who held the position of executive directors in the firms. The ratio of executive directors to the number of directors on the board is converted into a percentage value.

Duality (DUALITY)

This indicates the situation where the position of Chairman and CEO (also known as Managing Director and Chief Executive Director) is held by the same person. This variable is quantified as a binary variable that is 1 if the Chairman also serves as CEO and 0 if the Chairman does not serve as CEO.

Board of Directors' Meeting (DMEET)

This suggests the number of board's meeting held by the firm during the year.

Board of Directors' Remuneration (DREMUN)

This represents the log value of directors' remuneration during the year. The absolute value of directors' remuneration is replaced by their natural logarithm value.

Audit Committee's Independence (AINDEP)

This implies the percentage of audit committee who held the position of independent non- executive directors in the firms. The ratio of independent non-executives to the number of audit committee members on the board is converted into a percentage value.

Audit Committee's Expertise (AEXPERT)

This denotes the percentage of audit committee members with accounting or financial expertise. The ratio of audit committee members with accounting or financial expertise to the number of audit committee members on the board is converted into a percentage value.

Audit Committee's Meeting (AMEET)

This indicates the number of audit committee meetings held by the firm during the year.

External Audit Quality (BIG4)

This refers to the situation where the firm appoints one of the Big 4 audit firms to conduct an external audit. The Big 4 audit firms are PricewaterhouseCoopers, Deloitte deTouche, KPMG and Ernst & Young. These auditors have the four largest market shares based on assets held. This variable is quantified as a binary variable that is 1 if the firm appoints any of the Big 4 audit firm and 0 if the firm does not appoint any of the Big 4 audit firm.

External Audit Fees (AFEE)

This describes the log value of audit fees during the examined year. The absolute value of audit fees is replaced by their natural logarithm value.

Internal Audit Source (AINT)

This refers to the situation where the firm outsources its internal audit function. This variable is quantified as a binary variable that is 1 if the firm outsources the internal audit function and 0 if the firm has a permanent internal audit function.

(c) Control Variables

The factors that influence financial statement fraud are multifaceted. Prior studies have shown mixed results on the association of financial statement fraud and corporate governance structures, and it could be attributed to the omission of variables that motivate financial statement fraud (Perols & Lougee, 2011). These variables are potentially important predictors to financial statement fraud cases and need to be controlled. A number of studies have established the relationship between financial statement fraud and firm characteristics as a control variable (see Agrawal & Chadha, 2005; Beasley, 1996; Carcello & Nagy, 2004; Chapple et al., 2007; Machuga & Teitel, 2009; Sharma, 2004). In this study, firm characteristics refer to the traits of the firm. This study includes firm size, leverage and related party transaction as the control variables in Model 1.

Firm Size (SIZE)

This refers to the size of firm proxied by total sales. The absolute value of sales is replaced by their natural logarithm value.

Agency theory suggests that large firms have higher agency cost (Jensen & Meckling, 1976). In this situation, the presence of corporate governance is important to reduce the occurrence of agency conflict (Fama & Jensen, 1983). A large firm can be inferred as more complex with an imbalance of information between managers and shareholders (Beasley, Carcello, Hermanson, & Neal, 2009; Cohen, Krishnamoorthy, & Wright, 2004; Klein,

2002). Furthermore, a large firm tends to implement decentralised decision-making processes (Baucus & Near, 1991). As a result the segregation of power provides a greater opportunity for financial statement fraud to occur.

Leverage (LEV)

This denotes the ratio of total debt to total assets. A high leverage firm refers to a firm that depends highly on its assets being financed by debt. Therefore, a firm that is experiencing high leverage is presumed to be at greater risk of bankruptcy and engagement in financial statement fraud.

Related Party Transaction (RPT)

This indicates the ratio of related party transaction to the total assets. Firms with high related party transaction tend to experience more financial statement fraud cases (Dunn, 2004).

Table 5.6 summarises the definitions, measurements and sources of data for independent, control and dependent variables.

Table 5.6 Operational Definitions of Variables			
Variables	Meanings	Operationalisation	Source of Information
FSF	Financial statement fraud	1 for firm subject to financial statement fraud, otherwise 0	SCM/ Bursa Malaysia
DINDEP	Board of directors' independence	The percentage of independent directors on the board	Annual report- Profile of Directors
DEXPERT	Board of directors' expertise	The percentage of directors with accounting or financial expertise	Annual report- Profile of Directors
DINSIDE	Insiders on the board	The percentage of directors who serve on the management	Annual report- Profile of Directors
DUALITY	Duality	1 for Chairman who also serves as CEO, otherwise 0	Annual report- Corporate Structure
DMEET	Board of directors' meetings	The number of board's meetings	Annual report- Statement of Corporate Governance
DREMUN	Board of directors' remuneration	Natural log of directors' remuneration	Annual report- Statement of Corporate Governance
AINDEP	Audit committee's independence	The percentage of independent directors on the audit committee	Annual report- Profile of Directors
AEXPERT	Audit committee's expertise	The percentage of audit committee with accounting or financial expertise	Annual report- Profile of Directors
AMEET	Audit committee's meetings	The number of audit committee's meetings yearly	Annual report- Statement of Audit Committee
BIG4	External audit quality	1 for firms that appoint BIG 4 audit firms, otherwise 0	Annual report- Corporate Structures
AFEE	Audit fee	Natural log of audit fees	Annual report-Notes to the Financial Statement
AINT	Internal audit function	1 for outsourcing internal audit function, otherwise 0	Annual report-Audit Committee Report
LEV	Leverage	Total debts to total assets	OSIRIS
RPT	Related party transaction	Related party transaction to total assets	OSIRIS
SIZE	Firm size	Natural log of total sales	OSIRIS

5.4.2 Changes in Corporate Governance Structures after Financial Statement Fraud

This study investigates the changes in corporate governance structures in financial statement fraud firms. The following research question is developed for further analysis:

Research Question 2: Have Malaysian financial statement fraud firms implemented better corporate governance structures after the detection of financial statement fraud?

The analysis for Research Question 2 employs a one-to-one sample matching procedure. Cross-sectional analysis and univariate mean comparison are conducted on financial statement fraud firms and control firms in detecting changes in the practices of corporate governance structures. The corporate governance structures after a year of fraud are identified and compared with corporate governance practices during the fraud year. To ensure the improvement adds values and meets the benchmark, the post-corporate governance structures should be at least similar to the non-fraud firms during the fraud year. The corporate governance variables used for Research Question 2 are similar to the independent variables used in Research Question 1. Therefore, the operationalisation of the variables is visible in Table 5.6.

5.4.3 Real Earnings Management and Financial Statement Fraud

This study further examines financial statement fraud firms' involvement in real earnings management activities. Therefore, the following research question is developed:

Research Question 3: Have Malaysian financial statement fraud firms engaged in real earnings management activities prior to the detection of financial statement fraud?

Roychowdhury (2006) identifies three types of real earnings management activities, namely, the cash flow from operation (CFO), production costs and discretionary expenditure. All types of earnings management have been discussed in Chapter 3, however, for the purpose of this study, only two real earnings management proxies are used (i.e., abnormal CFO and abnormal production cost). This is because the information for research and development costs that is required to calculate the discretionary expenditure is not available in most sampled firms used in this study. To answer Research Question 3 the real earnings management activities for four consecutive years prior to a financial statement fraud event are analysed. García Lara et al. (2009) and Dechow et al. (1996) have shown that firms managed earnings up to four and three years, respectively, prior to the fraud conviction. Furthermore, Copeland (1968) suggests that a time horizon of four years is adequate to minimise any classification error. Research Question 3 also employs the one-to-one sample matching procedure.

This study does not examine whether financial statement fraud firms tend to increase or decrease their income. Based on the sample definition, financial statement fraud firms have various motives when engaged in earnings management. Financial statement fraud firms manipulate financial statements to mislead their stakeholders, for instance, creditors and the government. Positive accounting theory has argued that firms manage earnings upward to convince the creditors and manage earnings downward to reduce taxes and for political reasons. This explains why financial statement fraud does not occur due to a financial crisis which rationally causes firms to manage earnings upward. Therefore, mixed results for the positive and negative values of abnormal earnings are generated from the analysis. Because a financial crisis is not the motive for manipulating financial statements, no specific direction of earnings management activity is investigated. Therefore, this study focuses on examining the absolute value of real earnings management.

Many studies have used the mean value of earnings management proxy to determine earnings management level. However, due to the sample size this study is unable to generate appropriate mean value for analysis. Therefore, following Gunny (2005) and Dechow et al. (1996), the median of absolute for real earnings management proxies are used to define earnings management level. This study applies the Dechow, Kothari, and Watts (1998) model to identify the abnormal CFO and abnormal production costs. This model is also used by García Lara et al. (2009), Gunny (2005), Roychowdhury (2006) and Zang (2011) which confirm the validity of the model as the proxy of real

earnings management. The normal level of CFO is estimated using Model (2) and normal level of production costs is estimated using Model (3).

Normal level Cash Flow from Operations (Model 2)

$$\frac{CFO_{ti}}{A_{ti-1}} = \alpha_0 + \alpha_1 \left(\frac{1}{A_{ti-1}} \right) + \beta_1 \left(\frac{S_{ti}}{A_{ti-1}} \right) + \beta_2 \left(\frac{\Delta S_{ti}}{A_{ti-1}} \right) + \varepsilon_i$$

where:

- CFO_{ti} = Cash flow from operations in year t for firm i ;
- A_{ti} = Total asset in year t for firm i ;
- S_{ti} = Total sales in year t for firm i ;
- ΔS_{ti} = Sales in year t less sales in year $t-1$ for firm i ;
- ε = Error terms.

Xu et al. (2007) indicate that firms with abnormally low CFO are more likely to be involved in real earnings management through excessive sales discount offers. Similarly, García Lara et al. (2009) argue that failing firms will exhibit low abnormal CFO levels while giving more lenient credit opportunities to increase sales volume. García Lara et al. (2009) also contend that over the years, the continuous manipulation of real earnings activities will cause a firm's cash flows to decline. By examining four consecutive years, the result of the abnormal CFO level is shown, and subsequently the level of earnings quality is revealed. These levels will indicate how real earnings management activities lead to the occurrence of financial statement fraud. It is expected that the financial statement fraud firms exhibit poor earnings quality pattern and increasing abnormal CFO towards the fraud year compared to the matching firms.

Normal Level of Production Costs (Model 3)

$$\frac{PROD_{ti}}{A_{ti-1}}\alpha_0 + \alpha_1\left(\frac{1}{A_{ti-1}}\right) + \beta_1\left(\frac{S_{ti}}{A_{ti-1}}\right) + \beta_2\left(\frac{\Delta S_{ti}}{A_{ti-1}}\right) + \beta_3\left(\frac{\Delta S_{ti-1}}{A_{ti-1}}\right) + \varepsilon_i$$

where:

- $PROD_{ti}$ = Total production costs measured as sum of cost of goods sold and change in inventory;
 A_{ti} = Total asset in year t for firm i ;
 S_{ti} = Total sales in year t for firm i ;
 ΔS_{ti} = Sales in year t less sales in year $t-1$ for firm i ;
 ε = Error terms.

Manipulating production costs is involved with manipulating the reporting of cost of goods sold by increasing the production. By introducing more units of produced goods, firms can spread the fixed cost over a larger number of units, thus, lowering fixed costs per unit. The decrease in reported COGS makes the reported operating margins look larger. Therefore, it is expected that financial statement fraud firms will exhibit abnormally higher production costs due to excessive overproduction.

Model (2) and Model (3) are estimated cross-sectionally and are regressed for each firm in each year to generate the coefficient estimates in deriving the normal CFO and normal production cost, respectively. The residual between the actual CFO and normal CFO becomes the abnormal value of CFO and abnormal value of production costs. The actual values of CFO and actual values of production costs are retrieved from the financial statement in the annual report of the sample firm. The abnormal value will indicate the earnings quality of a firm. In the case where such abnormality is found, low

earnings quality is inferred and designates the presence of real earnings management activity. Therefore, this indicates the possible occurrence of financial statement fraud.

5.5 Conclusion

This chapter describes the research methods used in conducting this study. It starts with the sources for financial statement fraud data followed by the sampling procedures undertaken. Altogether, this study uses 76 financial statement fraud and 76 non-fraud firms to investigate the impact of corporate governance and real earnings management on financial statement fraud in Malaysia. The measurement of each variable is carefully defined and further examined using suitable statistical analysis procedures.

Three research questions underpin this study. First, in identifying the association between corporate governance structures and financial statement fraud, a binary logit regression analysis is employed. Second, this study investigates whether financial statement fraud firm leads to changes or improvements in their corporate governance practices. Thus, a univariate mean test is applied to both financial statement fraud and non-fraud firms for comparison purposes. Third and finally, this study investigates the real earnings management practices in financial statement fraud firms. The earnings quality pattern is recognised using earnings management proxies which are the abnormal CFO and abnormal production costs. The next chapter provides a detailed discussion of the findings.

Chapter 6

Results and Discussion

6.1 Introduction

The principal objective of this chapter is to discuss the results of the study. First, it reports the results regarding the association between corporate governance structures and occurrence of financial statement fraud. Second, this chapter demonstrates whether the corporate governance structures of firms engaged in financial statement fraud improved after the financial statement fraud year. Third and finally, it explains the behaviour of earnings quality in financial statement fraud firms prior to the fraud event, proxied by real earnings management activities. This chapter is structured as follows. Section 6.1 provides the results of descriptive statistic for the sample used in this study. Section 6.2 discusses the results of univariate tests regarding the independent variables which are regressed upon financial statement fraud. Section 6.3 is divided into three sub-sections that explain all the empirical results regarding corporate governance, real earnings management and financial statement fraud performed in this study. Section 6.4 discusses the sensitivity analysis and Section 6.5 concludes the chapter.

6.2 Descriptive Statistics

The descriptive statistics are shown below for a better understanding of the data characteristics. Table 6.1 is divided into three panels. Panel A covers the descriptive statistics for selected variables involving financial statement fraud

Table 6.1
Descriptive Statistics of Financial Statement Fraud and Non-Fraud Firms

Panel A: Fraud Year, Financial Statement Fraud Firms						
Variables	Mean	Median	Std. Deviation	Skewness	Minimum	Maximum
<i>Governance Variables:</i>						
DINDEP	43.588	42.857	13.917	-0.328	16.667	62.500
DEXPERT	34.295	33.333	17.018	-0.425	0.000	57.143
DINSIDE	39.250	33.333	18.658	0.823	16.667	80.000
DMEET	5.116	5.000	2.620	-0.678	0.000	8.000
DREMUN	5.876	5.983	0.437	-1.091	4.972	6.324
AINDEP	74.879	75.000	15.709	-0.877	33.333	100.000
AEXPERT	41.787	50.000	23.974	-0.394	0.000	66.670
AMEET	4.406	5.000	1.856	-1.615	0.000	6.000
AFEE	4.651	4.544	0.494	1.128	4.114	5.782
<i>Other Variables:</i>						
ASSETS (RM)	517,084,523	209,036,000	1,043,588,916	5.708	15,585,000	7,776,683,000
SALES (RM)	206,852,231	90,854,000	331,965,118	3.480	367,000	1,964,975,000
Panel B: Fraud Year, Non-Fraud Firms						
Variables	Mean	Median	Std. Deviation	Skewness	Minimum	Maximum
<i>Governance Variables:</i>						
DINDEP	40.863	42.857	17.073	1.352	30.000	83.333
DEXPERT	41.928	42.857	16.602	0.331	20.000	71.429
DINSIDE	34.115	33.333	18.172	-0.434	0.000	57.143
DMEET	5.159	5.000	3.046	1.678	4.000	13.000
DREMUN	6.385	6.107	1.255	2.010	5.371	9.567
AINDEP	76.783	66.667	15.497	0.637	60.000	100.000
AEXPERT	57.729	66.667	24.413	0.457	33.330	100.000
AMEET	4.536	5.000	0.946	1.379	4.000	7.000
AFEE	4.427	4.398	0.358	-0.452	3.696	4.914
<i>Other Variables:</i>						
ASSETS (RM)	469,229,877	195,739,000	855,260,102	5.831	36,748,000	6,531,008,000
SALES (RM)	264,168,207	163,022,000	422,332,744	4.468	8,856,000	2,901,183,000
Panel C: Fraud Year, Combine All Samples						
Variables	Mean	Median	Std. Deviation	Skewness	Minimum	Maximum
<i>Governance Variables:</i>						
DINDEP	45.410	42.857	15.626	0.819	16.667	83.333
DEXPERT	38.114	37.500	17.183	-0.072	0.000	71.429
DINSIDE	36.683	33.333	18.529	0.221	0.000	80.000
DMEET	5.232	5.000	2.945	0.790	0.000	13.000
DREMUN	6.140	6.015	0.981	2.658	4.972	9.567
AINDEP	74.360	75.000	15.885	-0.134	33.333	100.000
AEXPERT	49.517	50.000	26.075	0.052	0.000	100.000
AMEET	4.493	5.000	1.491	-1.656	0.000	7.000
AFEE	4.539	4.477	0.444	0.866	3.696	5.782
<i>Other Variables:</i>						
ASSETS (RM)	493,157,200	205,151,500	950,681,021	5.776	15,585,000	7,776,683,000
SALES (RM)	235,510,219	116,049,000	379,462,868	4.200	367,000	2,901,183,000

where: DINDEP = the percentage of independent directors on the board, DEXPERT = the percentage of directors with accounting or financial expertise, DINSIDE = the percentage of directors who serve on the management, DMEET = the number of board's meetings yearly, DREMUN = natural log of director's remuneration, AINDEP = the percentage of independent directors on the audit committee, AEXPERT = the percentage of audit committee with accounting or financial expertise, AMEET = the number of audit committee's meetings yearly, AFEE = natural log of audit fees, ASSET = the value of total assets, SALES = the value of total sales.

firms, while Panel B illustrates the descriptive statistics for selected variables of the non-fraud firms. Finally, Panel C reports the descriptive statistics for variables of both financial statement fraud and non-fraud firms. The data sources for all variables used in this study have already been discussed in the previous chapter.

Table 6.1 shows that the non-fraud firms have better corporate governance structures compared to the financial statement fraud firms. For example, the minimum (maximum) percentage of independent directors on the board (DINDEP) is higher in the non-fraud firms with 30.0 per cent (83.33 per cent) compared to the financial statement fraud firms with 16.67 per cent (62.5 per cent). The Malaysian Code of Corporate Governance (MCCG) recommends that the board should consist of at least one-third of independent directors (2007, p. 11). Clearly, this indicates that financial statement fraud firms do not comply with the MCCG best practices on DINDEP matters.

The percentage of directors with accounting and financial expertise (DEXPERT) is also higher in non-fraud firms. It is observed that a number of financial statement fraud firms consist of directors without accounting and financial expertise. The MCCG recommends that the appointment of directors should be based on skills, knowledge, expertise and experience (2007, p. 11). Nevertheless, the criteria set by the MCCG are unclear and subjective, and causes the process of appointing competent directors to be imprecise. Furthermore the percentage of directors who serve on the management (DINSIDE) is also higher in the financial statement fraud firms. As mentioned

in Chapter 4, this trend promotes conflict of interest, interference in managerial decisions and encourages firms to engage in financial statement fraud.

Financial statement fraud firms are also found to have the least number of board meetings (DMEET) compared to the non-fraud firms. In this study, the frequency of meetings is used as the proxy for directors' diligence. It is argued that infrequent number of meetings may suggest board members are not very concerned with their firms' quality of financial reporting.

Table 6.1 shows that directors in financial statement fraud firms received less remuneration compared to those working in non-fraud firms. In financial statement fraud firms, the average logged value for directors' remuneration (DREMUN) is 5.876, whereas the log value of directors' remuneration in non-financial statement fraud firm is 6.385. Guerrero (2004) argues that underpaid directors tend to use their authority and power to engage in financial statement fraud by demonstrating unreal progressive achievements of the firms.

Table 6.1 also reports that the audit committee structures are weaker in financial statement fraud firms compared to the non-fraud firms. For example, the percentage of audit committee who are independent directors (AINDEP) is higher in non-fraud firms. Although the MCCG suggests that all member of an audit committee should be non-executive and the majority are independent (2007, p. 14), the descriptive results show that a number of financial statement fraud firms are filled with only 33.33 per cent of independent audit committee

directors. In contrast the ratio of independent director on the audit committees of non-fraud firms is 60.0 per cent.

As expected, there are cases where financial statement fraud firms are not comprised of audit committee members with accounting or financial expertise (AEXPERT). The MCCG prescribes that all members of an audit committee should be financially literate and at least one of them should be a member of a professional accounting body (2007, p. 14). Nonetheless, these guidelines are not followed by the financial statement fraud firms. It is further observed that financial statement fraud firms have the least number of audit committee meetings (AMEET). There are financial statement fraud firms that do not hold any audit committee meeting during the year of fraud. According to Abbott et al. (2002), financial reporting errors can be minimised with at least four audit committee meetings per year. Incidentally, four is the minimum number of audit committee meetings held by the non-fraud firms.

The descriptive statistical results also show that the audit fees (AFEE) paid by the financial statement fraud firms is higher compared to the non-fraud firms. It is argued that higher audit fees may cause biased audit judgements especially when the amount contributes to a high percentage of the audit firm's income (Geiger & Rama, 2003). A detailed discussion on the differences between corporate governance structures in financial statement fraud and non-fraud firms is provided in Section 6.3.

6.3 Univariate Analysis

Section 6.3 is divided into three parts. First, it examines the normality of variables. Second, it demonstrates the independent t-test between financial statement fraud and non-fraud firms. Third, it presents the correlation matrix among testable variables.

6.3.1 Normality of Data

This study incorporates a number of analyses including logit regression and multiple regressions. These statistical tests require the data of the sample to be normally distributed. Therefore, testing the normality of the data for variables to be modelled is necessary. First, the outliers detected in the data are treated. According to Pallant (2007), outliers may influence the results of a parametric statistical test. In order to improve normality and remove these outliers, variables are winsorised at 1 per cent at the top and at the bottom, where the 100th percentile is replaced with the highest value of 99th percentile, and the 1st percentile is replaced with the lowest value of 2nd percentile. Duan (1997) and Hawkins (1980) argue that winsorizing for less than 5 per cent data point will not likely affect the hypothesis testing outcome. This study winsorises variable with skewness and kurtosis values of less of than -1 and more than 1. It applies to variables that have the value of skewness and kurtosis that are three times more than the value of standard error of skewness and kurtosis.

The nature of this study requires the analyses to combine the data for small and large firms in the same model. Therefore, the presence of heteroscedasticity is expected. In order to eliminate this issue and ensure the presence of homoscedasticity in the sample, the variable of director's remuneration, audit fees and total sales are replaced by their natural logarithmic value.

6.3.2 Comparisons of Corporate Governance Structures between Financial Statement Fraud and Non-Fraud Firms during the Fraud Year

Independent sample t-test is conducted to examine the differences between the corporate governance structures of financial statement and non-fraud firms. The results of the test are shown in Table 6.2.

As mentioned in Chapter 3, previous research argues that the corporate governance structures of financial statement fraud firms are weaker than those in non-fraud firms (Nor et al., 2010; Smaili & Labelle, 2009). Table 6.2 shows that the variables of the percentage of directors with accounting and financial expertise (DEXPERT), directors' remuneration (DREMUN), the percentage of audit committee members with accounting and financial expertise (AEXPERT), the number of audit committee meetings (AMEET), the choice for Big 4 audit firm (BIG4) and the source of internal audit function (AINT), confirm that the corporate governance structures in non-fraud firms are stronger than the financial statement fraud firms. These results are consistent with Farber (2005) who advocates that financial statement fraud firms have

weaker corporate governance structures compared to the non-fraud firms in the year of fraud.

Table 6.2
Independent Sample t-test: The Corporate Governance Structures during the Financial Statement Fraud Year

Continuous Variables	FSF(T ₀)	Non-Fraud(T ₀)	t-stat		Mean Difference
DINDEP	43.588	40.863	-1.299	***	2.724
DEXPERT	34.295	41.928	2.667	***	-7.633
DINSIDE	39.250	34.115	-1.638		5.134
DMEET	5.116	5.159	0.133		-0.043
DREMUN	5.876	6.385	3.361	***	-0.509
AINDEP	74.879	76.783	0.644		-1.903
AEXPERT	41.787	57.729	4.084	***	-15.942
AMEET	4.406	4.536	0.587	**	-0.130
AFEE	4.651	4.427	-3.052	**	0.224
Dummy Variables	%	%			%
DUALITY	18.88	20.29	0.528		-1.41
BIG4	53.62	78.26	3.139	*	-24.64
AINT	56.52	53.62	-0.340		2.90

***significant at 1 per cent level, **significant at 5 per cent level, * significant at 10 per cent level

N	76	76
where: DINDEP = the percentage of independent directors on the board, DEXPERT= the percentage of directors with accounting or financial expertise, DINSIDE = the percentage of directors who serve on the management, DUALITY = 1 for Chairman who also serves as CEO, otherwise 0, DMEET = the number of board's meetings yearly, DREMUN = natural log of director's remuneration, AINDEP = the percentage of independent directors on the audit committee, AEXPERT = The percentage of audit committee with accounting or financial expertise, AMEET = The number of audit committee's meetings yearly, BIG4 = 1 for firms that appoint BIG 4 audit firms, otherwise 0, AFEE = Natural log of audit fees, AINT = 1 for outsourcing internal audit function, otherwise 0		

Interestingly, the results show that the percentage of independent directors on the board (DINDEP) is better in the financial statement fraud firms. The percentage of independent directors on the board (DINDEP) in financial statement fraud firms has a higher mean at 43.59 compared to non-fraud firms at 40.86. Furthermore, financial statement fraud firms practice less DUALITY because they generally separate the Chairman and CEO positions. These

results suggest that it is not sufficient to rely only on independent directors and avoiding duality in order to improve the quality of financial reporting.

6.3.3 Correlation Analysis

In order to further examine corporate governance practices and real earnings management of financial statement fraud firms in Malaysia, a correlation analysis is performed. Pallant (2007) argues that regression analysis is sensitive to high correlation among independent variables and may cause multicollinearity. In a correlation test, Cooper and Schindler (2008) suggest that p-value greater than 0.8 collinearity should be treated. Therefore, a correlation test is conducted to ensure the model is within the accepted collinearity.

Table 6.3 shows the results of the correlation analysis concerning corporate governance structures. The variables of board of directors' independence (DINDEP), board of directors' expertise (DEXPERT) and number of board meetings (DMEET), have shown positive and significant correlations with audit committee independence (AINDEP), audit committee expertise (AEXPERT) and number of audit committee meetings (AMEET). The finding that there is a positive and significant correlation between these corporate governance structures is expected because the audit committee members are selected from the directors on the board. The highest correlations of 0.577 between the percentage of directors with accounting and financial

Table 6.3

Pearson Correlation Coefficients Matrix

Variables	FSF	DINDEP	DEXPERT	DINSIDE	DUALITY	DMEET	DREMUN	AINDEP	AEXPERT	AMEET	BIG4	AFEE	AINT	LEV	RPT	SIZE
FSF	1	-0.118	-0.223 *	0.182 **	-0.103	-0.277 ***	-0.297 ***	-0.205 **	-0.381 ***	-0.176 **	-0.26 ***	0.268 ***	0.037	0.181 **	0.182 **	-0.192 **
DINDEP		1	0.232 ***	-0.221 **	-0.048	0.342 ***	0.165 *	0.28 ***	0.209 **	0.069	-0.034	0.136	-0.018	0.08	-0.032	0.062
DEXPERT			1	-0.083	-0.107	0.343 ***	0.065	0.157 *	0.577 ***	-0.042	-0.012	-0.099	0.15 *	-0.055	-0.007	0.007
DINSIDE				1	0.002	-0.214 **	0.123	0.047	-0.042	0.061	-0.045	-0.097	-0.04	-0.069	-0.089	0.059
DUALITY					1	0.011	-0.073	0.077	0.091	0.009	0.079	-0.202 **	0.07	-0.011	0.072	0.047
DMEET						1	0.405 ***	0.218 ***	0.478 ***	0.293 ***	0.031	0.095	-0.058	0.001	-0.131	0.313 ***
DREMUN							1	0.109	0.211 **	0.12	0.093	0.124	-0.182 **	-0.082	-0.038	0.38 ***
AINDEP								1	0.376 ***	0.074	0.051	-0.071	0.094	-0.055	-0.004	0.104
AEXPERT									1	0.124	-0.059	-0.089	0.123	-0.112	-0.037	0.177
AMEET										1	-0.13	0.14	-0.083	-0.051	-0.158 *	0.307
BIG4											1	0.045	-0.065	-0.041	-0.111	0.109
AFEE												1	-0.199 **	0.196 **	0.11	0.198 **
AINT													1	-0.152 *	-0.119	-0.19 **
LEV														1	0.2 **	-0.061
RPT															1	-0.02
SIZE																1

*** significant at 1 per cent level, ** significant at 5 per cent level, * significant at 10 per cent level (2-tailed)

where: FSF = 1 for firm subject to financial statement fraud, otherwise 0, DINDEP = the percentage of independent directors on the board, DEXPERT = the percentage of directors with accounting or financial expertise, DINSIDE = the percentage of directors who serve in the management, DUALITY = 1 for Chairman who also serves as CEO, otherwise 0, DMEET = the number of board's meetings yearly, DREMUN = natural log of director's remuneration, AINDEP = the percentage of independent directors on the audit committee, AEXPERT = the percentage of audit committee with accounting or financial expertise, AMEET = The number of audit committee's meetings yearly, BIG4 = 1 for firms that appoint BIG 4 audit firms, otherwise 0, AFEE = natural log of audit fees, AINT = 1 for outsourcing internal audit function, otherwise 0, LEV = total debts to total assets, RPT = related party transaction to total assets, SIZE = natural log of total sales

expertise (DEXPERT) and the percentage of audit committee with accounting and financial expertise (AEXPERT) indicates that the higher the percentage of directors with accounting and financial knowledge, the more likely that audit committee members are experts in the accounting and finance fields.

Table 6.3 illustrates a positive and significant correlation exists between the number of board meetings (DMEET) and the number of audit committee meetings (AMEET). Given the correlation value of 0.293, this result suggests that a proactive board will positively influence the audit committee in becoming active. The DMEET is also positively significant with regard to the directors' remuneration (DREMUN) with a correlation value of 0.405.

The number of board meetings (DMEET) is also statistically influenced by the percentage of directors with accounting and financial expertise (DEXPERT) (0.343) and the percentage of audit committee members with accounting and financial expertise (AEXPERT) (0.478). The results of the correlation test also suggest that firms with a higher percentage of directors who also serve on the management (DINSIDE), have fewer number of board meetings (DMEET) (-0.214). This supports the argument of this study that firms with a higher percentage of directors who also serve on the management (DINSIDE) and lower number of board meetings (DMEET) are more likely to engage in financial statement fraud.

The presence of independent directors plays an important part in aboard of director structures. Table 6.3 demonstrates the relationship between the percentage

of independent directors on the board (DINDEP) and other components in the corporate governance structures that are likely to cause financial statement fraud incidents. The proportion of independent directors on the board is one of the common mechanisms discussed in studies on corporate governance. Table 6.3 shows that the percentage of independent directors on the board (DINDEP) is positive and related to the percentage of directors with accounting and financial expertise (DEXPERT), the number of board meetings (DMEET), directors' remuneration (DREMUN), percentage of audit committee members who are independent (AINDEP) and percentage of audit committee members with accounting and financial expertise (AEXPERT). Furthermore, firms with a higher percentage of independent directors (DINDEP) have a lower percentage of directors who also serve on the management (DINSIDE). This is essential to minimise financial statement fraud risks.

Apart from the directors' independence, the existence of independent directors on the audit committee is also essential in minimizing financial statement fraud. The correlation results suggest that the percentage of audit committee members who are independent (AINDEP) is positively correlated with the percentage of directors with accounting and financial expertise (DEXPERT) and the percentage of audit committee members with accounting and financial expertise (AEXPERT). Firms maintaining a permanent internal audit function (AINT) are more likely to use an external audit service from one of the Big 4 audit firms (BIG4). These results are desirable because this study hypothesises that financial statement fraud can be minimised by retaining a permanent internal audit function and employing

Big 4 audit firms for external audit services. The next section discusses the empirical results of the study.

6.4 Empirical Results

This section describes the results of the three research questions formulated for this study. First, it reports the association between financial statement fraud and corporate governance structures. In order to confirm the relationship, 12 hypotheses (H1a to H1l) are developed and a binary logit regression is performed. The results are discussed in Section 6.4.1. Second, Research Question 2 consists of 12 hypotheses (H2a to H2l) to investigate the changes made by the financial statement fraud firms in the context of corporate governance structure. Univariate mean test is conducted to examine the corporate governance structures by the financial statement fraud firms after the year of fraud event. It is compared with the corporate governance of financial statement fraud and non-fraud firms during the fraud year. Section 6.4.2 discusses the results for Research Question 2. Finally, this study investigates the real earnings management practices by the financial statement fraud firms up to four years before the fraud year. The regression models by Dechow et al. (1998) are utilised to measure abnormal cash flows from operation and the abnormal production costs. The results for Research Question 3 are discussed in Section 6.4.3.

6.4.1 Associations between Corporate Governance Structures and Financial Statement Fraud

A logit regression is employed to analyse the relationship between financial statement fraud and corporate governance structures. Table 6.4 summarises the regression results. Section 6.4.1.1 and Section 6.4.1.2 present a detailed discussion on the logit regression results.

6.4.1.1 Test of Fit

Similar to other types¹² of regression, a binary logit regression also requires the model used in the analysis to be robust. In a logit regression, the robustness or model fit is explained in the Omnibus Test, Hosmer-Lemeshow Goodness of Fit Test and Pseudo R-squared value (refer to Table 6.4). The Omnibus Test indicates the strength of the model, which is also known as the test for ‘goodness of fit’. The block Chi-square value is 76.084 with a significant value 0.000 ($p < .05$) at 15 degrees of freedom. The result suggests that the structure of the model including the financial statement fraud cases and its testable variables are statistically significant. This further indicates the model is able to distinguish between firms that reported financial statement fraud and firms that did not report financial statement fraud.

¹² Bivariate regression, multiple regressions, and multinomial logit regression.

Table 6.4
Logit Regression Results: Financial Statement Fraud and Corporate Governance Structures

$$\text{FSF} = \alpha + \beta_1 \text{DINDEP}_i + \beta_2 \text{DEXPERT}_i + \beta_3 \text{DINSIDE}_i + \beta_4 \text{DUALITY}_i + \beta_5 \text{DMEET}_i + \beta_6 \text{DREMUN}_i + \beta_7 \text{AINDEP}_i + \beta_8 \text{AEXPERT}_i + \beta_9 \text{AMEET}_i + \beta_{10} \text{BIG4}_i + \beta_{11} \text{AFEE}_i + \beta_{12} \text{AINT}_i + \beta_{13} \text{LEV}_i + \beta_{14} \text{RPT}_i + \beta_{15} \text{SIZE}_i + \varepsilon_i \quad (1)$$

Variables	Predicted Signs	Coefficient	P-value	Odds Ratio	95% C.I. for EXP(B)		VIF
					Lower	Upper	
Constant	?	-5.796	.1041	.003			
(β_1)DINDEP	-	-.011	.357	.989	.952	1.026	1.215
(β_2)DEXPERT	-	-.005	.068	.995	.961	1.031	1.292
(β_3)DINSIDE	+	.040	7.780 ***	1.041	1.012	1.071	1.254
(β_4)DUALITY	+	.172	.057	1.187	.291	4.846	1.124
(β_5)DMEET	-	-.003	.101	.997	.781	1.275	1.614
(β_6)DREMUN	-	-1.687	4.913 **	.185	.042	.823	1.336
(β_7)AINDEP	-	-.015	.707	.985	.951	1.020	1.204
(β_8)AEXPERT	-	-.032	5.506 **	.968	.943	.995	1.654
(β_9)AMEET	-	-.402	4.041 **	.669	.452	.990	1.563
(β_{10})BIG4	-	-1.828	10.887 ***	.161	.054	.476	1.117
(β_{11})AFEE	+	2.531	10.166 ***	12.565	2.652	59.542	1.291
(β_{12})AINT	+	1.015	3.992 **	2.760	1.020	7.470	1.170
Control Variables:							
(β_{13})LEV	?	.320	.840	2.809	.695	2.731	
(β_{14})RPT	?	1.114	1.003	1.377	.015	86.077	
(β_{15})SIZE	?	1.033	2.271	1.121	.733	10.760	
Chi Square test of Model Fit (Omnibus test)				76.084	***		
Hosmer-Lemeshow Goodness of Fit				7.897			
Pseudo R ²				0.565			
% of correct prediction				80.4			
N				138			

***significant at 1 per cent level, **significant at 5 per cent level

where: FSF = 1 for firm subject to financial statement fraud, otherwise 0, DINDEP = the percentage of independent directors on the board, DEXPERT = the percentage of directors with accounting or financial expertise, DINSIDE = the percentage of directors who serve on the management, DUALITY = 1 for Chairman who also serves as CEO, otherwise 0, DMEET = the number of board's meetings yearly, DREMUN = natural log of director's remuneration, AINDEP = the percentage of independent directors on the audit committee, AEXPERT = the percentage of audit committee with accounting or financial expertise, AMEET = The number of audit committee's meetings yearly, BIG4 = 1 for firms that appoint BIG 4 audit firms, otherwise 0, AINT = 1 for outsourcing internal audit function, otherwise 0, AFEE = natural log of audit fees, LEV = total debts to total assets, RPT = related party transaction to total assets, SIZE = natural log of total sales, ε = error term

Pallant (2007) posits that the Hosmer and Lemershow test provides more reliable results for model fit. The Hosmer-Lemershow Goodness of Fit test is interpreted differently from the Omnibus Test. In this test, poor fit is indicated by a significant value less than 0.05, therefore a significant value more than 0.05 is targeted. Table 6.4 shows the Chi-square value of the Hosmer-Lemershow Test is 7.897 with a significant value of .444 ($p>0.05$). This subsequently indicates support for the model.

The Nagelkerke R or the Pseudo R-squared shows a value of 0.565, indicating the amount of variation in the dependent variables or the financial statement fraud is 56.5 per cent explained by the predicted variables. The strength of Pseudo R-squared is also supported by the explanatory power of correct case prediction of 80.4 per cent.

Table 6.4 also demonstrates the value of variance inflation factor (VIF), which is used to detect multicollinearity. Gujarati (2009) and O'Brien (2007) state that VIF of more than 5 may indicate multicollinearity issue in regression analysis. Table 6.4 demonstrates the highest VIF is 1.654 for the percentage of audit committee with accounting and financial expertise (AEXPERT). Therefore, the multicollinearity issue is not likely to present in the regression analysis for this study.

6.4.1.2 Logit Regression Results

This section discusses the binary logit regression results which show the relationship between the dependent and independent variables. The dichotomous dependent variable (whether the firm is subject to financial statement fraud, or not) is regressed against the independent variables of corporate governance structures. Altogether, 12 independent variables and 3 control variables of total sales (SIZE), leverage (LEV) and related party transaction (RPT) are entered into the equation to examine the associations between corporate governance structures and occurrence of financial statement fraud.

Table 6.4 shows that the strongest predictor of reporting financial statement fraud cases is the log of audit fees (AFEE), recording an odds ratio of 12.565. This indicates that firms increasing one log value of audit fees are 12.565 times more likely to report financial statement fraud than those firms that not involved in financial statement fraud. The H1k predicts that the firms with higher audit fees are more likely to be involved in financial statement fraud. The result confirms the H1k proposition of a positive relationship between financial statement fraud and the amount of audit fees. The findings are similar to Geiger and Rama (2003) and Srinidhi and Gul (2006). Geiger and Rama (2003) suggest that an appropriate amount of audit fees should be paid to the external auditor so that the reports from audit works are not biased. In order to meet this objective, the corporate governance team and in particular the audit committee members are required to be focused and determined in executing their duties. Therefore, the external auditor

has less financial statement fraud risks to monitor. As a result, less audit fees are paid to the external auditor due to less audit work being required.

The next predictor showing a statistically significant result is the source of internal audit function (AINT). In H11, it is proposed that firms outsourcing their internal audit function are more likely to be involved in financial statement fraud. The odds ratio of 2.76 indicates that firms that outsource their internal audit service are 2.76 times more likely to be involved in financial statement fraud, thus, supporting H11. Therefore, it is advisable to have a permanent internal audit function if firms are keen to minimise financial statement fraud. This finding is similar to those of Abbott et al. (2007), Coram et al. (2008) and James (2003) who emphasise that outsourcing internal audit function increases the risks of financial statement fraud. They contend that an effective audit committee is less likely to make decision to outsource the internal audit function. This is due to the limited knowledge and information that the internal audit function would have of the firm concerned. However, it is important for the permanent internal audit function to be effective in delivering the requisite duties in order to minimise financial statement fraud (Beasley et al., 2000).

The results in Table 6.4 also indicate that firms that increase 1 per cent of directors on the board who serve on the management (DINSIDE), are 1.041 times more likely to be involved in financial statement fraud. In H1c, it is predicted that firms with a higher percentage of directors who serve on management are more likely to engage in financial statement fraud. The studies by Fan and Wong (2002) and Beasley (1996) fail to confirm the result for the factor of insiders on the board

and the occurrence of financial statement fraud. Nevertheless, the results in Table 6.4 confirm hypothesis H1c by the significant and positive association between the percentage of directors who serve on the management and the occurrence of financial statement fraud.

The percentage of audit committee members with accounting and financial expertise (AEXPERT) provides a negative and statistically significant result with an odds ratio of 0.968. This indicates that with 1 per cent increment in the percentage of audit committee members with accounting and financial expertise, the firms are 0.968 times less likely to be involved in financial statement fraud. This result supports H1h and is consistent with studies by Cohen et al. (2002) and Moyes and Hasan (1996). They find that audit committee members' accounting and financial background allowed them to detect possible financial statement fraud threats. Therefore, the proposal by the MCCG for firms to employ audit committees with people who have financial knowledge and at least one member registered with an accounting body, is appropriately defined. It is important for audit committee to be financially literate as they are the people who have to identify possible financial statement fraud risks.

Table 6.4 also shows a negative and statistically significant result with regard to the number of audit committee meetings (AMEET). The H1i predicts that firms with more frequent audit committee meetings are less likely to engage in financial statement fraud. The odds ratio of 0.669 signifies that firms that conduct an additional number of meetings yearly will be 0.669 times less likely to be involved in financial statement fraud. This result supports H1i and is consistent

with the findings of Beasley et al. (1999) and Owens-Jackson et al. (2009). It can be argued that by having regular and scheduled meetings, the audit committee is able to solve any current issues faced by the firms. As a result, firms can develop appropriate procedures to prevent further risks of financial statement fraud.

The H1f hypothesises that firms with higher directors' remuneration (DREMUN) are less likely to engage in financial statement fraud. The logit regression result shows an odds ratio value of 0.185. This demonstrates a negative and statistically significant relationship between directors' remuneration and the occurrences of financial statement fraud. The result shows that with an increase of 1 log value of directors' remuneration, a firm is 0.185 times less likely to be involved in financial statement fraud. Guerrero (2004) argues that underpaid directors tend to use their power to override normal processes and document misleading firm achievements in an attempt to increase their remuneration. Therefore, it is important to ensure the value of directors' remuneration is appropriate with the responsibilities held and contributions delivered.

Finally, the decision to choose a Big 4 audit firm for external audit service (BIG4) provides a negative and statistically significant result. In H1j, it is hypothesised that firms using the services of a BIG 4 auditor will be less likely to engage in financial statement fraud. The odds ratio of 0.161 indicates that firms employing a Big 4 audit firm are 0.161 times less likely to commit financial statement fraud, which supports H1j. External auditors play an important role in providing assurance for minimal accounting manipulation (Fan and Wong, 2005). Therefore, the decision to choose an external auditor should include its reputation and

knowledge of its quality of the service expected to be delivered. Similarly, Michaely and Shaw (1995), Nieschweitz et al. (2000), Lennox and Pittman (2010) and Nor et al. (2010) suggest that the external auditor's ability to understand the client's strategic plans will avert the risk of financial statement fraud.

However, Table 6.4 also shows that several testable variables are not related to financial statement fraud. It shows that the percentage of independent directors on the board (DINDEP), the percentage of directors with accounting and financial expertise (DEXPERT), the directors who are both Chairman and CEO (DUALITY), the number of board meetings (DMEET) and the percentage of audit committee members who are independent directors (AINDEP), are not significantly related to the occurrence of financial statement fraud.

Although the percentage of independent directors on the board (DINDEP) is found to be statistically insignificant, the predicted sign is similar to the hypothesis developed (H1a), where firms with a higher percentage of independent directors on the board are less likely to engage in financial statement fraud. The relationship is consistent with the results of Chapple et al. (2007), Beasley et al. (2000), Beasley et al. (1999) and Beasley (1996). The percentage of audit committee members who are independent directors (AINDEP) is also considered to be an important criterion in reducing financial statement fraud. The H1g predicts that firms with more independent directors on their audit committees will be less likely to engage in financial statement fraud. The MCCG requires that the majority of audit committee members be independent so that duties delivered are not being compromised (2007, p. 14). Although the results show an insignificant

relationship between the percentage of audit committee members who are independent directors and financial statement fraud, hypothesis H1g is similar to the findings of Abbott et al. (2002), Beasley et al. (2000), Crutchley et al. (2007), Owens-Jackson et al. (2009) and Smaili and Labelle (2009). The insignificant results for the percentage of independent directors on the board (DINDEP) and the percentage of audit committee members who are independent directors (AINDEP) may be due to the fact that these directors and audit committee members do not meet the strict definition of independence as outlined by the MCCG.

The percentage of directors with accounting and financial expertise (DEXPERT) is also found to be statistically insignificant but consistent with the expected negative relationship with financial statement fraud, as proposed in H1b. This is similar to the findings of Smaili and Labelle (2009) and Agrawal and Chadha (2005). The insignificant result may suggest the directors perceive audit committee to be responsible for controlling and overseeing all financial reporting matters. The directors are less likely to intervene because they rely on the competence of the audit committee for quality of financial reporting.

With respect to H1d, firms that practice duality or having the same person who is both Chairman and CEO (DUALITY) is hypothesised to be more likely to engage in financial statement fraud. In contrast, Table 6.4 shows a statistically insignificant relationship between DUALITY and financial statement fraud. Nevertheless, the predicted sign is consistent with Smaili and Labelle (2009), Uzun et al. (2004) and Dechow et al. (1996). Chapple et al. (2007) explain that in financial statement fraud, dichotomous variables are sensitive to some extent.

They find that all firms are likely to experience some amount of financial statement fraud whether it is immaterial or not. Therefore, a possible explanation for the insignificant results is that financial statement fraud and non-fraud firms will both experience cases of financial irregularities.

Similar to other variables that generate a statistically insignificant finding, the predicted sign for number of board meetings (DMEET) and its relationship to the occurrence of financial statement fraud is similar to preliminary hypothesis H1e. It is hypothesised that firms with more board meetings are less likely to engage in financial statement fraud. These results are similar to Carcello et al. (2002), Xie et al. (2003) and Vafeas (1999). Their results indicate that the number of board meetings held is an efficient monitoring tool and can minimise financial statement fraud risks. The fact that the number of board meetings is insignificant may indicate that it is not a critical corporate governance mechanism in preventing financial statement fraud compared to the meetings of the audit committee (AMEET). In this study the AMEET is more critical compared to the DMEET in preventing financial statement fraud since directors on the audit committee are more competent in detecting and preventing financial statement fraud.

To summarise, the findings in Research Question 1 demonstrate that the variables concerning the percentage of directors who serve on the management (DINSIDE), amount of audit fees (AFEE) and outsourced internal audit function (AINT) are positively and statistically significant with the occurrence of financial statement fraud in Malaysia. It is also found that directors' remuneration (DREMUN), percentage of audit committee members with accounting and financial expertise

(AEXPERT), number of audit committee meetings (AMEET) and choice of a Big 4 audit firm for external audit service (BIG4) are negatively associated and statistically significant to the occurrence of financial statement fraud in Malaysia. To sum up, the analysis suggests that the presence of an audit committee in corporate governance structure is more significant in preventing financial statement fraud compared to the presence of a board of directors.

6.4.2 Improvement in Corporate Governance Structures in Financial Statement Fraud Firms

In respect to Research Question 2, a univariate mean test is conducted to examine the changes made by the financial statement fraud firms on their corporate governance structures after the fraud year. Research Question 2 contains 12 hypotheses (H2a to H2l). Section 6.4.2.1 explains the results for the univariate mean test for pair-matched sample, while Section 6.4.2.2 discusses the univariate mean test for the independent sample.

6.4.2.1 Comparisons of Corporate Governance Structures between Financial Statement Fraud Firms during Fraud Year and after the Fraud Year

In order to test the hypotheses developed for Research Question 2, first, this study employs pair-matched mean test to examine the differences in corporate governance structures between financial statement fraud firms during the year of fraud and the year after the fraud event. Following this, Section 6.4.2.2 describes the results for comparing corporate governance structures between financial

statement fraud firms during subsequent fraud year and non-fraud firms during the fraud year, which emphasises the hypotheses of H2a to H2l.

Extant research provides limited evidence on the studies that explores the improvement in corporate governance structures in financial statement fraud firms. Therefore, this study fills that gap by examining the subsequent improvement made by the financial statement fraud firms in their corporate governance structures. It is important for these firms to examine and update their current corporate governance structures and make improvement after periodical reviews in order to minimise financial statement fraud. In general, it is expected that financial statement fraud firms are expected to improve their corporate governance structures after the year of fraud, which is evident by the pair-matched sample t-test results, reported in Table 6.5.

Table 6.5 shows that financial statement fraud firms have improved their corporate governance structures after the financial statement fraud year. As reported in Table 6.5, it is found that the mean percentage of independent directors on the board (DINDEP) in the year after the fraud occurred is 46.36 which is significantly different ($t = 2.075$) compared to 43.59 in the year of fraud event, which is consistent with Farber (2005). The mean difference in the percentage of independent directors on the board is 2.77 which are greater than the fraud year. This supports the contention that financial statement fraud firms will increase the percentage of independent directors after the financial statement fraud has occurred.

Table 6.5						
Pair-Matched Sample t-test: Post Fraud Corporate Governance Structures						
Continuous Variables	FSF(T ₀)	FSF(T ₊₁)	t-stat		Predicted Signs	Mean Difference
DINDEP	43.588	46.356	2.075	**	+	2.768
DEXPERT	34.295	40.265	2.713	***	+	5.970
DINSIDE	39.250	36.472	-2.025	**	-	-2.777
DMEET	5.116	6.275	2.597	**	+	1.159
DREMUN	5.876	5.880	0.116		+	0.004
AINDEP	74.879	80.029	2.150	**	+	5.150
AEXPERT	41.787	49.130	2.615	**	+	7.343
AMEET	4.406	5.174	2.922		+	0.768
AFEE	4.651	4.666	0.351		-	0.014
Dummy Variables	%	%				%
DUALITY	18.88	13.04	-2.046	**	-	-5.84
BIG4	53.62	50.72	-1.236		+	-2.90
AINT	56.52	57.97	0.275		-	1.45
***significant at 1 per cent level, **significant at 5 per cent level						
N	76	76				
where: DINDEP = the percentage of independent directors on the board, DEXPERT = the percentage of directors with accounting or financial expertise, DINSIDE = the percentage of directors who serve on the management, DUALITY = 1 for Chairman who also serves as CEO, otherwise 0, DMEET = the number of board's meetings yearly, DREMUN = natural log of director's remuneration, AINDEP = the percentage of independent directors on the audit committee, AEXPERT = The percentage of audit committee with accounting or financial expertise, AMEET = the number of audit committee's meetings yearly, BIG4 = 1 for firms that appoint BIG 4 audit firms, otherwise 0, AINT = 1 for outsourcing internal audit function, otherwise 0, AFEE = natural log of audit fees						

Table 6.5 exhibits the mean percentage of directors with accounting and financial expertise (DEXPERT) in the year the fraud occurred and the year after the fraud is significantly different (t=2.713) with a mean difference of 5.97. This outcome signifies that financial statement fraud firms have made efforts to increase their boards' competence by recruiting directors who are accounting and financially literate. Furthermore, the pair-matched sample test results reveal that financial statement fraud firms reduce the percentage of directors who serve on the management (DINSIDE) after the financial statement fraud event. The t-statistics and mean difference are significantly different at -2.025 and -2.78 levels, respectively. Consistent with Dunn (2004) and Dechow et al. (1996), financial

statement fraud firms reduce the domination of insiders on the board in order to minimise financial statement fraud risks.

The mean for number of board meetings (DMEET) in the year after financial statement fraud is 6.28 compared to 5.12 in the year the fraud is committed. It is significantly different ($t= 2.597$) between the financial statement fraud year and after fraud year with a mean difference of 1.16 compared to the fraud year. The results suggest that financial statement fraud firms will increase the number of board meetings following the fraud event in order to discuss possible related issues. The scholarly opinion is that board meetings are an efficient monitoring tool and can minimise financial statement fraud (Carcello et al., 2002; Vafeas, 1999; Xie et al., 2003).

It is also observed that the mean percentage of audit committee members who are independent directors (AINDEP) in the year of fraud and after fraud is significantly different ($t=2.15$) with a mean difference of 5.15. This result is inconsistent with Farber (2005) who reports a declining independence level on the audit committee after the financial statement fraud year. This suggests that financial statement fraud firms in Malaysia have followed the best practices outlined by the MCCG, which emphasises that members of the audit committee should be independent directors.

Table 6.5 also illustrates that the mean percentage of audit committee members with accounting and financial expertise (AEXPERT) in year of fraud and after the fraud year is significantly different ($t=2.615$) with a mean difference of 7.43. In

the financial statement fraud year, the mean percentage of audit committee with accounting and financial expertise is only 41.79 and has increased to 49.13 in the following year. Similarly, Farber (2005) finds that the level of competence increases in the year after the fraud. This signifies that financial statement fraud firms realised the importance of having accounting and financial experts in the audit committee. As shown in the descriptive statistics of Table 6.1, a number of financial statement fraud firms do not have any member in the audit committee who is accounting and financial literate. Thus, this improvement implies that the financial statement fraud firms follow the requirements set down by the MCCG for having audit committee members who are financially literate.

Furthermore, Table 6.5 shows that the directors' remuneration (DREMUN) and the number of audit committee meetings (AMEET) do not provide statistically significant results. However, the results of mean tests render support for the assumption that financial statement fraud firms will improve their corporate governance structures after a fraud occurs. Due to the fact that the pair-matched analysis finds differences in the mean test analysis, this study concludes that the financial statement fraud firms changed their corporate governance structures after the financial statement fraud year.

The amount of external audit fees (AFEE), the external audit quality (BIG4) and the source for internal audit function (AINT) differed from the proposition made in this study. It is argued that high audit fees are likely to influence the true and fair audit decision (Geiger & Rama, 2003). However, the mean difference is small (0.014) and shows the increment is minimal for a one-year period. This could be

due to inflation and audit firms demand for higher payments to cover the increasing audit expenses. The decision to choose an external auditor from the BIG 4 audit firms is closely related to financial statement fraud occurring. Studies have agreed that the Big 4 auditing firms are competent in restraining or detecting financial statement fraud. Nevertheless, univariate mean test finds that financial statement fraud firms tend not to employ Big 4 audit firms after a financial statement fraud has occurred.

Apart from the reluctance to hire any of the Big 4 audit firms, financial statement fraud firms outsourced their internal audit function (AINT). The result of logit regression is supported by Abbott et al. (2007), Coram et al. (2008) and James (2003). They find that it is more effective to have a permanent internal audit function or system in place, rather than an outsourced internal audit function. It is evident that financial statement fraud firms have corporate governance structures that could cause financial statement fraud to recur. Given these circumstances, the policy maker needs to examine and revise the current standards by incorporating corporate governance variables and their structures so that they are able to minimise financial statement fraud.

6.4.2.2 Comparisons of Corporate Governance Structures between Financial Statement Fraud Firms after the Fraud Year and Non-Fraud Firms during Fraud Year

Independent sample t-test is conducted to find the difference in corporate governance structures for financial statement fraud and non-fraud firms. The main

objective for Research Question 2 is to examine whether the corporate governance structures in financial statement fraud firms are better than the non-fraud firms after the year of fraud. Therefore, the mean of each testable corporate governance structure of financial statement fraud firms during the year after fraud occurred, is compared to the testable corporate governance structures of non-fraud firms during the fraud year. This will distinguish the level of corporate governance structures between the financial statement fraud and non-fraud firms at in the year after fraud (t_{+1}) and non-fraud firms at the year of fraud (t_0).

In the previous section, Table 6.5 presents that the corporate governance structures of financial statement fraud firms are initially weak. In order to prevent financial statement fraud, it is expected that the corporate governance structures in financial statement fraud firms after the fraud year (t_{+1}) are at least similar to the corporate governance of the non-fraud firms in the fraud year (t_0). This is due to the fact that the financial statement fraud firms are likely to implement better corporate governance structures to avoid financial statement fraud reoccurrences. Table 6.6 presents the findings for the independent sample t-test between financial statement fraud and non-fraud firms.

Farber (2005) reports changes in corporate governance structures after the detection of fraud are important if investors' confidence is to be retained. Table 6.6 shows that the mean percentage of independent directors on the board (DINDEP) in the year after fraud (t_{+1}) is 46.36 compared to 40.86 in non-fraud firms in the fraud year (t_0). There is significant difference ($t = 2.559$) between the percentage of independent directors on the board of non-fraud firms in the fraud

Table 6.6						
Independent Sample t-test: Post Fraud Corporate Governance Structures						
Continuous Variables	Non-Fraud (t ₀)	FSF (t ₊₁)	t-stat		Predicted Signs	Mean Difference
DINDEP	40.863	46.356	2.559	**	+	5.493
DEXPERT	41.928	40.265	-0.525		+	-1.662
DINSIDE	34.115	36.472	0.771		-	2.357
DMEET	5.159	6.275	2.421	**	+	1.116
DREMUN	6.385	5.880	-3.296	***	+	-0.505
AINDEP	76.783	80.029	1.226		+	3.246
AEXPERT	57.729	49.130	-2.062	**	+	-8.599
AMEET	4.536	5.174	2.379	**	+	0.638
AFEE	4.427	4.666	3.406	***	-	0.238
Dummy Variables	%	%				%
DUALITY	20.29	13.04	-1.233	**	-	-7.25
BIG4	78.26	50.72	3.503	**	+	-27.54
AINT	53.62	57.97	0.856		-	4.35

***significant at 1 per cent level, **significant at 5 per cent level

N	76	76
where: DINDEP = the percentage of independent directors on the board, DEXPERT = the percentage of directors with accounting or financial expertise, DINSIDE = the percentage of directors who serve on the management, DUALITY = 1 for Chairman who also serves as CEO, otherwise 0, DMEET = the number of board's meetings yearly, DREMUN = natural log of director's remuneration, AINDEP = the percentage of independent directors on the audit committee, AEXPERT = the percentage of audit committee with accounting or financial expertise, AMEET = the number of audit committee's meetings yearly, BIG4 = 1 for firms that appoint BIG 4 audit firms, otherwise 0, AINT = 1 for outsourcing internal audit function, otherwise 0, AFEE = natural log of audit fees		

year (t₀) and the financial statement fraud firms at after fraud year (t₊₁). This is consistent with the findings of Beasley (1996), Dechow et al. (1996) and Farber (2005). The H2a predicts that after the financial statement fraud year, financial statement fraud firms are more likely to have higher percentage of independent directors on the boards compared to non-fraud firms. The mean difference in the percentage of independent directors on the board is 5.493, which is greater than that of non-fraud firms, hence, supporting the H2a. The results indicate that financial statement fraud firms increase the percentage of independent directors

more than the control firms after the financial statement fraud event. This finding is consistent with Farber (2005).

This study also finds that the mean for the number of board meetings (DMEET) in financial statement fraud and non-fraud firms is significantly different ($t=-2.421$) with a mean difference of 1.116. The number of audit committee meetings (AMEET) is also higher and significantly different as the mean in financial statement fraud and non-fraud firms is 5.17 and 4.34, respectively. The H2e predicts that after the fraud year, financial statement fraud firms are more likely to have more board meetings compared to non-fraud firms. The H2i proposes that after the fraud year, financial statement fraud firms are likely to have more audit committee meetings in contrast to non-fraud firms. Table 6.6 also demonstrates that the mean difference is greater for non-fraud firms after the fraud event. This indicates that financial statement fraud firms increase the DMEET and AMEET after the financial statement fraud year so that problems in the firm can be discussed, hence, H2e and H2i are supported. The finding for higher AMEET is similar to Farber (2005).

Table 6.6 also shows that financial statement fraud firms avoid having the same person acting as both Chairman and CEO (DUALITY) compared to non-fraud firms. The H2d predicts that after the fraud year, financial statement fraud firms are more likely to have less duality compared to the non-fraud firms. The mean percentage for financial statement fraud firms with duality after the fraud occurred is 13.04 compared to 20.29 for non-fraud firms. Thus, H2d is supported. The mean difference of 7.25 indicates financial statement fraud firms are avoiding

conflict of interest by refusing to have duality in the senior management because it will compromise the quality of financial reporting.

Table 6.6 shows the corporate governance structures of the percentage of independent directors on the board (DINDEP), the number of board meetings (DMEET), the number of audit committee meetings (AMEET) and DUALITY in financial statement fraud firms after the fraud year, is better and stronger than the non-fraud firms during the year of fraud. These results suggest that a number of corporate governance structures have improved in the financial statement fraud firms and better-practiced than the non-fraud firms. This shows that the financial statement fraud firms make more effort to improve their corporate governance structures in order to improve their financial reporting systems.

Nevertheless, Table 6.6 shows that a number of testable variables are weaker in regard to financial statement fraud firms even after the fraud year. The variables are directors' remuneration (DREMUN), the percentage of audit committee members with accounting and financial expertise (AEXPERT), the amount of external audit fees (AFEE), selecting Big 4 audit firms as external auditor (BIG4) and the source of internal audit function (AINT). The possible explanation for lacking these corporate governance structures is that firms have only a limited understanding of the best corporate governance practices. The findings further suggest that improvements need to be emphasised by the financial statement fraud firms if they want better corporate governance practices to minimise financial statement fraud. The next section discusses whether financial statement fraud firms are engaged in real earning management activities prior to a fraud occurring.

6.4.3 Real Earnings Management Activities prior to Financial Statement Fraud

With regard to Research Question 3, this study investigates the prevalence of real earnings management activities in the period leading up to the financial statement fraud event. Before the occurrence of financial statement fraud, financial statement fraud firms are expected to implement aggressive real earnings management strategies which will cause earnings quality to decline. Dechow et al. (2011) provide evidence that earnings quality in financial statement fraud firms is lower than non-fraud firms due to the practice of real earnings management. The real earnings management activities are reviewed up to four consecutive years before the financial statement fraud event occurs. Two hypotheses (H3a and H3b) are tested in Research Question 3. For the purpose of this study, real earnings management activities are used for the proxy of earnings quality and measured by the level of abnormal cash flow from operation and abnormal production costs.

6.4.3.1 Abnormal Cash Flow from Operation (CFO)

This section discusses the behaviour of real earnings management activities proxied by the level of abnormal CFO. Estimated abnormal CFO is measured using (Dechow et al., 1998) model which calculates the normal level of CFO. As explained in Chapter 5, the abnormal CFO is generated from the residual of actual CFO and normal CFO. The abnormal CFO of financial statement fraud firms are then compared with the level of abnormal CFO of non-fraud firms. The H3a predicts that before the fraud year, financial statement fraud firms have less

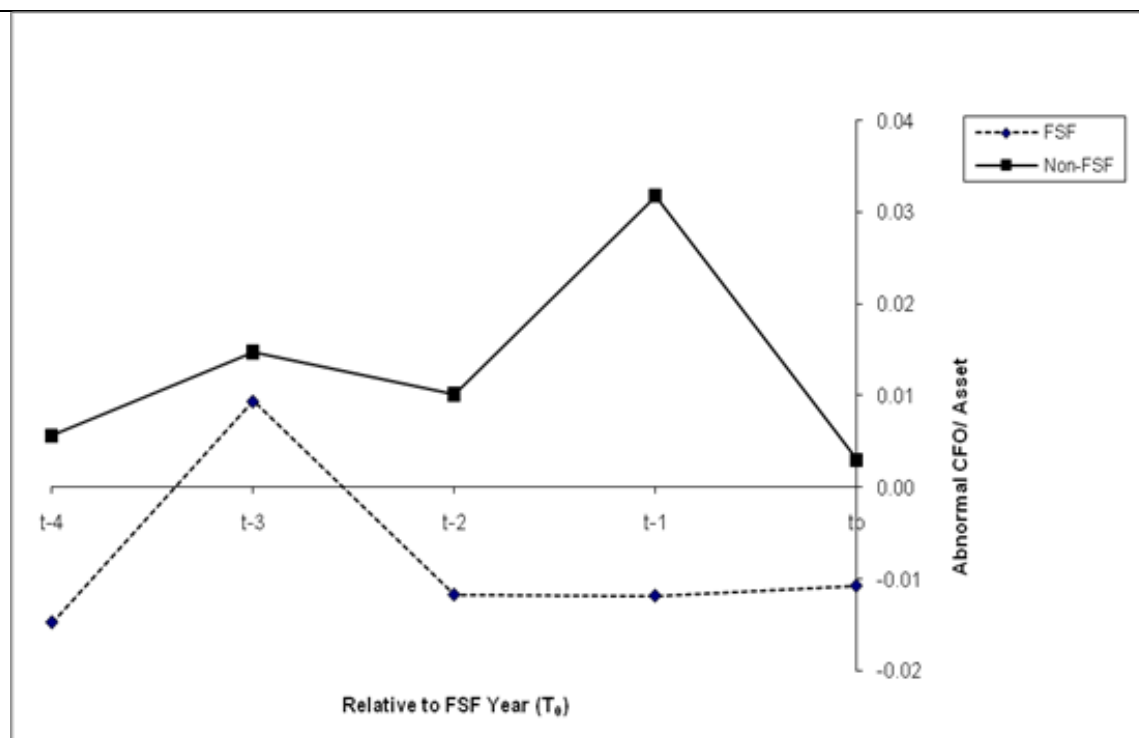
abnormal CFO compared to non-fraud firms. Figure 6.1 shows in graph form the abnormal CFO for financial statement fraud and non-fraud firms.

The median of abnormal CFO scaled by lagged asset is plotted up to four years before the financial statement fraud event. Firms that manipulate their financial statements are attempting to exhibit favourable financial conditions. Dechow et al. (2011) provide evidence that the amount of sales significantly increases as the financial statement fraud year approaches. It is argued that firms are involved in financial statement fraud because they fail to achieve targeted earnings. Therefore, it is possible that financial statement fraud firms intend to report higher incomes in terms of larger sales revenue.

In managing CFO substance the attempt to increase current period earnings will require firms to accelerate their sales from the next fiscal year. This is similar to when firms offer customers more lenient credit terms and the buyer will treat this offer as a sales discount. This will cause earnings in the current period to rise temporarily due to increased sales volume. However, this occurs at the expense of declining margins due to lower cash inflow per sale item. The low margins due to price discounts will cause cash flow to decline relative to sales and changes in sales will be abnormally low.

Figure 6.1
Abnormal CFO of Financial Statement Fraud and Non-Fraud Firms

$$\frac{CFO_{ti}}{A_{ti-1}} = \alpha_0 + \alpha_1 \left(\frac{1}{A_{ti-1}} \right) + \beta_1 \left(\frac{S_{ti}}{A_{ti-1}} \right) + \beta_2 \left(\frac{\Delta S_{ti}}{A_{ti-1}} \right) + \varepsilon_i \quad \dots\dots\dots (2)$$



	Type of Firms	N	t ₋₄	t ₋₃	t ₋₂	t ₋₁	t ₀
AbCFO	FSF	65	-.0147465	.0094065	-.0117288	-.0118456	-.0107526
	Non-Fraud	65	.0056693	.0147892	.0101894	.0317737	.0030333
	z-value		1.263	0.068	0.598	0.268	0.412
SD	FSF	65	.37629897	.24586680	.16098599	.14683570	.14848810
	Non-Fraud	65	.28055178	.58029204	.62214810	.36510475	.38233633
Min	FSF	65	-1.03369	-.99215	-.26103	-.24311	-.32334
	Non-Fraud	65	-1.33117	-2.89777	-1.82751	-.68151	-.99981
Max	FSF	65	2.42281	1.31507	.98601	.81606	.91935
	Non-Fraud	65	.69411	2.03588	3.25740	2.17704	2.49452
Q1	FSF	65	-.0977014	-.0679129	-.0829928	-.0749588	-.0680016
	Non-Fraud	65	-.0757856	-.1953928	-.2239403	-.1756395	-.1549852
Q3	FSF	65	.0402451	.0672881	.0458536	.0439413	.0577902
	Non-Fraud	65	.0884741	.1991161	.2503759	.1228228	.1142516

***significant at 1 per cent level, **significant at 5 per cent level, *significant at 10 per cent level

Note: Mann-Whitney tests (z-value) are used to evaluate differences in medians.

The plot in Figure 6.1 shows no specific pattern as the alleged year of financial statement fraud event approaches. The lowest abnormal CFO recorded is during four years before the financial statement fraud event (t_{-4}), and it is not much different from the abnormal CFO two years before the fraud event (t_{-2}), one year before the fraud event (t_{-1}) and the year of the fraud event (t_0). The plots demonstrate that financial statement fraud firms have abnormally low CFO compared to non-fraud firms, thus, suggesting lower earnings quality. As mentioned by García Lara et al. (2009) and Xu et al. (2007), firms with abnormally low CFO manage their earnings by offering excessive sales discounts and lenient credit terms. Nevertheless, the difference in abnormal CFO between the financial statement fraud and control firms is insignificant throughout the year of analysis, thus, H3a is rejected. The potential cause for this insignificant result is that financial statement fraud firms are likely to be involved in other types of earnings management activities, such as accruals, which is shown in Table 6.7. The next section discusses financial statement fraud firms and their involvement in managing production costs as real earnings management activity.

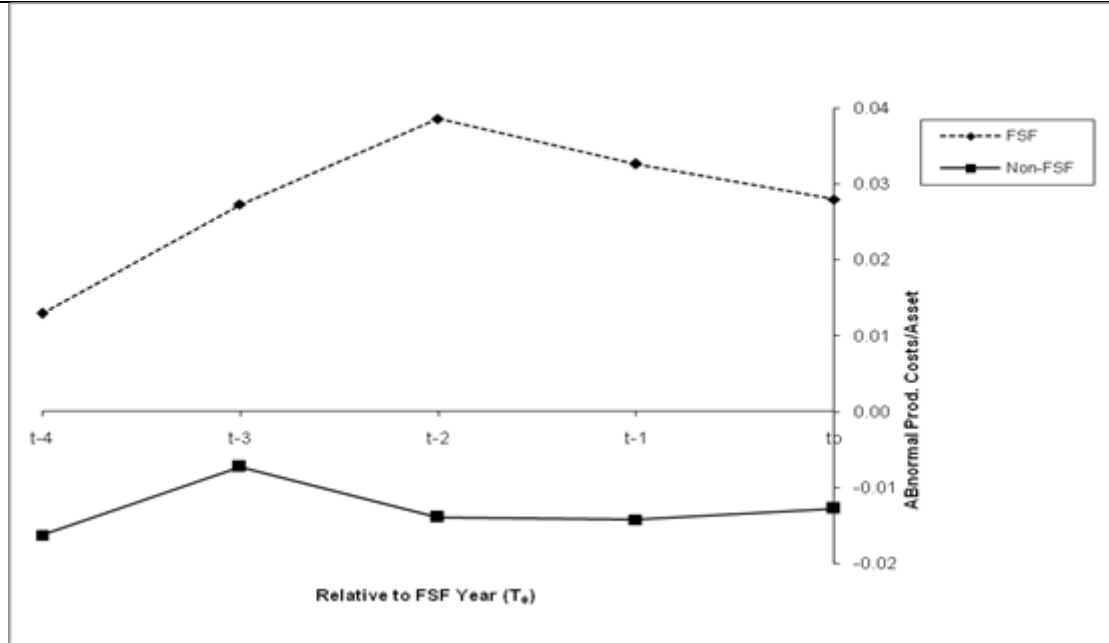
6.4.3.2 Abnormal Production Costs

This section discusses the behaviour of another proxy for real earnings management activity which is the abnormal production costs. This study analyses abnormal production costs to evaluate whether financial statement fraud firms are engaged in manipulating production costs prior to the financial statement fraud event. As mentioned earlier, financial statement fraud firms are experiencing distress and attempt to report forecast earnings by spreading fixed costs prior to the event of financial statement fraud.

Managing production costs involves increasing the volume of the inventory (or service) more than necessary. This causes production costs to increase but by doing this, the fixed cost per item is lower because the costs are spread over a larger number of units. As a result, the value for cost of goods sold (COGS) declines. Firms also retain more unsold items due to overproduction and make the value of CFO to be lower than normal at the given sales level, accordingly, firms report better operating margins. High abnormality level indicates that the earnings quality in financial statement fraud firms is lower than the non-fraud firms. Estimated abnormal production costs are measured using the Dechow et al. (1998) model, which calculates the normal level of production costs. It is predicted that before the fraud year, financial statement fraud firms have abnormally higher production costs compared to non-fraud firms. The abnormal production costs are generated from the residual of actual production costs and normal production

Figure 6.2
Abnormal Production Costs of Financial Statement Fraud and Non-Fraud Firms

$$\frac{PROD_{it}}{A_{i,t-1}} \alpha_0 + \alpha_1 \left(\frac{1}{A_{t-1}} \right) + \beta_1 \left(\frac{S_t}{A_{t-1}} \right) + \beta_2 \left(\frac{\Delta S_t}{A_{t-1}} \right) + \beta_3 \left(\frac{\Delta S_{t-1}}{A_{t-1}} \right) + \varepsilon \quad \dots\dots\dots (3)$$



	Type of Firms	N	t ₋₄	t ₋₃	t ₋₂	t ₋₁	t ₀
AbProdC	FSF	65	.0129501	.0272960	.0385713	.0326166	.0279714
	Non-Fraud	65	-.0163206	-.0072853	-.0139474	-.0142628	-.0127947
	z-value		1.362	1.502	1.765*	2.433**	1.502
SD	FSF	65	.24455124	.17037802	.11244254	.14235600	.13101632
	Non-Fraud	65	.15285588	.09639030	.07118935	.07533062	.07988958
Min	FSF	65	-1.73272	-.96703	-.45025	-.75242	-.42361
	Non-Fraud	65	-.44251	-.24204	-.09785	-.15462	-.14720
Max	FSF	65	.47069	.24316	.23310	.25578	.20961
	Non-Fraud	65	.95587	.26307	.35884	.33610	.41763
Q1	FSF	65	-.0618816	-.0266314	-.0656026	-.0230783	-.0641335
	Non-Fraud	65	-.0452288	-.0782073	-.0440928	-.0491986	-.0502148
Q3	FSF	65	.0838373	.0815570	.0702320	.0714848	.0881879
	Non-Fraud	65	.0377762	.0585363	.0351078	.0389073	.0347236

**significant at 5 per cent level, *significant at 10 per cent level

Note: Mann-Whitney tests (z-value) are used to evaluate differences in medians.

costs. The abnormal production costs of financial statement fraud firms are then compared to the level of abnormal production costs of the non-fraud firms. The median of abnormal production costs are scaled by lagged asset and plotted up to four years before the financial statement fraud event. Figure 6.2 shows the level of

abnormal production costs for financial statement fraud firms prior to the fraud year is higher than non-fraud firms.

Overall, the plots indicate that financial statement fraud firms have abnormally high production costs compared to non-fraud firms, hence, suggesting lower earnings quality. The highest abnormal production costs are recorded in two years before the fraud event (t_{-2}). The reduction in abnormal production costs in one year before the fraud event (t_{-1}) and the year of the fraud event (t_0) is possibly due to the reversal of prior abnormal production costs activity. It is consistent with the argument that firms with abnormally high production costs are potentially managing earnings through overproduction (Xu et al., 2007).

Figure 6.2 illustrates that the difference in abnormal production costs for financial statement fraud and non-fraud firms is only statistically significant during the year before the fraud event (t_{-1}) and two years before the fraud event (t_{-2}). In regard to H3b, it is hypothesised that financial statement fraud firms are likely to have higher abnormal production costs compared to non-fraud firms. Based on the results, the H3b is only accepted for the periods of one year before the fraud event (t_{-1}) and two years before the fraud event (t_{-2}). It may be concluded that financial statement fraud firms engage in real earnings management through overproduction in the two years period prior to financial statement fraud occurring. According to Sun (2011), the alterations in real earnings management activities are done to meet short-term goals. Consequently the results indicate that financial statement fraud firms overproduce so that they can quickly boost their earnings close to the financial statement fraud year.

6.4.3.3 Abnormal CFO and Abnormal Production Costs

This study extends the analysis by examining the correlation between abnormal CFO and abnormal production costs. Table 6.7 reveals the correlation analysis between earnings management proxies (i.e., abnormal accruals, abnormal CFO and abnormal production costs). Similar to Cohen et al. (2008) this study concludes that abnormal CFO and abnormal production cost are negatively associated. It further indicates that firms substitute between these real earnings management proxies.

Table 6.7			
Pearson Correlation Coefficients Matrix of Earnings Management Proxies			
	AbCFO	AbProdC	AbAcc
AbCFO	1	-.198**	.014**
AbProdC		1	-.190
AbAcc			1
**significant at 5 per cent level			
where: AbCFO = the abnormal cash flow from operation computed using Dechow et al. (9998) model, AbProd = the abnormal production costs computed using Dechow et al. (9998) model, AbAcc = the abnormal accruals computed using the Modified Jones Model			

Prior studies show that in addition to using real earnings management to manipulate financial statement figures, firms are also involved in accruals management. Cohen et al. (2008) and Zang (2011) argue that real earnings management and accruals earnings management are substitutes. Table 6.7 shows that the correlations coefficient between abnormal CFO and abnormal accruals is positive. This is consistent with Roychowdhury (2006) who demonstrates that abnormal CFO and abnormal accruals are positively associated, hence, it confirms that firms managed CFO and accruals concurrently. Moreover, Cohen et al. (2008)

find a significant negative relationship between abnormal production costs and abnormal accruals, suggesting that firms substitute both type of earnings management. Similarly, this study finds a negative relationship between abnormal production costs and abnormal accruals, meaning that financial statement fraud firms use these two earnings management methods as substitutes. Due to the weak findings for both results on abnormal CFO and abnormal production costs activities prior to financial statement fraud year, further tests on accruals earnings management are also performed. Results for these additional tests are discussed under the sensitivity analysis in Section 6.5.3.

6.5 Sensitivity Analysis

The use of multiple approaches is better than using only one method (Cooke, 1989). Therefore, this study examines the robustness of the reported results and the suitability of variables selected for analysis. First, in order to generate robust results, this study has dealt with normality, multicollinearity, heteroscedasticity issues. These specifications mitigate the impact of measurement errors on the regression results (Pallant, 2007). For sensitivity and robustness tests, a number of analyses are performed including (i) endogeneity test, (ii) examining corporate governance practices in firms with low earnings quality, and (iii) the practice of accruals earnings management in financial statement fraud firms prior to the event of financial statement fraud.

6.5.1 Endogeneity

Variables in a regression can be endogenous for several reasons including omitted variables and measurement errors (Green, 2008). Bhagat and Bolton (2008) state the issues regarding endogeneity are often discussed in corporate governance studies. The Hausman-test is a test that helps in determining possible endogeneity problems in a regression model. In the Hausman-test, the predicted errors of each independent variable are determined. The independent variables are measured as endogenous if the significant level is less than 5 per cent, while variables are implied to be exogenous if the significant level provides a result greater than 5 per cent. For endogenous variables a further test is executed to determine the level of significance. If the significance level is more than 5 per cent, it suggests that the variable has no endogeneity issue. For this study all variables are exogenous except for the variables of the percentage of directors who serve on the management (DINSIDE) and selecting one of the Big 4 audit firms as external auditor (BIG4). Table 6.8 presents the t-statistic results and significance level for the corporate governance variables used in this study.

In order to examine the level of significance of the endogenous variables, Two-stage-least-square (2SLS) regression is conducted. The results of the 2SLS show a coefficient of the percentage of directors who serve on the management is -4.171

Table 6.8
Endogeneity Test

Variables	t-stat	Sig. Level
DINDEP	0.758	0.384
DEXPERT	0.533	0.465
DINSIDE	4.834	0.028**
DUALITY	0.318	0.573
DMEET	2.600	0.107
DREMUN	3.643	0.056
AINDEP	0.009	0.923
AEXPERT	2.481	0.115
AMEET	0.050	0.822
BIG4	7.797	0.005**
AFEE	3.160	0.075
AINT	0.713	0.398

**significant at 5 per cent level

where: DINDEP = the percentage of independent directors on the board, DEXPERT = the percentage of directors with accounting or financial expertise, DINSIDE = the percentage of directors who serve on the management, DUALITY = 1 for Chairman who also serves as CEO, otherwise 0, DMEET = the number of board's meetings yearly, DREMUN = natural log of director's remuneration, AINDEP = the percentage of independent directors on the audit committee, AEXPERT = the percentage of audit committee with accounting or financial expertise, AMEET = the number of audit committee's meetings yearly, BIG4 = 1 for firms that appoint BIG 4 audit firms, otherwise 0, AINT = 1 for outsourcing internal audit function, otherwise 0, AFEE = natural log of audit fees

which is not statistically significant (p-value 0.668) to the choice of selecting Big 4 audit firm as an external auditor. The result for the 2SLS shows a coefficient of the choice for selecting the Big 4 audit firms as external auditor is -0.002 which is also not statistically significant (p-value 0.756) to the percentage of directors who serve on the management. This suggests that the variables included in the regression model are not associated with the endogeneity issue.

6.5.2 Corporate Governance and Earnings Quality

Initially, this study argues that financial statement fraud occurs due to weak corporate governance structures. Further tests have discovered that financial statement fraud firms have lower earnings quality compared to non-fraud firms. For a robustness check, another sensitivity test has been conducted to show that firms with lower earnings quality have weak corporate governance structures. Therefore, this study further tests the association between earnings quality and corporate governance structures. To operationalise the robustness check, the financial statement fraud firms is treated as the firms with lower earnings quality which is proxied by the real earnings management activities is coded as 1, otherwise 0. The results for the test are documented in Table 6.9.

Table 6.9 reveals the results for the association between earnings quality and corporate governance structures. All independent variables are used in the model as previously defined. The study uses the same sample for the sensitivity test. The results from the regression analysis exhibit reveal that each corporate governance structure has similar direction of relationships as shown in the main model in Research Question 1. The results provide evidence that firms with low earnings quality have weak corporate governance structures compared to firms with high earnings quality. Therefore, the results are robust to this alternative sensitivity test and the main conclusion regarding corporate governance and financial statement fraud is unchanged.

Table 6.9
Logit Regression Results: Earnings Quality and Corporate Governance Structures

$EQ = \alpha + \beta_1 \text{DINDEP}_i + \beta_2 \text{DEXPERT}_i + \beta_3 \text{DINSIDE}_i + \beta_4 \text{DUALITY}_i + \beta_5 \text{DMEET}_i + \beta_6 \text{DREMUN}_i + \beta_7 \text{AINDEP}_i + \beta_8 \text{AEXPERT}_i + \beta_9 \text{AMEET}_i + \beta_{10} \text{BIG4}_i + \beta_{11} \text{AFEE}_i + \beta_{12} \text{AINT}_i + \beta_{13} \text{LEV}_i + \beta_{14} \text{RPT}_i + \beta_{15} \text{SIZE}_i + \varepsilon_i \dots\dots\dots(4)$						
					95% C.I.for EXP(B)	
Variables	Predicted Signs	Coefficient	P-value	Odds Ratio	Lower	Upper
Constant	?	-3.873	.336	.021		
(β_1)DINDEP	-	-.011	.801	.989	.947	1.033
(β_2)DEXPERT	-	-.020	6.437	.980	.937	1.025
(β_3)DINSIDE	+	.041	.526	**	1.042	1.009
(β_4)DUALITY	+	.583	.235		.558	1.116
(β_5)DMEET	-	-.070	5.265	.872	.809	1.121
(β_6)DREMUN	-	-2.455	.035	**	.086	.011
(β_7)AINDEP	-	-.004	6.021	.996	.960	1.034
(β_8)AEXPERT	-	-.041	4.626	**	.960	.929
(β_9)AMEET	-	-.525	8.700	**	.592	.367
(β_{10})BIG4	-	-1.882	9.140	***	.152	.044
(β_{11})AFEE	+	2.971	1.912	***	19.515	2.843
(β_{12})AINT	+	.852	.234		2.345	.701
Control Variables:						
(β_{13})LEV	?	.579	.439	.579	.439	1.736
(β_{14})RPT	?	1.440	1.040	1.440	1.040	1.917
(β_{15})SIZE	?	1.132	.848	1.132	.848	1.783
Chi Square test of Model Fit (Omnibus test)				72.284	***	
Hosmer-Lemeshow Goodness of Fit				6.971		
Pseudo R ²				0.618		
% of correct prediction				84.5		
N				116		

***significant at 1 per cent level, **significant at 5 per cent level

where: EQ = 1 for firm subject to low earnings quality, otherwise 0, DINDEP = the percentage of independent directors on the board, DEXPERT = the percentage of directors with accounting or financial expertise, DINSIDE = the percentage of directors who serve on the management, DUALITY = 1 for Chairman who also serves as CEO, otherwise 0, DMEET = the number of board's meetings yearly, DREMUN = natural log of director's remuneration, AINDEP = the percentage of independent directors on the audit committee, AEXPERT = the percentage of audit committee with accounting or financial expertise, AMEET = The number of audit committee's meetings yearly, BIG4 = 1 for firms that appoint BIG 4 audit firms, otherwise 0, AINT = 1 for outsourcing internal audit function, otherwise 0, AFEE = natural log of audit fees, LEV = total debts to total assets, RPT = related party transaction to total assets, SIZE = natural log of total sales, ε = error term

This study has included year and industry dummy as control variables in the main model in Research Question 1. Results indicate no significant relationship between year dummy and the occurrence of financial statement fraud. However, industry dummy shows that manufacturing and service sectors significantly related to financial statement fraud. This is probably due to the fact that manufacturing firms represent almost half of the sample (refer to Table 5.3). Overall, this additional logit regression analysis is robust since the results support the findings and hypotheses.

6.5.3 Accruals Earnings Management

In Section 6.4.3.1, it is evident that the abnormal CFO is statistically insignificant, although the trend is that financial statement fraud firms are involved in real earnings management. With reference to abnormal production costs (refer to Section 6.4.3.2), it is found that real earnings management using production costs prior to the financial statement fraud year is only significant for two years, that is one year before the fraud event (t_{-1}) and two years before the fraud event (t_{-2}) in the analysis for a five-year period. As mentioned earlier, it is argued that financial statement fraud firms may be involved in accruals earnings management prior to the financial statement fraud year.

Given the conditions, this study further examine whether financial statement fraud firms are also involved in accruals earnings management prior to the financial statement fraud event. The primary model for abnormal accruals used is the Modified Jones Model (Dechow et al., 1995). The value for abnormal accruals is

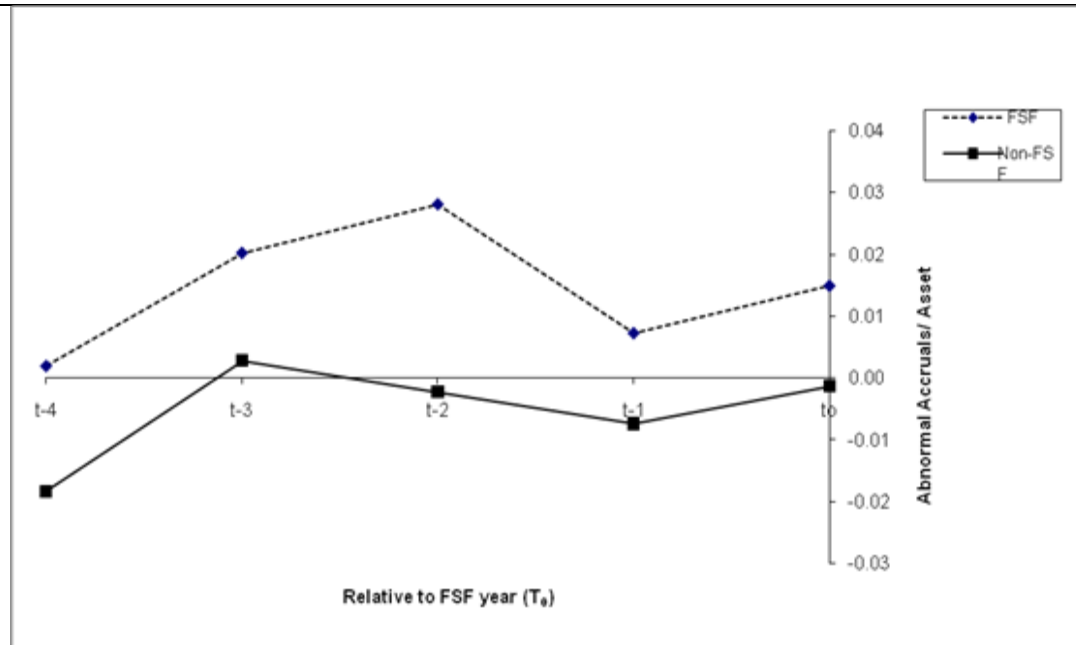
retrieved from the residual of total accruals and normal accruals. The median of abnormal accruals scaled by lagged asset is plotted up to four years before the financial statement fraud event.

Figure 6.3 illustrates the level of abnormal accruals of both financial statement fraud and non-fraud firms up to four years before the fraud year. It is presented that the highest abnormal accruals level recorded are two years before the financial statement fraud event (t_2). The difference in abnormal accruals between financial statement fraud and non-fraud firms is statistically significant for all periods being analysed, except during one year before the fraud event (t_{-1}). These significant findings answer the question concerning weak results emerging from the analysis of abnormal CFO. This additional test draws attention to financial statement fraud firms preferring to manipulate their earnings using abnormal accruals prior to the financial statement fraud event. The finding is consistent with Dechow et al. (1996) who conclude that financial statement fraud firms have higher abnormal accruals in the first three years prior to the fraud year.

The possible cause for insignificant difference in abnormal accruals levels between the financial statement fraud and non-fraud firms during the one year prior to the fraud event (t_{-1}), may be due to financial statement fraud involvement in other type of earnings management, which is abnormal production costs. This is confirmed by the significant findings in the one year period before the fraud event (t_{-1}) when the difference in abnormal production costs between financial statement fraud firms and non-financial statement fraud firms is analysed (refer to Figure

Figure 6.3
Abnormal Accruals of Financial Statement Fraud and Non-Fraud Firms

$$NDA_t = \alpha_1 \left(\frac{1}{A_{t-1}} \right) + \alpha_2 \left(\frac{\Delta REV_T - \Delta REC_i}{A_{t-1}} \right) + \alpha_3 \left(\frac{PPE_i}{A_{t-1}} \right) \quad \dots (5)$$



	Type of Firms	N	t ₋₄	t ₋₃	t ₋₂	t ₋₁	t ₀
AbAcc	FSF	65	.0019532	.0202036	.0280680	.0072652	.0149048
	Non-Fraud	65	-.0184151	.0027558	-.0022998	-.0074399	-.0013914
	z-value		4.458***	2.335**	2.736*	0.952	2.424**
SD	FSF	65	.01693175	.10617394	.19542839	.04770203	.08714178
	Non-Fraud	65	.12886587	.04512287	.05820590	.04380141	.07818143
Min	FSF	65	-.06326	-.73642	-1.51181	-.34778	-.47691
	Non-Fraud	65	-.08615	-.12179	-.14094	-.08717	-.11618
Max	FSF	65	.02347	.06544	.10127	.04695	.05795
	Non-Fraud	65	.87707	.12904	.16327	.08076	.49682
Q1	FSF	65	-.0047881	.0046738	-.0001735	-.0065037	.0002603
	Non-Fraud	65	-.0454714	-.0302835	-.0445110	-.0353178	-.0452030
Q3	FSF	65	.0092339	.0305894	.0497543	.0188536	.0310638
	Non-Fraud	65	-.0003631	.0347725	.0380938	.0330358	.0247881

***significant at 1 per cent level, **significant at 5 per cent level, *significant at 10 per cent level

Note: Mann-Whitney tests (z-value) are used to evaluate differences in medians.

6.2). Furthermore, Table 6.7 demonstrates a negative relationship between abnormal accruals and abnormal production costs, which implies that firms substitute these two types of earnings management. Overall, the plots in Figure 6.3

demonstrate that the financial statement fraud firms have higher abnormal accruals level compared to the non-fraud firms. Consequently, financial statement fraud firms have lower earnings quality compared to the non-fraud firms.

6.6 Conclusion

This chapter explains the results concerning the practice of corporate governance structures for financial statement fraud firms in Malaysia. It also reveals the changes made by the financial statement fraud firms in their corporate governance structures after the fraud year. Additionally, this chapter describes real earnings management activities by the financial statement fraud firms prior to the fraud event. With reference to the impact of corporate governance on the occurrence of financial statement fraud, this study confirms the prediction that the occurrence of financial statement fraud is associated with weak corporate governance structures. The results from the logit regression analysis indicate a significantly lower risk of financial statement fraud when firms have lower percentage of inside directors, higher value of directors' remuneration, a higher percentage of audit committee members who have accounting and financial expertise, higher number of audit committee meetings, appoint Big 4 audit firms for external audit, lower external audit fees and a permanent internal audit function. The findings also suggest that the presence of an audit committee in corporate governance structures is more significant towards preventing financial statement fraud compared to board of directors.

Consistent with the prior research, results indicate that financial statement fraud firms have weak corporate governance structures compared to the non-fraud firms

in the year of financial statement fraud. Specifically, financial statement fraud firms have less percentage of directors with accounting and financial expertise, fewer board meetings, lower directors' remuneration, lower percentage of independent directors serving on audit committee, lower percentage of audit committees with accounting and financial expertise, and less audit committee meetings. They also tend not to outsource their internal audit function and are unlikely to select a Big 4 audit firms for external audit service during the financial statement fraud year. In respect to the changes made by the financial statement fraud firms, some corporate governance structures improve one year after the financial statement fraud has occurred. A number of corporate governance structures are found better in financial statement fraud firms subsequent to the fraud year, compared to the non-fraud firms during the fraud year. These are indicated through having more independent directors on the board, higher number of the board and audit committee meetings as well as reduce in duality. Based on these findings, policy makers (i.e., the SCM) need to monitor the changes made by the financial statement fraud firms to discourage fraud recurrence.

With regard to the earnings management quality in financial statement fraud firms, this study documents that both real earnings proxies, the abnormal CFO and abnormal production costs are more aggressive in financial statement fraud firms compared to the matching control firms in the four years prior to fraud. However, the difference in abnormal CFO between the financial statement fraud and control firms is insignificant throughout the four years of analysis. In addition, the differences in abnormal production costs between the financial statement fraud and non-fraud firms are only statistically significant in the one year before the

fraud event (t_{-1}) and two years before the fraud event (t_{-2}). Due to the weak evidence generated from the analysis of real earnings management, a further test on accruals earnings management is performed. The difference in abnormal accruals between the financial statement fraud and non-fraud firms is statistically significant throughout the years being analysed, except for one year before the fraud event (t_{-1}). This additional test draws attention to the fact that financial statement fraud firms prefer to manipulate earnings using abnormal accruals prior to the financial statement fraud occurring.

The results for the analyses conducted in this study are summarised in Table 6.10. The next chapter discusses the future implications of these findings and limitations of this study.

Table 6.10
Summary of Results

Research Hypotheses		Predicted Signs	Results
<i>Research Question 1: Financial Statement Fraud and Corporate Governance</i>			
H1a	Board independence	Negative	Hypothesis not supported
H1b	Board expertise	Negative	Hypothesis not supported
H1c	Insiders on the board	Positive	Hypothesis supported
H1d	Duality	Positive	Hypothesis not supported
H1e	Board meetings	Negative	Hypothesis not supported
H1f	Board remuneration	Negative	Hypothesis supported
H1g	Audit committee independence	Negative	Hypothesis not supported
H1h	Audit committee expertise	Negative	Hypothesis supported
H1i	Audit committee meetings	Negative	Hypothesis supported
H1j	Big 4 as external auditor	Negative	Hypothesis supported
H1k	External audit fees	Positive	Hypothesis supported
H1l	Internal audit function	Negative	Hypothesis supported
<i>Research Question 2: Improvement of Corporate Governance Structures in Financial Statement Fraud Firms</i>			
H2a	Board independence	Positive	Hypothesis supported
H2b	Board expertise	Positive	Hypothesis not supported
H2c	Insiders on the board	Negative	Hypothesis not supported
H2d	Duality	Negative	Hypothesis supported
H2e	Board meetings	Positive	Hypothesis supported
H2f	Board remuneration	Positive	Hypothesis not supported
H2g	Audit committee independence	Positive	Hypothesis not supported
H2h	Audit committee expertise	Positive	Hypothesis not supported
H2i	Audit committee meetings	Positive	Hypothesis supported
H2j	Big 4 as external auditor	Positive	Hypothesis not supported
H2k	External audit fees	Negative	Hypothesis not supported
H2l	Internal audit function	Positive	Hypothesis not supported
<i>Research Question 3: Earnings Quality Prior to Financial Statement Fraud</i>			
H3a	Abnormal CFO	Negative	Hypothesis not supported
H3b	Abnormal production costs	Positive	Hypothesis supported for only periods of t_{-1} and t_2

Chapter 7

Summary, Conclusions, Implications, Limitations and Future Research

Directions

7.1 Introduction

The present study examines corporate governance practices and real earnings management as they relate to financial statement fraud in Malaysia. The rising number of financial statements fraud cases in Malaysia has raised public attention and economic concerns in the country. Fraudulent financial reports are able to influence the decision-making process made by financial statement users. This study is particularly helpful in assessing the success of the Malaysian Code of Corporate Governance (MCCG) in improving financial reporting quality and minimising financial statement fraud. Furthermore, this study can assist analysts and investors to identify early warning signals for financial statement fraud through the practice of earnings management. This chapter is organised as follows: Section 7.2 summarises the findings of the first five chapters. Section 7.3 describes the major findings of the important studies analysed in this study. Section 7.4 explains the implications of the study to policy makers, regulators, academic researchers, firms and financial statement users. The limitations of the study are discussed in Section 7.5 while Section 7.6 presents the suggestions for future research. Finally, Section 7.7 concludes the chapter on the basis of the overall findings.

7.2 Summary of Prior Chapters

It has been argued in Chapter 1 that financial statement fraud can be restrained with the presence of effective corporate governance and by monitoring the real earnings management activities. The increasing incidence of financial statement fraud in Malaysia has influenced the ability of financial statement users to make informed decisions, and thereby compromised investors' confidence in the financial markets. Malaysia is chosen for this study for a number of reasons: rising financial statement fraud cases, government awareness and rapid growth of the capital market. In response to these conditions, this study examines the practice of corporate governance and real earnings management in financial statement fraud cases in Malaysia.

Chapter 2 specifically discusses corporate governance, earnings management and financial statement fraud in Malaysia's institutional context. Malaysia's wealth in natural resources and rising trade have influenced the nation's population growth, investment in infrastructure and led to substantial economic wealth. Malaysia is unique as it is blessed with multi-ethnic citizens of the Malays, Chinese and Indians. With a growing economy, Malaysia has sort to improve the quality of financial statement reports by developing policies, standards and regulations. The financial reporting requirements are enforced by the Companies Commission of Malaysia, the Bursa Malaysia, the Securities Commission of Malaysia and the Malaysian Institute of Accountants. These agencies have substantially improved the quality of financial reporting in Malaysia. For example, Malaysia has made a full transition to IFRS which took place on January 1, 2012 as a sign of

accounting harmonisation and recognising the inevitability of globalisation. Together, these agencies have strengthened accounting standards through the Companies Act 1965 (Act 125), the Security Laws, Companies Act 1965, the MCCG and the ISA 240 on *The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements*. Nevertheless, even with the establishment of these agencies, standards and policies, the number of financial statement fraud cases has risen over the last decade. This is probably due to the weak enforcement of existing standards and policies which may lead to financial statement fraud. Therefore, an examination of the corporate governance structures and the practice of real earnings management are of paramount importance.

Chapter 3 reviews the extant literature on corporate governance, real earnings management and financial statement fraud. It begins with a discussion on the concepts of financial statement fraud. In brief, it is stated that financial statement fraud is an action of omitting or altering figures in financial statement. It is evident from the literature that there have been a number of studies conducted on the relationship between corporate governance structures and financial statement fraud. Although results have been mixed, it may be proposed that financial statement fraud firms have weaker corporate governance structures compared to non-fraud firms. Understanding the importance of the relationship between the quality of corporate governance structures and credibility of financial reporting, only a few studies examined subsequent improvements made to corporate governance structures after a conviction of financial statement fraud.

To the best of the researcher's knowledge, only Farber (2005) investigates the changes made in the corporate governance structures of financial statement fraud firms. It emerged that the study of financial statement fraud is becoming more important in developing countries. Prior studies conclude that the extent of earnings management practice began before the financial statement fraud year. Substantial studies on earnings management have used accounting accruals as the proxy for earnings management, while evidence shows that real earnings management activities are favoured by operating firms. To summarise, the literature reveals a lack of substantive research on (i) the association between corporate governance structures and the incidence of financial statement fraud in Malaysia, (ii) corrective actions taken after financial statement fraud year, and (iii) real earnings management activities prior to the financial statement fraud year.

Chapter 4 explains the conceptual framework and develops directions of hypotheses used in this study. These hypotheses are based on the reviewed studies, agency theory and positive accounting theory. The hypotheses predict the relationships between corporate governance and financial statement fraud, and also predict the expected relationship between real earnings management and financial statement fraud. In general, this study posits that better structured corporate governance will reduce financial statement fraud risks. Therefore, financial statement fraud firms will make changes to their corporate governance structures to improve the quality of financial reporting. It is expected that financial statement fraud firms has lower earnings quality due to higher practice of real earnings management activities.

Chapter 5 justifies the research designs and methods employed in this study. This chapter also provides detailed information about the sample selection procedure including the selection of control samples. The final sample includes 76 firms involved in financial statement fraud in Malaysia from 2001 to 2008. It is matched with 76 non-fraud firms based on a number of certain criteria. The study uses 1604 firm-year of annual reports, which are collected from the Bursa Malaysia. The measurements of all variables employed are illustrated in Table 5.6. A logit regression model is used to test the relationship between corporate governance structures and financial statement fraud. Univariate mean test examines the changes made in corporate governance structures after the financial statement fraud event. This chapter also demonstrates the use of the regression model developed by Dechow et al. (1998) to estimate real earnings management activities by the sample firms.

7.3 Summary of Empirical Results

The summary of major findings of this study is discussed within the context of the three research questions addressed in Chapter 6 which are as follows:

1. To what extent are corporate governance structures associated with financial statement fraud in Malaysia?
2. Have Malaysian financial statement fraud firms implemented better corporate governance structures after the event of financial statement fraud?
3. Have Malaysian financial statement fraud firms engaged in real earnings management activities prior to the event of financial statement fraud?

Research Question 1 is concerned with the extent to which public firms in Malaysia engage in financial statement fraud. The logit regression analysis provides evidence that the structures of corporate governance in a firm may lead to its involvement in financial statement fraud. Table 6.4 tabulates the relationship between corporate governance structures and financial statement fraud occurrences. The results show that the percentage of directors that also serve on the management, the amount of audit fees and the decision to outsource the internal audit function are positively and statistically significant to the occurrence of financial statement fraud in Malaysia. Moreover, the value of directors' remuneration, the percentage of audit committee members with accounting and financial expertise, the number of audit committee meetings, and the choice of Big 4 audit firms for external audit service are statistically significant. These factors have a negative relationship with financial statement fraud.

Table 6.4 also exhibits a number of corporate governance structures that are not significantly related to the occurrence of financial statement fraud. These are: percentage of independent directors on the board, percentage of directors with accounting and financial expertise, directors who are both Chairman and CEO, number of board meetings and percentage of audit committee members who are independent directors. To sum up, it is suggested that the presence of the audit committee in the corporate governance structure is more significant in preventing financial statement fraud as it may enhance the effectiveness of the board of directors.

Research Question 2 investigates whether financial statement fraud firms consider having corporate governance mechanisms seriously to mitigate financial statement fraud. In the financial statement fraud year, corporate governance structures in financial statement fraud firms are weaker than the non-fraud firms. This refers to the percentage of directors with accounting and financial expertise, directors' remuneration, the percentage of audit committee members with accounting and financial expertise, number of audit committee meetings and choosing one of the Big 4 audit firms for external audit service. Financial statement fraud firms make changes in their corporate governance structures after the fraud has occurred, which indicates their efforts to minimise the risk of financial statement fraud. The summary of results is provided in Table 6.5. Following the fraud year, it is found that financial statement fraud firms increase the percentage of independent directors on the board, increase the percentage of directors who have accounting and financial expertise, reduce the percentage of directors who serve on the management, increase the number of board meetings, increase the percentage of audit committee members who are independent and increase the percentage of audit committee members with accounting and financial expertise.

A number of corporate governance attributes emerge as weaker in financial statement fraud firms compared to non-fraud firms after the fraud year. These include directors' remuneration, percentage of audit committee members with accounting and financial expertise, amount of external audit fees, choice of Big 4 audit firms as external auditors and the source of internal audit function (refer to Table 6.6). Table 6.6 also demonstrates that several corporate governance structures are better practiced in financial statement fraud firms after the fraud

year, compared to the non-fraud firms during the fraud year. These are indicated through higher percentage of independent directors on the board, higher number of the board meetings, higher number of audit committee meetings and reduce in duality. The results for question two suggest that substantial changes and improvements need to be made by financial statement fraud firms so that corporate governance is better implemented. In this way, they can effectively minimise financial statement fraud.

Research Question 3 is designed to reveal the potential indicators for financial statement fraud as evidenced by real earnings management activities up to four years prior to the fraud. Abnormal CFO and abnormal production costs are used as the proxies for real earnings management activities by the sample firms. The measurements for both proxies are examined using the regression model developed by Dechow et al. (1998). The results in Figure 6.1 reveal that the difference in abnormal CFO between the financial statement fraud and control firms is insignificant throughout the years of analysis. However, Figure 6.2 demonstrates the difference in abnormal production costs for financial statement fraud and non-fraud firms is significant for one year before the fraud event (t_{-1}) and two years before the fraud event (t_{-2}). Although the plots' trends in both graphs demonstrate that financial statement fraud firms have lower earnings quality from low abnormal CFO and high abnormal production costs, the insignificant result weakly supports the contention that financial statement fraud firms are engaged in real earnings management activities prior to the financial statement fraud year.

It is argued that financial statement fraud is subjected to other type of earnings management (Xu et al., 2007). Due to the weak results arising from the real earnings management analysis, further test on accruals earnings management is executed. The difference in abnormal accruals concerning financial statement fraud and non-fraud firms is found to be statistically significant throughout the years of analysis, except for one year before the financial statement fraud event (t_{-1}). This additional test draws attention to the fact that financial statement fraud firms prefer to manipulate earnings using accruals compared to real earnings management prior to the financial statement fraud.

7.4 Implications of the Study

The results of this study will be useful to policy makers, regulators, firms, academia and other financial statement users (e.g. investors, analysts and creditors). Evidence presented in this study shows that the corporate governance attributes and earnings management activities are significant for explaining the occurrence of financial statement fraud. The unique background of Malaysia included in this study also demonstrates that Malaysia has a rich setting for the exploration of knowledge on corporate governance, real earnings management and financial statement fraud. The Securities Commission of Malaysia (SCM) is established to protect investors through the issuance of the MCCG. This study finds significantly less risk of financial statement fraud will occur when firms have lower percentage of directors who serve on the management, higher value of directors' remuneration, higher percentage of audit committee members who have accounting and financial expertise, higher number of audit committee meetings,

appoint Big 4 audit firms for external audit service, lower amount of audit fees and a permanent internal audit function. Based on these findings, this study may assist the SCM by directing the agency to focus on these corporate governance attributes that need to be re-examined and restructured for producing better quality financial reporting.

The Malaysian Institute of Accountants (MIA) addresses the financial statement fraud issue in its ISA 240 entitled *The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements*. The results of this study indicate that financial statement fraud firms change their corporate governance structures following the financial statement fraud year. Auditors may use this study for assessing and evaluating the changes made in a firm's corporate governance structure, and determine whether such changes are positively, or negatively associated to earnings management and financial statement fraud. Similarly, the main responsibilities of the Companies Commission of Malaysia (CCM) are to assist businesses becoming registered and to ensure the firms operate according to the legislation, and have a corporate governance team. The findings here may help firms to be more aware when hiring directors on their boards through the evidence of good corporate governance practice.

The results of this study show evidence that financial statement fraud firms have lower earnings quality compared to non-fraud firms. This study reports the prevalence and direction taken in earnings management up to four years prior to the financial statement fraud event. The level of pervasiveness of earnings management practices in Malaysian firms may assist investors and analysts to

look for early warning signs of financial statement fraud. Other financial statement users such as financial institutions and creditors may benefit from this study because they depend on financial statement information in their decision-making processes.

Finally, this study not only add to the growing body of literature linking corporate governance, real earnings management and financial statement fraud, it also reflects the growing interest in these three issues for accounting research. This study will also be of interest to other researchers as further comprehensive investigation provides better understanding on the connection between corporate governance structures and financial statement fraud as well as real earnings management and financial statement fraud.

7.5 Limitations of the Study

The results of the present study must be considered in the context of the limitations of this study. The scopes and limitations of this study are as follows:

1. Since the information of financial statement fraud firms from the SCM is only available from 2001, this study incorporates year 2001 to 2008 as the sample period. The investigation of corporate governance practices, real earnings management and financial statement fraud in Malaysia is limited to the examination of data published in annual reports for 1995 to 2009.

2. Accordingly, this study is unable to discuss all firms in Malaysia because the sample of financial statement fraud firms concerns only public firms. In addition, this study includes only certain industries in accordance to available sample. Hence, the results may not be generalizable to corporate governance practices for all type of industries.
3. This study uses an archival secondary data from annual reports to perform all analysis. Nevertheless, by looking at the context of this study, secondary data analysis is the most suitable research technique for this study.
4. Roychowdhury (2006) identifies three types of real earnings management, namely: abnormal CFO, abnormal production costs and abnormal discretionary expenditure. However, this study only incorporates two real earnings management proxies (i.e., abnormal CFO and abnormal production costs) because the data on research and development costs required to calculate the discretionary expenditure is not available in most of the sampled firms used in this study.
5. In this study, the context of real earnings management refers to activities that are motivated solely by the need to meet earnings benchmark and are not a reflection of normal business practices.

7.6 Suggestions for Future Research

More research on identifying the causes for financial statement fraud is warranted due to the increasing number of fraud cases around the world. The current study is based on only one emerging country, Malaysia. Therefore, caution must be taken in generalizing the findings to other countries that have different marketplace and economic environments. A future study using the same variables could compare two or more countries, thus, placing this study into a new perspective. This will provide comparative and constructive results with regards to the level of corporate governance structures, real earnings management activities and financial statement fraud in a wider context.

The present study examines the changes made in corporate governance structures one year after the financial statement fraud event. A longitudinal study could be undertaken to better describe the efforts made by firms that are improving the quality of their financial reporting. This information will interest investors who appreciate firms that value the importance of proper corporate governance systems that are supposed to protect investors. This study focuses only on the public firms that are convicted of financial statement fraud. It is possible that real earnings management occurs in other firms, such as private firms. Therefore, extending this study into a wider sample would be interesting and rewarding to a broader scope of viewers.

7.7 Conclusion

The findings of this thesis suggest that the corporate governance structures do influence financial statement fraud occurrence in Malaysia. Financial statement fraud is positively significant in terms of the number of directors who serve on the management, the amount of audit fees being paid and outsourcing internal audit function. On the other hand, the value of directors' remuneration, the percentage of audit committee members with accounting and financial expertise, the number of audit committee meetings and the choice of a Big 4 audit firm suggest there is a significant negative relationship with financial statement fraud.

As an indication that firms recognise the value of corporate governance system in minimizing financial statement fraud, the financial statement fraud firms also significantly improve corporate governance structures with regards to the percentage of independent directors on the board, increasing the percentage of director with accounting and financial expertise, reducing the percentage of directors who serve on the management, increasing the number of board meetings, increase the percentage of audit committee who are independent and increasing the percentage of audit committee with accounting and financial expertise. However, a number of corporate governance attributes are still weak in financial statement fraud firms compared to the non-fraud firms after the fraud year including the value of directors' remuneration, the percentage of audit committee members with accounting and financial expertise, the amount of audit fees, the choice of Big 4 audit firms as external auditor and the source of internal audit function. A number of corporate governance structures are found better practiced

in financial statement fraud firms after the fraud year, compared to the non-fraud firms during the fraud year, which are indicated through higher percentage of independent directors on the board, higher number of the board meetings, higher number of audit committee meetings and reduce in duality practices.

The examination of real earnings management activities in financial statement fraud firms demonstrates that the differences in abnormal CFO between financial statement fraud and non-fraud firms are insignificant prior to financial statement fraud year. Nevertheless, the differences in abnormal production costs between financial statement fraud and non-fraud firms are significant during the period of one year before the fraud event (t_{-1}) and two years before the fraud event (t_{-2}), hence, indicating that financial statement fraud firms are engage in managing production costs prior to the financial statement fraud year.

Additional tests draw attention that financial statement fraud firms prefer to manipulate earnings using accruals prior to the event of financial statement fraud. If the authorised regulatory bodies are focused in addressing the corporate governance and earnings management factors, then the objectives for reducing financial statement fraud may be achieved.

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Appendix 1: Financial Reporting Standards by MASB

Standards	Title
Framework:	Framework for the Preparation and Presentation of Financial Statements
FRS1:	First-time Adoption of Financial Reporting Standards
FRS2:	Share-Based Payment
FRS3:	Business Combinations
FRS4:	Insurance Contracts
FRS5:	Non-current Assets Held for Sale and Discontinued Operations
FRS6:	Exploration for and Evaluation of Mineral Resources
FRS7:	Financial Instruments: Disclosures
FRS8:	Operating Segments
FRS9:	Financial Instruments (IFRS 9 issued by IASB in November 2009)
FRS9:	Financial Instruments (IFRS 9 issued by IASB in October 2010)
FRS10:	Consolidated Financial Statements
FRS11:	Joint Arrangements
FRS12:	Disclosure of Interests in Other Entities
FRS13:	Fair Value Measurement
FRS101:	Presentation of Financial Statements
FRS102:	Inventories
FRS107:	Statement of Cash Flows (formerly known as Cash Flow Statements)
FRS108:	Accounting Policies, Changes in Accounting Estimates and Errors
FRS110:	Events after the Reporting Period (formerly known as Events After the Balance Sheet Date)
FRS111:	Construction Contracts
FRS112:	Income Taxes
FRS116:	Property, Plant and Equipment
FRS117:	Leases
FRS118:	Revenue
FRS119:	Employee Benefits
FRS119:	Employee Benefits (as amended in November 2011)
FRS120:	Accounting for Government Grants and Disclosure of Government Assistance
FRS121:	The Effects of Changes in Foreign Exchange Rates
FRS123:	Borrowing Costs
FRS124:	Related Party Disclosures
FRS124:	Related Party Disclosures (issued in Nov 2010)
FRS126:	Accounting and Reporting by Retirement Benefit Plans
FRS127:	Consolidated and Separate Financial Statements
FRS127:	Separate Financial Statements (as amended in November 2011)
FRS128:	Investments in Associates
FRS128:	Investments in Associates and Joint Ventures (as amended in November 2011)
FRS129:	Financial Reporting in Hyperinflationary Economies
FRS131:	Interests In Joint Ventures
FRS132:	Financial Instruments: Presentation
FRS133:	Earnings per Share
FRS134:	Interim Financial Reporting

FRS136:	Impairment of Assets
FRS137:	Provisions, Contingent Liabilities and Contingent Assets
FRS138:	Intangible Assets
FRS139:	Financial Instruments: Recognition and Measurement (compiled)
FRS140:	Investment Property
FRS201 ₂₀₀₄ :	Property Development Activities
FRS204 ₂₀₀₄ :	Accounting for Aquaculture
TR 1 ₂₀₀₄ :	Share Buyback - Accounting and Disclosure
TR 3:	Guidance on Disclosures of Transition to IFRSs
TR i-1:	Accounting for Zakat on Business
TR i-2:	Ijarah
TR i-3:	Presentation of Financial Statements of Islamic Financial Institution
TR i-4:	Shariah Compliant Sale Contracts
SOP i-1:	Financial Reporting from an Islamic Perspective
IC:	IC Interpretations 107, 110, 112, 113, 115, 121, 125, 127, 129, 131, 132, 201
IC:	IC Interpretations 1, 2, 5, 6, 7, 8
IC:	IC Interpretations 4, 18
IC:	IC Interpretations 9 & 10
IC:	IC Interpretations 11, 13, 14
IC:	IC Interpretations 12, 15, 16, 17
IC:	IC Interpretation 19 Extinguishing Financial Liabilities with Equity Instruments
IC:	IC Interpretation 20 Stripping Costs in the Production Phase of a Surface Mine
MFRS: *	MFRSs Volume I + Volume II *
MFRS9:	Financial Instruments (IFRS 9 issued by IASB in November 2009)
MFRS9:	Financial Instruments (IFRS 9 issued by IASB in October 2010)
MFRS10:	Consolidated Financial Statements
MFRS11:	Joint Arrangements
MFRS12:	Disclosure of Interests in Other Entities
MFRS13:	Fair Value Measurement
MFRS119:	Employee Benefits (IAS 19 as amended by IASB in June 2011)
MFRS127:	Separate Financial Statements (IAS 27 as amended by IASB in May 2011)
MFRS128:	Investments in Associates and Joint Ventures (IAS 28 as amended by IASB in May 2011)
M-IC20:	IC Interpretation 20 Stripping Costs in the Production Phase of a Surface Mine

Source: Malaysian Accounting Standard Board (2012).

Appendix 2: International Standards of Auditing by MIA

Standards	Title
ISA 200	Overall Objectives of the Independent Auditor and the Conduct of an Audit in Accordance with International Standards on Auditing
ISA 210	Agreeing the Terms of Audit Engagements
ISA 220	Quality Control for an Audit of Financial Statements
ISA 230	Audit Documentation
ISA 240	The Auditor's Responsibilities Relating to Fraud in an Audit of Financial Statements
ISA 250	Consideration of Laws and Regulations in an Audit of Financial Statements
ISA 260	Communication with Those Charged with Governance
ISA 265	Communicating Deficiencies in Internal Control to Those Charged with Governance and Management
ISA 300	Planning an Audit of Financial Statements
ISA 315 (Revised)	Identifying and Assessing the Risks of Material Misstatement through Understanding the Entity and Its Environment
ISA 315	Identifying and Assessing the Risks of Material Misstatement through Understanding the Entity and Its Environment
ISA 320	Materiality in Planning and Performing an Audit
ISA 330	The Auditor's Responses to Assessed Risks
ISA 402	Audit Considerations Relating to an Entity Using a Service Organization
ISA 450	Evaluation of Misstatements Identified during the Audit
ISA 500	Audit Evidence
ISA 501	Audit Evidence - Specific Considerations for Selected Items
ISA 505	External Confirmations
ISA 510	Initial Audit Engagements - Opening Balances
ISA 520	Analytical Procedures
ISA 530	Audit Sampling
ISA 540	Auditing Accounting Estimates, Including Fair Value Accounting Estimates, and Related Disclosures
ISA 550	Related Parties
ISA 560	Subsequent Events
ISA 570	Going Concern
ISA 580	Written Representations
ISA 600	Special Considerations - Audits of Group Financial Statements (Including the Work of Component Auditors)
ISA 610 (Revised)	Using the Work of Internal Auditors

ISA 610	Using the Work of Internal Auditors
ISA 620	Using the Work of an Auditor's Expert
ISA 700	Forming an Opinion and Reporting on Financial Statements
ISA 705	Modifications to the Opinion in the Independent Auditor's Report
ISA 706	Emphasis of Matter Paragraphs and Other Matter Paragraphs in the Independent Auditor's Report
ISA 710	Comparative Information - Corresponding Figures and Comparative Financial Statements
ISA 720	The Auditor's Responsibilities Relating to Other Information in Documents Containing Audited Financial Statements
ISA 800	Special Considerations - Audits of Financial Statements Prepared in Accordance with Special Purpose Frameworks
ISA 805	Special Considerations - Audits of Single Financial Statements and Specific Elements, Accounts or Items of a Financial Statement
ISA 810	Engagements to Report on Summary Financial Statements

Source: Malaysian Institute of Accountants (2012).

Appendix 3: List of Financial Statement Fraud Firms

1. Actacorp Holdings Berhad
2. AKN Technology Berhad
3. Amtek Holdings Berhad
4. Antah Holding Berhad
5. Astral Asia Berhad
6. Autoair Holdings Berhad
7. BSA International Berhad
8. Bukit Katil Resources Berhad
9. Chuan Huat Resources Berhad
10. Concrete Engineering Products Berhad
11. Consolidated Farms Berhad
12. Datuk Keramat Holdings Berhad
13. Dutaland Berhad
14. Ekran Berhad
15. Englotechs Holding Berhad
16. Equine Capital Berhad
17. Fountain View Development Berhad
18. Fututech Berhad
19. Goh Ban Huat Berhad
20. Gold Bridge Engineering & Construction Berhad
21. Golden Land Berhad
22. Gula Perak Berhad
23. Haisan Resources Berhad
24. Harvest Court Industries Berhad
25. Ho Hup Construction Company Berhad
26. Hubline Berhad
27. Hwa Tai Industries Berhad
28. Iris Corporation Berhad
29. Jaycorp Berhad
30. Jin Lin Wood Industries Berhad
31. JPK Holdings Berhad
32. Kosmo Technology Industrial Berhad

33. Kym Holdings Berhad
34. LBS Bina Group Berhad
35. LFE Corporation Berhad
36. Liqua Health Corporation Berhad
37. London Biscuits Berhad
38. M3nergy Berhad
39. Mechmar Corporation (Malaysia) Berhad
40. Mems Technology Berhad
41. Mtd Acpi Engineering Berhad
42. Multi-Code Electronics Industries (M) Berhad
43. Naim Holdings Berhad
44. Ocean Capital Berhad
45. Oilcorp Berhad
46. Olympia Industries Berhad
47. Padiberas Nasional Berhad (Bernas)
48. Paxelent Corporation Berhad
49. Pentamaster Corporation Berhad
50. Pilecon Engineering Berhad
51. Pinehill Pacific Berhad
52. PJbumi Berhad
53. Polymate Holdings Berhad
54. Prime Utilities Berhad
55. Puncak Niaga Holdings Berhad
56. QSR Brands Berhad
57. Ralco Corporation Berhad
58. Satang Holdings Berhad
59. SBBS Consortium Berhad
60. Scientex Packaging Berhad
61. Seal Incorporated Berhad
62. Supercomal Technologies Berhad
63. Suremax Group Berhad
64. Syarikat Kayu Wangi Berhad
65. Ta Win Holdings Berhad
66. Talam Corporation Berhad

- 67. Techno Asia Holdings Berhad
- 68. The Ayer Molek Rubber Company Berhad
- 69. Theta Edge Berhad
- 70. Thong Guan Industries Berhad
- 71. Tiger Synergy Berhad
- 72. Timberwell Berhad
- 73. Toyo Ink Group Berhad
- 74. United U-Li Corporation Berhad
- 75. Welli Multi Corp Berhad
- 76. Wonderful Wire And Cable Berhad

Appendix 4: List of Financial Statement Non-Fraud Firms

1. Advance Synergy Berhad
2. AIC Corporation Berhad
3. APB Resources Berhad
4. Ayer Hitam Tin Dredging Malaysia Berhad
5. Bonia Corporation Berhad
6. Central Industrial Corporation Berhad
7. Century Logistic Holdings Berhad
8. CepatWawasan Group Berhad
9. Computer System Advisers(M) Berhad
10. CYL Corporation Berhad
11. D'nonce Technology Berhad
12. Daiman Development Berhad
13. Dialog Group Berhad
14. DKLS Industries Berhad
15. DPS Resources Berhad
16. Eastern Pacific Industrial Corporation Berhad
17. EcoFirst Consolidated Berhad
18. Eden Inc. Berhad
19. FajarBaru Builder Group Berhad
20. Formosa Prosonic Industries Berhad
21. Huat Lai Resources Berhad
22. Hume Industries (Malaysia) Berhad
23. Innoprise Plantations Berhad
24. Jasatera Berhad
25. Keck Seng (Malaysia) Berhad
26. Kemayan Corporation Berhad
27. Kian Joo Can Factory Berhad
28. Kilang Papan Seribu Daya Berhad
29. KSL Holdings Berhad
30. Lay Hong Berhad
31. LCTH Corporation Berhad
32. Lysaght Galvanized Steel Berhad

33. Lysaght Galvanized Steel Berhad (*different based year*)
34. Mah Sing Group Berhad
35. Malpac Holdings Berhad
36. MESB Berhad
37. Mesiniaga Berhad
38. Metech Group Berhad
39. Metech Group Berhad(*different based year*)
40. MK Land Holdings Berhad
41. Narra Industries Berhad
42. Negri Sembilan Oil Palms Berhad
43. Nestle (Malaysia) Berhad
44. Nilai Resources Group Berhad
45. NWP Holdings Berhad
46. OKA Corporation Berhad
47. Opus Group Berhad
48. Oriental Food Industries Holdings Berhad
49. OrnaPaper Berhad
50. P.I.E. Industrial Berhad
51. Pasdec Holdings Berhad
52. PBA Holdings Berhad
53. Petaling Garden Berhad
54. Petrol One Resources Berhad
55. Pharmaniaga Berhad
56. PLS Plantations Berhad
57. Prolexus Berhad
58. Rapid Synergy Berhad
59. Riverview Rubber Estates Berhad
60. Riverview Rubber Estates Berhad (*different based year*)
61. Sapura Industrial
62. Sarawak Energy Berhad
63. Sarawak Oil Palms Berhad
64. SBC Corporation Berhad
65. Scomi Engineering Berhad
66. Seacera Group Berhad

- 67. SMIS Corporation Berhad
- 68. SMIS Corporation Berhad (*different based year*)
- 69. Suiwah Corporation Berhad
- 70. Sunchirin Industries (Malaysia) Berhad
- 71. Tecnic Group Berhad
- 72. UMS Holdings Berhad
- 73. United Malayan Land Berhad
- 74. UPA Corporation Berhad
- 75. Wong Engeneering Corporation Berhad
- 76. Zecon Berhad