RISK MANAGEMENT COMMITTEE, OWNERSHIP CONCENTRATION AND HEDGING ACTIVITIES DISCLOSURE: EVIDENCE OF MALAYSIAN COMPANIES

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ABSTRACT

Although the listed companies on Bursa Malaysia began to report their hedging activities under the Malaysian Financial Reporting Standard (MFRS) 7, 132 and 139 in 2010, there has been no clear and adequate evidence on information of hedging activities using derivatives. This matter prompted this study to examine the extent of information on hedging activities disclosure (HAD). This study also examined the role of the Risk Management Committee (RMC) and its effectiveness in influencing the extent of HAD. Furthermore, this study examined the moderating effect of ownership concentration on the relationship between the effectiveness of the RMC and the extent of HAD. Data were collected from the annual reports of 500 non-financial listed companies on Bursa Malaysia in 2013. This study used descriptive, multiple, and hierarchical regression to analyse the data. The analyses show that the extent of HAD by non-financial companies in Malaysia is insufficient. This study finds that large and high leverage companies tend to provide more HAD in their annual reports, but the existence of RMC does not affect the extent of HAD. Besides, the findings of this study reveal that the relationship between the effectiveness of RMCs is negatively associated with the extent of HAD. However, when the characteristics of the RMC are individually tested, it is found that only RMC independence and diligence have an influence on the extent of HAD. The findings also show that high ownership concentration does not significantly moderate the relationship between RMC effectiveness and the extent of HAD. This study provides empirical evidence on the extent of HAD in Malaysia and also the importance of the existence and effectiveness of RMCs in enhancing the quality of financial reporting in the country, which will be useful for investors, policy-makers, regulators and researchers.

Keywords: hedging activities information, hedge accounting, risk management committee, ownership concentration, derivatives

ABSTRAK

Walaupun syarikat-syarikat yang tersenarai di Bursa Malaysia telah mula melaporkan aktiviti perlindungan nilai mereka mengikut Piawaian Pelaporan Kewangan Malaysia (PPKM) 7, 132 dan 139 pada tahun 2010, namun masih tiada bukti yang jelas dan mencukupi tentang tahap pendedahan maklumat terhadap aktiviti perlindungan nilai yang mengunakan derivatif. Justeru, ia telah mendorong kajian ini untuk mengkaji sejauh mana tahap pendedahan maklumat aktiviti perlindungan nilai (HAD) dan penelitian ke atas peranan jawatankuasa pengurusan risiko (RMC) serta keberkesanannya dalam mempengaruhi tahap HAD. Selain itu, kajian ini juga mengkaji kesan pengantara penumpuan pemilikan terhadap hubungan antara keberkesanan RMC dan tahap HAD. Data dikumpulkan berdasarkan laporan tahunan daripada 500 buah syarikat bukan kewangan yang tersenarai di Bursa Malaysia pada tahun 2013. Kajian ini menggunakan analisis deskriptif, regresi berganda dan regrasi hierarki untuk menganalisis data. Hasil analisis ke atas laporan tahunan menunjukkan bahawa tahap pendedahan maklumat tentang aktiviti perlindungan nilai adalah tidak mencukupi. Kajian ini mendapati bahawa syarikat yang lebih besar dan mempunyai kadar hutang yang tinggi adalah lebih cenderung untuk menyediakan lebih banyak maklumat tentang aktiviti perlindungan nilai dalam laporan tahunan mereka, tetapi kewujudan RMC tidak mempengaruhi HAD. Selain itu, kajian ini juga mendapati bahawa hubungan antara HAD dengan keberkesanan RMC adalah negatif. Walau bagaimanapun, apabila ciri-ciri RMC diselidik secara berasingan, kajian ini mendapati hanya kebebasan RMC dan usaha RMC mempunyai hubungan yang signifikan terhadap HAD. Dapatan kajian ini juga menunjukkan bahawa tumpuan yang tinggi terhadap pemilikan tidak memberi kesan yang signifikan terhadap hubungan antara keberkesanan RMC dengan HAD. Kajian ini menyediakan bukti empirikal terhadap HAD dan kepentingan kewujudan serta keberkesanan RMC terhadap kualiti laporan kewangan yang berguna kepada pelabur, penggubal dasar, pengawal selia dan juga penyelidik.

Kata kunci: maklumat aktiviti perlindungan nilai, perakaunan lindung nilai, jawatankuasa pengurusan risiko, penumpuan pemilikan, derivatif

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LIST OF ABREVIATIONS

AASB	Australia Accounting Standard Board
AUDITOR	Type of Audit Firms
BOD	Board of Directors
CSIZE	Company Size
ETF	Exchange Trade Fund
FRS	Financial Reporting Standards
HAD	The Extent of Hedging Activities Disclosure
IAS	International Accounting Standard
IASB	International Accounting Standard Board
IFRS	International Financial Reporting Standard
IPC	Infrastructure Project Company
LEV	Leverage
MASB	Malaysian Accounting Standards Board
MFRS	Malaysian Financial Reporting Standard
PROF	Profitability
RDIVER	RMC Gender Diversity
RDUTY	RMC Duty
RDILI	RMC Diligence
REFF	RMC Effectiveness
REITs	Real Estate Investment Trust
REXIST	RMC existence
REXPERT	RMC Expertise
RINDE	RMC Independent
RTRAIN	RMC Training
RMC	Risk Management Committee
ROA	Return on Assets
SFAS	Statement of Financial Accounting Standard
SPAC	Special Purpose Acquisition Company
UK	United Kingdom
US	United States

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Derivative instruments can be defined as financial instruments whose value is entirely dependent on the value of its underlying assets (Stulz 2004). For example, the value of Crude Palm Oil (CPO) futures contract will rise and fall as the value or price of spot CPO rises or falls. According to Obiyathulla (2007), the basic derivatives can be separated into several types which are options, futures/forwards and swap contracts. The underlying asset of derivatives is often categorised as either physical or financial assets. Based on Stulz (2004), derivatives may be employed for three different reasons, which are: firstly, for risk management; secondly, for income generation; and thirdly, for financial engineering. Even though derivatives may be practiced for different functions, many previous studies have reported that derivatives are frequently employed by numerous companies as an instrument for corporate risk management (e.g., Grant & Marshall, 1997; Mallin, Ow-Yong, & Reynolds, 2001). In this case, derivatives act as a mechanism to hedge risks, whereby companies (financial and non-financial) use derivatives to offset risks resulting from their business activities (Stulz, 2004).

With respect to risk management, derivatives mainly offer assistance to alleviate companies' exposure to a significant number of risks, such as fluctuations in inventories, bonds, commodities and index prices; changes in foreign exchange rates; changes in interest rates; etc. (Birt, Rankin, & Song, 2013). Besides, derivatives also

offer a minimum cost for a company to bear financial risk exposure. For example, interest rate swaps and option contracts are executory contracts and need either no initial cash outlay or only a little initial outlay (see Allayannis & Weston, 2001; Johnson & Swieringa, 1996). Interestingly, there are two sides to this coin. Derivatives can also magnify risks at the company level which may lead to financial distress and collapse as can be seen in a number of prominent companies, such as Enron, HIH, Baring, and others. This is because the value of the underlying assets is not moving as expected, which can result in huge losses. Hence, derivatives must be handled with extra care by all players in the derivatives market so that the derivatives market activities will help more than hurt.

Since derivatives are held in many business transactions together with high financial risk exposure and involve huge amounts of a company's funds, it is therefore essential for companies to have well-defined internal policies, practices and controls for the use of derivatives (Chung & Fung, 1995). For users of financial statements, it is essential for them to understand more and have enhanced information regarding the companies' usage of derivatives. Ameer (2010) argued that there is a need for users (especially investors), to understand risk exposure and risk management activities carried out by companies when they use derivatives. According to Papa and Peter (2013), insufficient derivatives disclosures or limited transparency (i.e., either designated or non-designated for hedging) can result in investors undervaluing the risk of reporting entities and can lead to critical investment decision, as being involved in derivatives can increase a company's exposure to risk. In promoting greater transparency, they also suggested that, "…*Companies should adequately explain the nature and purpose*

of derivatives instruments used, making a clear distinction between accounting hedges, economic hedges and trading derivatives" (p. 6). In this case, companies involved in hedging activities must explain their risk management policies that include the hedging objective and its cost as well as associate their descriptions of risk management to the disclosures of quantitative information. Furthermore, Papa and Peter (2013) stressed that companies involved in hedging activities should also provide more insight on their complex hedging strategies.

In today's business environment, the use of derivative instruments by companies has become one of the new challenging topics of discussion in the accounting literature. One of the concerns is the reliability and transparency of hedging activities information provided by the companies. In many countries, a number of researchers have reported that hedging activities information is inadequately disclosed. In Australia, Hassan, Percy, and Stewart (2006) reported that some companies withhold information in relation to hedging activities. Indeed, they also reported that some companies are reluctant to follow disclosure requirements. A recent study in Australia by Birt et al. (2013) also showed that the disclosure of derivatives information, including hedging activities information, remains incomplete and varied, although the Australia Accounting Standards Board 7 (AASB 7) has been introduced to improve the disclosure level in Australia. Studies in many other countries have also provided similar evidence that the extent of the derivatives disclosure and hedging activities information vary and do not comply with the accounting standard requirements. For example, in the United Kingdom (UK), Woods and Marginson (2004) documented

that qualitative disclosures related to derivatives used for hedging are generic in nature, the numerical data is incomplete and is not comparable in the UK banking sector. The information disclosed is said to be a boilerplate statement, whereby no 'cross-reference' is made to link it to the quantitative information. Besides, Woods and Marginson (2004) also found that there are significant variations in the terms used for hedging activities (i.e., phraseology) to legitimise the management's actions for using derivatives to mirror a low level of risk. In Portugal, Lopes and Rodrigues (2007) reported a poor variation of disclosure on hedging activities and indicated that there is a high non-compliance with disclosure requirements among Portuguese listed companies. In Romania, Alexandria (2012) reported that Romanian banks disclosed a moderate level of information on the use of derivatives for hedging purposes.

Several international studies have reported that the extent of derivatives disclosure increases when there is strong and effective corporate governance (e.g., Birt et. al., 2013; Chalmers & Godfrey, 2004; Taylor, Tower, Van Der Zhan, & Neilson, 2008). In addition, some studies have shown that companies disclosed additional information voluntarily when there is effective corporate governance (e.g., Bamber & Meeking, 2010; Mallin, Dunne, Helliar, & Ow-Young, 2004). Further, there are studies that have claimed that the potency of the governance mechanism in a company is restricted due to ownership structure (e.g., Akhtaruddin & Haron, 2010; Chen, Li, & Shapiro, 2011; Cho & Kim, 2007; Hu, Tam, & Tan, 2010). However, in Malaysia, there is not enough evidence to support this assertion. Although several studies have highlighted that corporate governance mechanisms can significantly influence the extent of financial

instruments disclosure by a company, mixed findings have been discovered (see Abdullah & Chen, 2010; Adznan & Puat Nelson, 2014; Hassan, Saleh, Yatim, & Rahman, 2012). Moreover, some of the suggested evidence is not substantial enough to be generalised as the point of their studies can be considered outdated. Besides, there also some other factors that have not been considered by previous researchers, such as the effect of ownership structure. In this regard, this study believes that further investigation needs to be conducted so as to explain more clearly the effect of governance mechanisms and disclosure of financial instruments in Malaysia. At the same time, it contributes to the current evidence by examining the MFRS 7, particularly on hedging activities disclosure practice among Malaysian companies.

In 2010, the Malaysian Accounting Standards Board (MASB) fully adopted the standards on accounting for financial instruments to be complied with by public companies for financial year beginning from 1 January 2010. Three separate financial reporting standards (FRSs) actually deal with accounting for financial instruments, namely FRS 132, FRS 139 and FRS 7[1]. The requirements for hedging activities are included in two of the standards, FRS 139 and FRS 7, effective 2010. Subsequently, the nomenclature of these accounting standards changed to Malaysian Financial Reporting Standards (MFRSs) after it was fully converged with the International

[1]***FRS 7 (Financial Instruments; Disclosures)***-The objective of this FRS is to require entities to provide disclosures in their financial statements that enable users to evaluate the significance of financial instruments for the entity's financial position and performance and the nature and extent of risks arising from financial instruments to which the entity is exposed during the period and at the reporting date, and how the entity manages those risks. ***FRS 132 (Financial Instruments; Presentation)*** - The objective of this FRS is to require entities to present and classify financial instruments as liabilities or equity and for offsetting financial assets and financial liabilities. ***FRS 139 (recognition and measureme****nt)*-The objective of this Standard is to establish principles for recognising and measuring financial assets, financial liabilities and some contracts to buy or sell non-financial items.

Financial Reporting Standards (IFRSs) in the year 2012. Before the adoption of these accounting standards, reporting for hedging activities in Malaysia was governed by MASB 24 and FRS 132 standards that only prescribed companies to present and disclose the information as an off-balance sheet item. These two standards did not require recognition and measurement of hedging activities. In the new standards, however, reporting on hedging activities should be recognised in the financial statements. This is because MASB believes that recognizing hedging activities in the financial statements is important and will be able to provide more valuable information to the users. Failure to comply with this requirement means information is incomplete and would result in shareholders/investors underestimating the underlying risk of the company associated with financial instruments. However, to apply the requirement in practice is quite difficult because achieving hedge accounting requires more times, expertise, cost and resources (Ameer, Mohd Isa, & Abdullah, 2011; Hausin, Hemmingsson, & Johansson, 2008; Taylor et al., 2008), particularly, in preparing the documentation, monitoring and evaluating hedging activities as well as meeting the strict criteria stipulated by the accounting standards. Hence, for companies that lack of expertise and resources, reporting such information may create ambiguities for the readers of financial statements.

1.2 Problem statement

Beginning January 2010, companies in Malaysia are required to disclose their financial instruments information in accordance with MFRS 7 (Financial Instruments: Disclosure) which is equivalent to FRS 7. This requirement is a result of the move by the MASB to fully adopt the IFRSs. The purpose of adopting MFRS 7 is to improve

the financial reporting quality and increase the level of transparency of financial instruments information, including disclosure of information on hedging activities. While the adoption of MFRS 7 by business entities is relatively recent in Malaysia, several studies in other countries which have adopted IFRSs have raised concerns regarding the extent and quality of the disclosure provided by companies in meeting this accounting standard (e.g., Birt et al., 2013; Hassan et al., 2006; Lopes & Rodrigues, 2007; Wei & Taylor, 2009). One of these concerns is related to hedging activities information, whereby it has been claimed to be less useful and subject to management discretion (Bamber & Meeking, 2010; Hausin et al., 2008; Papa & Peter, 2013). This is because hedge accounting is optional for companies since it is voluntary-mandatory based in nature; hence, some companies may use their discretion to report or not to report the usage of derivatives for hedging activities even though the companies are eligible to apply for hedge accounting. This is evidenced by several studies which have shown that some companies eligible for hedge accounting avoid full compliance and fail to disclose hedging activities information (see Bamber & Meeking, 2010; Birt et al. 2013; Papa & Peter, 2013).

In Malaysia, several earlier studies have also indicated that there is a low level of hedging activities information disclosure and some companies have been known to avoid reporting disclosure of hedging activities in annual reports (see Abdullah & Chen, 2010; Adznan & Puat Nelson, 2014; Ammer et al., 2011; Hassan et al., 2012). In addition to company characteristics, previous studies have also proposed that one of the important elements that should subsist in the company for better transparency for specific aspects of financial instruments disclosure is to have good corporate

governance mechanisms. Although corporate governance mechanisms may influence the extent of disclosure level among Malaysian companies, it appears that there is not enough grounds to back up this assertion. While Adznan and Puat Nelson (2014) only focused on the board of directors and audit committee effectiveness, there is mixed evidence to support the existence of the Risk Management Committee (RMC) in enhancing the extent of financial instruments disclosure. Hassan et al. (2012) found that the existence of the RMC would significantly influence the level of disclosure; while Abdullah and Chen (2010) found no relationship between the two. Looking into this subject, this study tries to fill the gap by arguing that the evidence on the existence of RMC is still insufficient to explain the level of transparency and quality of financial instruments disclosure, mainly on the hedging activities information. Hence, this study attempts to not only look at the existence of RMC but also to examine if the effectiveness of the committee matters in enhancing the disclosure of hedging activities information.

Different from earlier studies (i.e., Abdullah & Chen, 2010; Hassan et al., 2012) that have only focused on the existence of the RMC, this study focuses on the attributes of the RMC as proxies for its effectiveness (i.e., size, independence, diligence, diversity, training, qualification, duty) to assess its association with the extent of hedging activities disclosure. As a result, this study encompasses a wider scenario regarding the effect of the RMC on financial instruments reporting practice, particularly on the amount of disclosure on hedging activities. In addition, it is argued that the RMC's roles in overseeing the transparency of financial instruments disclosure in annual reports (particularly on hedging activities information) may not be achieved. This is

because in Malaysian listed companies, ownership is usually dominated by family members, institutional owners, directors of the company and foreign shareholders (see Yunos, Smith, & Ismail, 2010). The ownership of companies involving any of these individual groups is said to be a high ownership concentration company (Ismail & Sinnadurai, 2012). According to Singam (2003), owners with a significant amount of shares may take aggressive actions, either directly or indirectly, over firm decisions, such as the election of board members and the replacement of the Chief Executive Officer (CEO) or poor management, with their voting power. As such, under a different type of ownership concentration structure, it has been argued that large shareholders who have access to power and control may weaken the RMC's functions. Hence, this study also proposes to look into the issue of ownership concentration as a moderator variable on the relationship between the RMC's effectiveness and the extent of hedging activities disclosure of listed companies in Malaysia.

1.3 Research questions

This study proposes to examine the extent of hedging activities information in Malaysia. Besides, this study looks into the issue of the existence of RMCs and their effectiveness (which are linked to the characteristics of size, diversity, independence, diligence, training, duty) on the extent of hedging activities information disclosed by Malaysian listed companies. Further, this study is interested in identifying if ownership concentration limits the effectiveness of RMCs. Therefore, this study addresses the following research questions:

1. What is the extent of hedging activities information disclosed by Malaysian listed companies?

2. What is the relationship between the existence of the RMC and the extent of information on hedging activities disclosure?
3. What is the relationship between the level of the RMC's effectiveness and the extent of information on hedging activities disclosure?
4. What are the characteristics of the RMC that influence the extent of information on hedging activities disclosure in Malaysian listed companies?
5. What is the effect of ownership concentration on the relationship between the level of the RMC's effectiveness and the extent of information on hedging activities?

1.4 Research objectives

In Malaysia, the study of financial instruments information provided by business entities has not been well examined, especially information of derivatives used for hedging activities. Hence, this study presents empirical evidence on the extent of hedging activities disclosure and its relationship with RMC's existence and effectiveness, as well as ownership structure. In doing so, the study tries to achieve the following objectives:

1. To examine the extent of hedging activities information disclosed by listed companies.
2. To determine the relationship between the existence of the RMC and the extent of hedging activities information disclosed by Malaysian listed companies.

3. To determine the relationship between the level of the RMC's effectiveness and the extent of hedging activities information disclosed by Malaysian listed companies.
4. To determine the relationship between each dimension of the RMC's effectiveness (characteristics) and the extent of information on hedging activities disclosure of the Malaysian listed companies.
5. To determine whether ownership concentration moderates the relationship between the level of the RMC's effectiveness and the extent of hedging activities information disclosed by Malaysian listed companies.

1.5 Motivation of the study

Within the Malaysian setting, the motivation for this study is based on four reasons. The first reason is due to an increasing number of Malaysian listed companies that use derivatives to mitigate financial risk. This can be supported by several studies that have highlighted the use of derivatives in Malaysia (see Ameer, 2010; Ameer et al., 2011; Othman & Ameer, 2009). For example, Othman and Ameer (2009) reported that derivatives used by Malaysian companies (except for banks) are mostly for hedging purposes (i.e., 90% of the company samples). Additionally, a study by Ameer (2010) has indicated that there has been an increased number of companies that use derivatives to hedge foreign exchange and interest rate risk from the year 2003 until 2007. Moreover, a report from Bursa Malaysia shows that the derivatives market has grown significantly. The notional trading value on the derivatives market is also expected to grow rapidly from RM512 billion in 2010 to RM 4.2 trillion in the year

2020 (*Bursa Malaysia Derivatives Annual Report 2010*). Hence, based on this fact, this study believes that a study on disclosure of hedging activities in Malaysia is deemed important.

Besides that, a study in this field is needed because some surveys have claimed that derivatives used for hedging activities are not only for mitigating financial risk exposure but for other reasons and purposes as well (see Ameer et al., 2011; Géczy, Minton, & Schrand, 1997; Papa & Peter, 2013; Smith & Stulz, 1985). These include to increase the company's value, reduce tax, lower the cost of financial distress and reduce the cost of external financing and earnings management. Financial instruments are now more complex and more innovative to cater to new risk management concepts (i.e., hedging), and hence, there is a need for more relevant and transparent information about the companies' risks arising from derivatives and how the related risks are being managed. This is true because companies may have their own approach, structure and process to manage risks (see Subramaniam, McManus, & Zhang, 2009). Papa and Peter (2013) showed that the information on hedging activities is the second most important information demanded by investors after risk information.

The second reason for this study to be undertaken is the lack of reported evidence on disclosure of hedging activities information and compliance to the accounting standards in Malaysia. To date, there is no clear and adequate evidence that specifically addresses how hedging activities disclosure is being practiced among Malaysian listed companies. A study by Othman and Ameer (2009) did not directly specify the level of information on hedging activities. Their study only focused on risk related disclosure.

Nevertheless, the study has shown that many Malaysian listed companies have disclosed that they are engaged in hedging activities, but the information on the activities is limited, particularly on risk information. Hassan et al. (2012) and Abdullah and Chen (2010) documented the level of hedging activities disclosures, and both studies have shown a low level of disclosure practice by Malaysian listed companies. These studies were done before and during the early adoption of IFRSs in Malaysia. However, results from these studies are difficult to interpret because disclosure of hedging activities is aggregately measured as part of the overall financial instruments disclosure. Besides, it may be out-dated and biased as these studies were conducted in the period where companies were required to follow MASB 24 (i.e., Hassan et al., 2012) as well as in the early adoption period (i.e., Abdullah & Chen, 2010; Adznan & Puat Nelson, 2014). The requirement for financial instruments disclosure during this period is substantially less extensive as compared to the present requirement (i.e., MFRS 7). In addition, the implementation of the accounting standard was still at the learning stage. Thus, to determine whether the level of hedging activities disclosure has improved after the post-adoption period of the accounting standard for financial instruments, this study is deemed relevant. Since implementation of an accounting standard can be perceived as a learning process, the outcome will most likely be different after a few years.

The third reason that motivates this study to be conducted is due to the demand for effective corporate governance to encourage compliance and greater transparency in today's world of increasingly complex and advanced financial instruments. This is because it is understood that transparency of information may reduce the information

asymmetry which can safeguard the investors/shareholders from an inappropriate decision by the management, hence preventing huge losses and exposure to high risk (see Patel, Balic, & Bwakira, 2002). Based on this reason, this study looks into the effectiveness of the RMC on hedging activities disclosure among Malaysian listed companies. A recent study by Adznan and Puat Nelson (2014) has claimed that effective an internal corporate governance mechanism will be able to promote greater compliance and transparency of financial instruments among Malaysian listed companies. However, their evidence only covers the effectiveness of the board and audit committee rather than incorporating other internal governance mechanisms (e.g., the RMC). Hence, the transparency of information affected by other internal corporate governance mechanisms (especially RMC's effectiveness) is not yet conclusive and offers an avenue to be explored.

With regards to earlier Malaysian studies, mixed evidence has been established on the link between the existence of the RMC and the extent of derivatives disclosure (i.e., Abdullah & Chen, 2010; Hassan et al., 2012). Thus, the existence of the RMC can be further questioned in terms of its effectiveness in promoting compliance and greater transparency. This means that merely establishing the RMC is not enough. It is the effectiveness of the RMC that is much more important to ensure that it will support the management. For example, DeZoort, Hermanson, Archambeault, and Reed (2002) defined that an effective audit committee should consist of four elements of effectiveness, which are composition (qualified members), authority, resources and diligence. Without these elements, the reliability and transparency of financial reporting provided by a company can be questionable. A study by Ika and Mohd

Ghazali (2011) has shown that these elements can be operationalised by using a number of characteristics, such as size of the committee, scope of duty for committee members, meeting frequency, members' expertise, and independence. Likewise, it can be argued that to be an effective committee, the RMC (as a board committee) should have strong attributes, whether in terms of its composition (e.g., board size, type of directors, board diversity); board process (e.g., frequency of meetings) or board characteristics (i.e., knowledge, skills, experiences, academic qualification, relevant training). This is important because the RMC has a direct role and responsibility in the risk management process, including the decision to support the hedging strategies and disclosure of an entity's information (see Ng, Chong, & Ismail, 2013).

Moreover, hedge accounting is a challenging accounting concept. To elaborate further, the requirements to apply for hedge accounting demand companies to fulfil strict conditions, including designation, documentation and hedge effectiveness. According to Taylor et al. (2008), failure to establish documentation at inception will mean hedge accounting cannot be adopted, regardless of how effective hedging is at offsetting risk. Therefore the existence of the RMC with certain characteristics, can ensure that a clear discretion and documentation has been made by the management, as well as relevant disclosure of hedging activities information has been induced. Lastly, the reason why this study should be conducted is based on several studies that have raised concerns on management and ownership structure of a company. Several previous studies have revealed that the ownership structure of a company will influence the information disclosed (e.g., Akhtaruddin & Haron, 2010; Claessens, Djankov, & Lang, 2000; Ismail & Sinnadurai, 2012; Yunos et al., 2010). As Malaysia is reported as one of the

Southeast Asian countries where ownership concentration is high (see Lim, 2012; Yunos, 2011), it provides an interesting backdrop for this study to further investigate the effect of ownership concentration on the effectiveness of the RMC. It has been well documented that when ownerships get more concentrated, the controlling shareholders can potentially influence the management of the company as well as the selection of board committees (see Abdullah, Ku Ismail, & Nachum, 2012; Akhtaruddin & Harun, 2010; Ismail & Sinnadurai, 2012; Singam, 2003). Therefore, this study argues that the large controlling owners will weaken the effectiveness of the RMC and consequently may result in a low level of disclosure of hedging activities information.

Previous studies have also mentioned that in emerging countries like Malaysia, controlling owners may create conflict of interest due to insider control. According to Ismail and Sinnadurai (2012), there are two principal modes of controlling ownership in Malaysia: domination by the family of the CEO and the domination by Government-related institutional investors. A study by Yunos et al. (2010) has reported that companies registered in Malaysia are mainly controlled by the family system and usually their top management owns the largest shares. Top management and the largest shareholder is often the same person, indicating the presence of managerial ownership (i.e., controlled by insider). They reported that 96.8% of the sample companies are closely held, of which 52.3% is controlled by insiders, 24.8% by the outsiders, and the remaining percentage by both insiders and outsiders. They also showed that an average of 30.8% of the total sampled companies are controlled by management, whereby the manager is appointed by the controlling shareholder. Many studies have shown that in

emerging economies, board committees (Board of Directors [BOD]) and audit committees) are not effective. This is due to the dominant role of the controlling owners in which the majority of owners are insiders. Besides, the developed countries' corporate governance model that has been adopted also does not work well in emerging economies due to their different institutional environment. Since this study only focuses on RMCs, this study tests the moderating effect of different ownership structure on the effectiveness of the RMC. The test also provides indication on whether or not the controlling owners would reduce the RMCs' functionality.

1.6 Scope of the study

This study examines the relationship between the existence of the RMC, RMC's effectiveness, RMC's characteristics, ownership structure and the extent of information on hedging activities disclosed in the annual reports of Malaysian listed companies. The population frame for this study is all main market public-listed companies[2] except for the financial services, Real Estate Investment Trust (REITs), Close-End Fund and Exchange Trade Fund (ETF) sectors listed on Bursa Malaysia for the period of financial year ended 2013. The above mentioned sectors are excluded from the sample because of their unique nature and regulations imposed on them are different. The year 2013 is chosen because it is the third year where accounting standards for financial instruments became mandatory for all Malaysia listed companies. It is perceived that a three-year period is considered sufficient for companies to understand and apply the accounting standards. Besides that, prior

[2] Since August 2009, the Main board and the Second board of Bursa Malaysia have been merged and is known as Main Market of Bursa Malaysia.

studies (i.e., Abdullah & Chen, 2010; Hassan et al., 2012; Adznan & Puat Nelson, 2014) have only covered the period before and during early adoption period of the introduction of the new accounting standard. Thus, this poses an opportunity to further define whether the degree of hedging activities disclosure has improved after the post-adoption period of the accounting standard for financial instruments. This is considered relevant because the requirement for financial instruments disclosure during the period is substantially less extensive as compared to the present requirement (i.e., MFRS 7). In addition, the implementation of the accounting standard was still at the learning stage. Since the implementation of an accounting standard can be regarded as a learning process, the outcome will most likely be different after a few years. Moreover, the year 2013 is considered because the replacement of the current accounting standards (i.e., MFRS 9-*Financial Instruments:Recognition and Measurement*) is to be deferred to the year 2018 by MASB. Since several studies have revealed that the extent of information disclosed is not significantly different between years, this study believes that using one year data (i.e., year 2013) is sufficient to fulfil the objectives of this study.

The companies' annual reports published in Bursa Malaysia's website are downloaded and scrutinised accordingly. First, this study examines the extent of information on hedging activities disclosure (HAD). The extent of disclosure is based on the disclosure score which is the requirement for mandatory and voluntary information on hedging activities. In order to analyse the degree of HAD, this study uses a disclosure index. This index is based on the score over total disclosure items. Second, this study also examines the level of the RMC's effectiveness based on the characteristics score

(see DeZoort et al., 2002; Ika & Mohd Ghazali, 2012). The effectiveness of the RMC is aggregately measured based on the characteristics score and developed based on DeZoort et al.'s (2002) audit committee effectiveness framework (i.e., size, qualification, diversity, independence, duty, diligence and training). It should be noted that this study only focuses on the RMC; hence, other corporate governance variables are not examined. However, '*Auditor Quality*' is selected as the control variable.

Third, this study tests the influence of the RMC's effectiveness on the extent of HAD. In addition, each of the RMC's effectiveness characteristics is tested. Based on the preliminary investigation, some companies are found to be delegating the functions of risk management to the audit committees while some specifically delegate the responsibility for risk management activities to the RMC. In this regard, this study only accepts the existence of the RMC as one of the expected variables that would influence the extent of information on HAD. Lastly, this study also tests the effect of the different types of ownership concentration on the relationship between the RMC's effectiveness and the level of information on HAD. Four control variables, i.e., company size, profitability, audit quality and leverage, are used in the study. Previous studies on financial instruments disclosure have shown that they significantly influence the level of disclosure (see Birt et al., 2013; Chalmer & Godfrey, 2004; Hassan et al., 2012; Ismail & Abdul Rahman, 2011).

1.7 Contribution of the study

The findings of this study contribute to a better understanding of hedging activities reporting practices, RMC's effectiveness and ownership concentration in Malaysia. It

is beneficial to many parties, such as regulators, policy-makers, other researchers, company's management, auditors and shareholders. The significance and contribution of the study are discussed in terms of its theoretical and practical contributions.

1.7.1 Theoretical contribution

This study enhances the literature on financial instruments disclosure, particularly from an emerging country's perspective on HAD. As derivatives usage in Malaysia is mostly for hedging purposes, the findings of this study may widen the understanding of current derivative disclosure behaviour practices and findings from previous financial instruments disclosure studies. Hope (2003) noted that compliance among companies in developing countries is not always rigidly enforced. Therefore, examination of the current derivatives usage for HAD in Malaysia can provide insights on how Malaysian companies behave with the adoption of IFRS on hedging activities.

Furthermore, the findings of this study can indirectly shed light on the existence of voluntary HAD, which is perceived as a subject of management discretion. Disclosing more voluntary information by companies will lead to better understanding and will be valuable to investors in estimating risks on the usage of derivatives. This is supported by Bhat (2008), who claimed that investors cannot directly observe the management process and activity on the usage of financial instruments; they would justify the value of the companies based on the level of disclosure and quality of corporate governance mechanisms. Many previous international studies have examined the relationship between corporate governance and financial instruments

disclosure. However, the results cannot be generalised and provide meaningful interpretations in Malaysia since different countries have different organisational culture and structure (see Akhtaruddin &Haron, 2010; Ismail & Sinnadurai, 2012; Yunos et al., 2010). Thus, examining the relationship between the RMC's effectiveness, ownership concentration and the extent of HAD can contribute to the current literature in this area in the Malaysian context. Through these associations, this study reveals how the RMC reacts to the new requirements of HAD and transparency of the information provided by Malaysian listed companies. Presumably, this disclosure requirement would reduce the information asymmetry and agency problem. According to Greco (2012), the new requirements for derivatives disclosure do not minimise the information asymmetry between managers and shareholders. Thus, examination of the RMC's effectiveness in Malaysia may provide a different view on this matter.

Moreover, previous studies have shown mixed evidence on whether the existence of the RMC would influence financial instruments disclosure, implying that the presence of the committee is not a strong enough measure to guarantee quality financial instruments information disclosure (Abdullah & Chen, 2010; Birt et al., 2013; Hassan et al., 2006). In addition, even though ownership structure among Malaysian companies has been claimed to be one of the unique factors (see Yunos, 2011), previous financial instrument disclosure studies have not examined the ownership structure in their research. Therefore, results from this study may enhance the literature on the influence of ownership structure on the financial instruments disclosure and the internal corporate governance mechanisms (i.e., the RMC) employed by companies.

Lastly, findings from this thesis may also support the understanding on the relevance of the theories in explaining corporate governance mechanisms and financial reporting by business entities in Malaysia. This is because many researchers have not found conclusive evidence to support the agency theory in their corporate governance effectiveness studies. Therefore, the study may complement the theory and suggest whether the attributes of the RMC act as an important resource to reduce agency conflicts.

1.7.2 Practical contribution

This study provides valuable insights for the Malaysian accounting standard setters and regulators in terms of future direction after the adoption of financial instruments accounting standards, specifically on hedging activities disclosure. More work could be planned, particularly to enhance stewardship and accountability functions of a company's management. Furthermore, the findings of this study give a new justification for the RMC because its establishment is now still on a voluntary basis, especially in non-financial companies. This is because the evidence on the association between the RMC's effectiveness and HAD in this study may suggest how the composition and uniqueness of this committee can ensure transparency and quality of disclosure.

This study may also support the need for a stand-alone RMC in the near future to regulators, such as the Securities Commission of Malaysia and Bursa Malaysia, as suggested by previous studies (see Hassan et al., 2012; Yatim, 2009). The Malaysian Code on Corporate Governance 2012 has placed the responsibility of risk management

onto the shoulders of the board of directors and most boards delegate the duty to the audit committee. This creates a burden for the audit committee as it already has many duties with regards to accounting and internal control aspects (Zaman, 2001). The establishment of a stand-alone RMC would enable it to focus more on the risk profile, including the usage of derivatives by companies for hedging as well as external elements that bind the company's business environment. In this respect, evidence from this study may also demonstrate the benefits of a stand-alone committee in contributing towards a company's risk management activities. Moreover, the findings of this study may provide insights to the regulators that the controlling owners (i.e., ownership concentration) may have an impact on disclosure of financial instruments, particularly on HAD. Hence, this can enhance the monitoring role of regulators in protecting the shareholders' interest by discouraging or controlling owners from expropriating companies' wealth for their own use.

Results of this study are also important to the investors/shareholders. Hausin et al. (2008) found that there is an expectation gap between the information on hedging activities disclosed in the financial reports and the way the information is used by investors for decision-making. They claimed that investors/shareholders lose confidence in the information's truthfulness provided by companies when the investors/shareholders use other reliable sources of information instead of the annual reports. Hence, the transparency and quality of HAD in the annual reports will build confidence for investors/shareholders in their investment decision-making. This is supported by Papa and Peter (2013), as they claimed that the disclosure of information on hedging activities is one of the important indicators to shareholders to estimate and

evaluate their investments in companies. In addition, findings on the RMC's effectiveness on disclosure of hedging activities may provide an understanding to investors/shareholders whether Malaysian companies' financial reports are faithful and reliable as compared to other countries. Besides, the investors/shareholders can learn from the findings of this study that the controlling owners (i.e., concentrated ownership) may have an effect on the RMC and disclosure of hedging activities information. Hence, this could be more valuable to investors/shareholders (particularly minority shareholders) as it will help them in making wise investment decisions. Finally, the results of the study will be useful to researchers and auditors concerned with the quality of financial reporting and corporate governance practices. This is because the influence of corporate governance on disclosure of financial instruments, particularly on the usage of derivatives, can be associated with the reliability of financial information as it controls management from misusing their power. Moreover, findings of this study provide some insight to the auditors, particularly in planning their audit task and focusing on accounting figures that are within the discretion of the management.

1.8 Organisation of the thesis

This chapter provides the background of study, followed by problem statement. This chapter also highlights the research questions, objectives, motivation and scope of the study. Lastly, the significances and contributions of the study are discussed. The rest of this thesis is organised as follows: Chapter 2 outlines the review of related literature on disclosure of financial instruments and hedging activities information and corporate

governance. The theoretical framework is discussed in Chapter 3, followed by the hypotheses development, sample of the study and research method adopted in this study. Chapter 4 presents the descriptive analysis of the data, regression analysis and discusses the findings of the study in relation to the hypotheses and moderating variable. Finally, Chapter 5 discusses overall findings, presents limitations, implications of the study and provides potential issues for future research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the relevant literature on HAD. It begins with an explanation of risk management and reasons for hedging. Then, the discussion continues by highlighting the importance of derivatives and hedging activities information. Section 2.4 highlights the development of financial instruments accounting standards and accounting requirements for hedging activities for business entities in Malaysia. Section 2.5 reviews past studies' empirical findings that focus on the extent of disclosure on derivatives used for hedging activities. Section 2.6 discusses the impact of corporate governance, disclosure of financial instruments, the effectiveness of the RMC and ownership concentration. Section 2.7 discusses the moderating effect of ownership concentration, and finally, Section 2.8 summarises this chapter.

2.2 Risk management and reasons for hedging

In order to sustain businesses in a dynamic global environment, managing financial risk exposure is one of the companies' concerns in their risk management policy. This is because management realises that improper management of financial risks would affect the company's medium and long-term business survival. There are a number of ways to limit the financial risk exposure and one common way to deal with such exposure is by hedging the financial risk with derivatives, such as forwards contracts or swaps. Although a company might hedge using alternative means, such as financial and operational strategies, this section only discusses hedging activities by the use of derivatives. The use of derivatives for hedging can basically be described as an attempt

to reduce the risk of an underlying transaction by concluding an adverse transaction in order to offset any financial risks (Hausin et. al., 2008).

Instead of using derivatives to hedge a company's financial risk, there are also some other reasons for hedging that have been pointed out by several previous studies. One of the early studies by Smith and Stulz (1985) pointed out that hedging can be used to reduce the expected corporate tax liability for a company with a convex corporate tax schedule as well as to increase a company's value. It is also claimed that hedging can moderate the probability of a company encountering financial distress, which in turn, can lower the expected costs of financial distress (see Bessembinder, 1991; Myers, 1977). On the other hand, Froot, Scharfstein, and Stein (1993) claimed that hedging can facilitate the financing of investment projects using internal funds to decrease the reliance on costly external financing. According to Stulz (2004), the reason for a company to hedge is also influenced by managerial compensation. The study highlights that companies, for which option is a component of managerial compensation, are less likely to hedge since it will affect management's future wages. Although theoretically, hedging can mitigate the company's financial risks and offer some benefits, in practice, this is relatively difficult to achieve. This is because hedging instruments need good, effective and proper risk management strategies. Without careful analysis, companies could increase the potential underlying risk of the instruments. This is evidenced by several corporate financial tragedies involving hedging activities that shocked investors, where undisclosed derivative risk-related exposures failed to be managed (e.g., cases such as Enron, Baring, etc.). Hence, several studies have raised concerns regarding the importance of information disclosure on the

use of derivatives (e.g., Bhat, 2008; Birt et al., 2012; Hassan et al., 2006). According to Papa and Peter (2013), investors/shareholders still believe that they can be deceived by derivatives risk exposures even when companies state that the reason for using derivatives is for reducing risk. Therefore, more transparent reporting regarding hedging financial risk by using financial instruments should be disclosed to investors/shareholders (Hassan et al., 2006).

2.3 The importance of derivatives and hedging activities information disclosure

Extensive use of derivatives for hedging activities does not only involve financial institutions, but also non-financial institutions. This has been documented in several past studies that large corporations (i.e., non-financial institutions) are likely to use derivatives for hedging to mitigate a variety of financial risks (see Ameer, 2010; Bailey, Browne, Hicks, & Skerrat, 2003; Géczy et al., 1997; Lins, Servaes, & Tamayo, 2011). The decision to use derivatives for hedging as one of the risk management policies has been found to be related to a company's specific characteristics. For example, company size, foreign sales, liquidity and growth option have been claimed to be the common factors that influence the use of derivatives (see Ameer, 2010; Birt et al., 2013; Hu & Wang, 2006). Even though derivatives have been used widely for hedging among large companies, many studies have reported that it is inadequately disclosed (e.g., Abdullah & Chen, 2010; Birt et al., 2013; Hassan et al., 2012). Generally, previous studies have highlighted the importance of financial reporting for derivatives used for hedging activities by claiming that the extent of information disclosed can affect investors/shareholders' understanding of risk exposure and risk management activities. This has been proven by some of the studies which have empirically tested

if such information is value relevant to investors (e.g., Bhat, 2008; Hassan & Saleh, 2010; Hassan et al., 2006). In addition, Hodder, Koonce, and McAnally (2001) supported this argument by claiming that inadequate quantitative disclosure of risks of derivatives that are used for hedging activities has led investors to inappropriately evaluate the level of risk in making their investment decisions.

According to Géczy et al. (1997), the use of derivatives does not only allow companies to hedge against a variety of risks, but also upturns the company's risk profile as hedging information somehow cannot be easily identified in financial statements. Therefore, adequate and relevant information needs to be released to the investors. A recent survey by Papa and Peter (2013) from the users' perspective has shown that hedging activities disclosure is the second most important information needed by investors after risk disclosure information. They pointed out that lack of disclosure will limit the knowledge of the counterparty and credit risk, lead investors to underestimate incremental economic hedges, restrict the assessment ability on hedge effectiveness and trading risk and lead to misjudging the risk exposures that are not reported in the statement of financial position. In addition, they claimed that low level of HAD would result in poor quality of transparency for users regarding the effectiveness of the risk management activities.

In Malaysia, Hassan and Saleh (2010) highlighted that it is important for companies to disseminate high quality of hedging activities information. It has been found that such information is value relevant for investors in making their investment decisions. However, it should be noted that this evidence is only supported in the period before

the standard became mandatory. They concluded that the investors rely on the hedging activities information provided by companies to manage their hedging risk strategies.

In contrast, a study by Hausin et al. (2008) claims that investors' perceived disclosure of hedging activities in the annual report is not important for their analysis because the information provided is usually standardised and overloaded with confusing texts. They also claimed that lack of quantitative and specific data (for instance, in the form of plain tables), leads to investors not resorting to this kind of information. This is true because several evidences in Malaysia have shown the inadequacy of HAD by companies. For example, Othman and Ameer (2009) found varying information across industries in reporting their hedging activities, particularly on their risk exposure. Companies have been found to use derivatives but misleadingly state their engagement in any hedging/trading activities of financial instruments. Hassan et al. (2012) and Abdullah and Chen (2010) also showed low level of hedging activities information and overall financial instruments disclosure by Malaysian listed companies.

A survey by Ameer et al. (2011) can be used to support the weaknesses of Malaysian companies in disclosing information about their hedging activities. According to them, among the reasons for not disclosing information, are lack of expertise and high cost in preparing the information compared to their expected benefits. Thus, the disclosure of derivatives used for hedging activities in Malaysia is considered to be low and lacking in terms of its usefulness. This may affect the users' understanding and lead them to make wrong justification on the company's performance and evaluation of their investment decisions.

2.4 Accounting practice for hedging activities in Malaysia

This section highlights the development of accounting standards for financial instruments in Malaysia. It explains the disclosure requirements for hedging activities stipulated under MFRS 7 and MFRS 139 that need to be followed by all business entities in Malaysia. The requirements under this standard are also examined as part of this study's effort to answer the research questions.

2.4.1 Development of accounting standards for financial instruments

The accounting standard landscape for financial instruments in Malaysia is premised on three separate standards adopted from the International Accounting Standards (IAS). Historically, it started in the year 2001 where only one accounting standard was recognised by the MASB to deal with financial instruments reporting by business entities in Malaysia. The accounting standard was called MASB 24 (Financial instruments: Disclosures and Presentation) which is equivalent to IAS 32 (Financial Instruments: Disclosure and Presentation). At that time, all Malaysian companies were required to follow this accounting standard to report their financial instruments information. However, the situation changed in 2005 when the MASB renamed and renumbered the MASB standards to FRSs, in order to be in line with the objective of

the International Accounting Standards Board (IASB) to work towards convergence into a single set of accounting standards worldwide, known as the IFRSs. As the MASB standards were adopted from the IASs, there were no major areas of differences between the standards when the MASB standards were renumbered and renamed to FRSs (Leng, Lazar, & Othman, 2007). The introduction of FRS 132 (Financial Instruments: Disclosure and Presentation), initially to be adopted by Malaysian

companies, started for financial periods beginning or after 2006. The earlier version of FRS 132 is generally identical to the IASB's IAS 32 and MASB 24 with some improvements as revised in December 2003.

Although the MASB adopted IAS 32 fully for reporting financial instruments information in year 2006, the Board decided to defer the adoption of IAS 139 (equivalent to FRS139) that deals with principles governing the recognition and measurement of financial assets and financial liabilities. The implementation was made effective in the beginning or after January 2010. As the year progressed, the MASB further followed the IASB's step on the amended IAS 32 and subsequently mandated FRS 7 to be effective in Malaysia by the year 2010. The IASB amended IAS 32 by relocating all disclosures relating to financial instruments to IFRS 7 (Financial Instruments: Disclosures), with the aim of removing duplicative disclosure and eliminating internal inconsistencies. This move gave rise to the segregation of IAS 32 into two separate standards (i.e., IFRS 7 Financial Instruments: Disclosures and IAS 32 Financial Instruments: Presentation). IFRS 7 supersedes the disclosure requirements of IAS 32, whilst the remaining parts of IAS 32 deal only with financial instrument presentation matters. Similar to IFRS 7, the objective of FRS 7 in Malaysia is to require entities to provide disclosures in their financial statements that can enable users to evaluate: (i) the significance of financial instruments for the entity's financial position and performance; and (ii) the nature and extent of risks arising from financial instruments to which the entity is exposed to during the period and at the reporting date, and how the entity manages those risks.

With respect to the adoption of FRS 7 for financial instruments in Malaysia, business entities are expected to convey more useful of information to their users regarding their risk exposure to the financial instruments. It is also perceived that a greater transparency will be achieved regarding risks associated with the amount, timing and uncertainty of an entity's future cash flows which will allow financial report users to make more informed judgments about their risks and returns. This is because the standard forces extensive disclosure of risks relating to financial securities, interest rate risk, liquidity risk and detailed disclosure of credit risk. Figure 2.1 illustrates the chronology of the accounting standard adoption for financial instruments in Malaysia. With respect to the full convergence of MASB standards and IAS in the year 2012, MASB made the decision to change the nomenclature of FRS to MFRS. Besides that, the Board agreed to delay the implementation of IFRS 9 to replace MFRS 139 (*Recognition and Measurement*) to 2018. The standard will be set to override some principles relating to classification and measurement of financial assets detailed in MFRS 139, resulting in consequential amendments to MFRS 7 and MFRS 132 that are applicable for the financial period beginning on or after 1 January 2012.

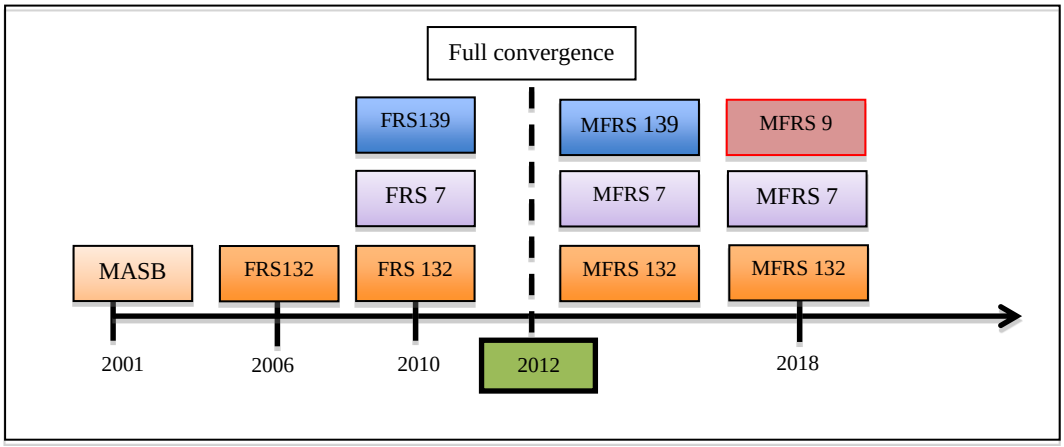


Figure 2.1
The chronology of accounting standard adoption for financial instruments in Malaysia

Looking into this development, Ali (2010) expressed his concern on the importance of Malaysian companies in preparing themselves to understand several key requirements in those related standards, including disclosure of derivatives used for hedging activities. He claimed that failure to adequately understand the requirements of these accounting standards may lead to non-compliance and errors in preparing the information. He suggested that management needs good procedures for monitoring, evaluating and reporting of their financial instruments information; otherwise, reporting such information would create ambiguities for the readers of financial statements.

2.4.2 Accounting requirements for hedging activities

Generally, there are two separate accounting standards that deal with derivatives for hedging activities, i.e., MFRS 139 and MFRS 7. MFRS 139 provides the recognition and measurement of derivatives used for hedging, while MFRS 7 specifies the disclosure requirements on hedging activities information. The following part discusses related requirements for each of these accounting standards. To begin with, it is important to note that the principles of these accounting standards complement each other and both standards deal not only with hedging activities but with other derivatives as well.

MFRS 139 (Financial Instruments: Recognition and Measurement)

As a general rule, MFRS 139 requires all derivatives to be accounted for based on fair value, whereby the fair value of the derivatives is recorded in the Statement of Financial Position, while its gains or losses are recorded in the Income Statement. With regards to derivatives used for hedging, only qualified derivatives and hedge items are

permitted. MFRS 139 provides strict criteria for qualifying derivatives. Paragraph 88 outlines the specific requirements that have to be met by companies to account for derivatives for hedging activities which are summarised as follows:

- Hedge items and hedging instruments have to be identified specifically.
- The hedging relationship has to be documented formally.
- The documentation of the particular hedging relationship must give information about the hedged risk and how the effectiveness of the hedge relationship is measured.
- At the outset of the hedge relationship, the hedge is expected to be highly effective. The effectiveness of a hedge relationship has to be tested regularly during the hedge duration. (The effectiveness of a hedge relationship is achieved when it falls into a range of 80% to 125% over the hedge lifetime).
- If a forecast transaction is hedged, the transaction has to be highly probable.

The qualifying hedge items are specifically addressed in detail under paragraphs 78 to 80. It is defined in paragraph 78 that, "a hedged item must generate a risk-exposure, which could affect the entity's income statement at present or in future periods. The hedged item can be: (i) a single asset, liability, firm commitment, highly probable forecast transaction or net investment in a foreign operation; (ii) a group of assets, liabilities, firm commitments, highly probable forecast transactions or net investments in foreign operations with similar risk characteristics; or (iii) in a portfolio hedge of interest rate risk only, a portion of the portfolio of financial assets or financial liabilities that share the risk being hedged". Paragraph 79 states that financial instruments which are classified as held-to-maturity cannot be a hedged item with respect to interest-rate risk/prepayment risk, except with respect to risks from foreign currency exchange rates

and credit risks. MFRS 139 also states in Paragraph 80 that only foreign currency risk of an intragroup monetary item (for instance, a payable or receivable between subsidiaries) is permitted to be a hedged item and only assets, liabilities, firm commitments or highly probable forecast transactions that involve external party to the entity can be designated as hedged items. For qualifying hedging instruments, Paragraphs 72 to 77 state that only instruments that involve external party qualify for use as a hedging instrument. Although the standard requires a one-to-one designation of hedge item and hedge instrument, a single external instrument with multiple elements (e.g., a cross-currency interest rate swap) can be used to hedge more than one type of risk (in such a case, the interest rate and foreign currency risk). However, the different risk types have to be clearly identifiable and it must be possible to calculate the effectiveness of each hedge relationship reliably. MFRS 139 also explains the types of hedging relationships. Paragraphs 89 to 102 mention the three types of hedge relationships that qualify for hedge accounting: (i) fair value hedge; (ii) cash flow hedge; and (iii) net investment hedge in a foreign operation.

The main differences between these three types of hedges are in terms of their sources of risk exposure and how they recognise the fair value gains or losses on the hedging instrument as well as hedged items through the income statement. Paragraph 89 guides how fair value hedge accounting should address the measurement of the hedged item and hedging instrument. The hedged item (e.g., an asset or a liability measured at cost) is adjusted for changes in fair value, according to the attributable risk, and these changes are recognised in the income statement. On the other hand, hedge instruments (derivatives) are measured at fair value and changes in fair value are recognised in the

income statement in the same period as well. In cash flow hedge, the recognition of hedging instrument and hedged item is explained in Paragraphs 95 to 101. The paragraphs state that the changes in the fair value of hedging instruments (effective portion) shall be deferred in Other Comprehensive Income (OCI) and presented within equity (normally the hedging reserve, a Statement of Financial Position line-item of the entity's equity); while the ineffective portion[3] is recognised under the profit or loss section in the income statement. However, in cash flow hedge accounting, hedged items are not adjusted to be measured at fair value. The gain or loss on the hedging instrument that is deferred in OCI shall be reclassified to profit or loss at a future date when the hedged item affects profit or loss (for example, when the interest payment on a floating rate debt instrument is made or when the payment associated with an anticipated transaction occurs).

Another type of hedge relationship which qualifies for hedge accounting is net investment hedge that is the foreign currency cash flow hedge used to reduce exposure that arises from a company's net investment in a foreign operation. Paragraph 102 states that the net investment in a foreign investment shall be accounted similarly to cash flow hedge. It states that the portion of the gain or loss on the hedging instrument determined to be effective shall be recognised directly in shareholder equity (part of cumulative translation account), upon consolidation of each period into the parent financial statement. In contrast, the ineffective portion on the hedging instrument shall be recognised immediately in profit or loss. The hedging instrument in a net

[3] Ineffectiveness occurs when the change in the fair value exceeds the change in the present value of the future cash flows of the hedged item/exposure (also known as over-hedged).

investment hedge can either be a derivative instrument (e.g., foreign exchange forward contract) or a non-derivative instrument (e.g., foreign currency denominated debt instrument), or a combination of a derivative and non-derivative instrument. Similarly, when a non-derivative instrument is used, the foreign currency translation gain or loss is recognised in equity (as opposed to profit or loss).

MFRS 7 (Financial Instruments: Disclosure)

Looking into MASB's accounting standards development (as highlighted in the previous section) in Malaysia from 2010 onwards, FRS 7 replaced FRS 132 regarding disclosure requirements for financial instruments; however, the nomenclature was changed to MFRS 7 in the year 2012. The general outcome of the full application of MFRS 7 is the presentation of information to the users about an entity's financial risk exposures and how those risks are managed by the entity. The requirement regarding hedging activities disclosures in MFRS 7 are provided in paragraphs 22 to 24. Each hedge type has different requirements which are summarised and presented in Figure 2.2.

Furthermore, for specific disclosure requirements, the requirements for cash flow hedges are the most extensive, and are different from the previous standard (i.e., FRS 132). In MFRS 7, the requirements concerning the gain or loss on the hedging instrument which is transferred from equity to the income statement has been expanded. It has also to be disclosed in a separate line-item of the income statement affected. In addition, the business entities are required to disclose information regarding the ineffectiveness of cash flow hedges and net investment hedges in the income statement. Compared to the previous accounting standard, these requirements

are new in MFRS 7. A further new requirement is that companies which use fair value hedges, need to report the gains or losses on the hedging instrument and hedging item attributable to that specific hedge. The ultimate aim of the disclosure requirements for hedge accounting is to clarify to the users what kinds of risks are involved in an entity's hedging activities. The objective is also to provide a better description regarding what kind of derivatives have been used as hedging instruments and their fair value. For the purposes of this study, the requirements of hedging activities under MFRS 7 are examined in order to determine the extent of hedging activities disclosure. It is assumed that MFRS 7 is a high quality disclosure standard. This is because the standard requires extensive disclosure that can aid the investors and other financial statement users on the impact of derivatives used for hedging activities.

Since its adoption in the year 2010, MFRS 7 has attracted many Malaysian companies to follow its requirements. A considerable amount of time and resources have been invested by many entities as well as regulators to ensure high compliance with this accounting standard. To date, no known studies has been found in Malaysia which reviews compliance with these new mandatory requirements; however, there is evidence of inadequate information, especially on derivatives used for hedging activities in other IFRS adoption countries (e.g., Bamber & McMeeking, 2010; Birt et al., 2013; Hausin et al., 2008). Some studies have concluded that the inadequacy of hedging activities information is due to the lack of understanding of the accounting standard or expertise (see Ameer et. al., 2011; Bailey et al., 2003; Bhamornsiri & Schoreder, 2004).

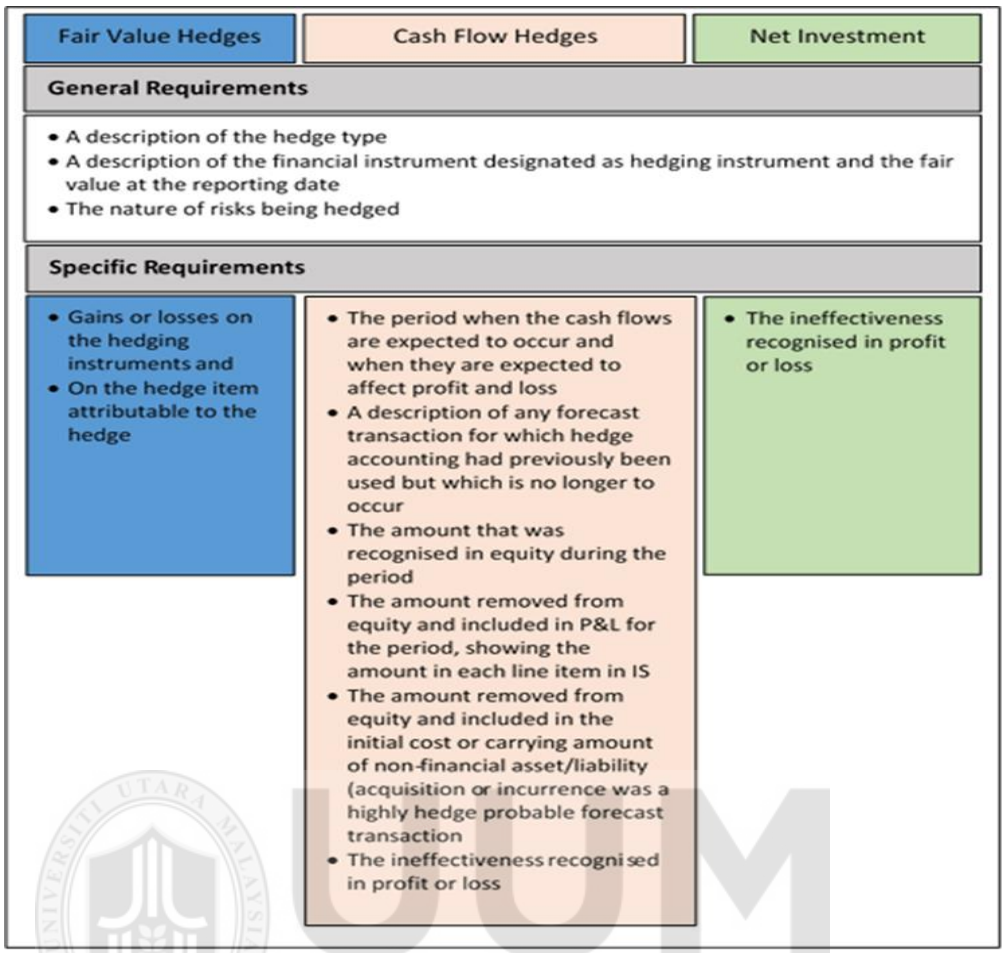


Figure 2.2
Summary of disclosure requirement under MFRS 7 for hedging activities

In another study, this inadequacy is also claimed to be due to the management incentives and to increase the firm value (Géczy et al., 1997). According to DeMarzo and Duffie (1995), the non-disclosure of the related hedging activities information could actually benefit risk-averse and self-interest managers. This is because the use of derivatives for hedging as part of the overall corporate policy will be reflected as changes in tax liabilities, changes in stakeholder contract or interdependencies between the choice of financial policy and future real investment decisions (Smith & Stulz, 1985). In addition, a study done by Bodnar, Hayt, and Marston (1996) also shows that the weak derivatives disclosure is related to earnings management activities.

A recent study has evidenced that the inadequacy of derivative disclosure is associated with weak corporate governance (Abdullah & Chen, 2010; Hassan et al., 2012: Taylor et al., 2008; Wei & Taylor, 2009). These studies argue that the corporate governance structure plays an important role in business entities. Good corporate governance can complement regulations by ensuring compliance with requirements that mandate management to discharge their legal and fiduciary duties and also encourages more relevant as well as faithful disclosure of information.

2.5 Studies on disclosure of hedging activities information

Many studies have investigated the reporting practices on financial instruments information. However, only a few studies have specifically addressed the disclosure of information on hedging activities. Since hedging activities information is part of the financial instrument disclosure, this section reviews related past studies on the disclosure of financial instruments, emphasising disclosure on hedging activities information.

2.5.1 The extent of disclosure

A number of studies have been undertaken on the international front to analyse the disclosure practices on financial instruments. Based on the literature review, analysis of financial instruments disclosures is aimed at quantifying the degree of disclosure on the issuance of the new accounting standard for financial instruments. In many cases, the extent of disclosure is aggregately measured by several kinds of disclosure categories (e.g., Birt et al., 2013; Chalmers & Godfrey, 2004 and 2000; Hassan et al., 2006; Taylor et al., 2008), including disclosure of hedging activities information. In a broad view, studies before the existence of regulations, have shown that the disclosure

of financial instruments, including hedging activities information, is less satisfactory; many companies under investigation limit the amount of their disclosure. However, a high level of disclosures is reported after the presence of the regulation but the information provided is not very useful.

In Australia, several related studies have been found which provide evidence before and after the presence of regulations on the level of hedging activities disclosure. Two different studies conducted by Chalmers and Godfrey (2000), and Chalmers (2001) report that the level of information regarding hedging activities is low and there is a lack of accounting policy disclosures relating to specific types of financial instruments. They concluded that disclosures are vague and clearly fail in terms of contributing to the overall understanding, comparability and consistency of the body of information within the annual report. Hassan et al. (2006) further documented a low level of hedging disclosure among Australian extractive companies. Many of the companies are shown as withholding some of the information in relation to their hedging activities. However, the study does not provide the detailed score for each category of HAD. In general, the lack of information regarding hedging activities has been documented based on five types of hedging activities information: (i) description regarding the hedging instruments; (ii) description of anticipated transaction; (iii) the period of time until they are expected to occur; (iv) amount of any deferred or unrecognised gain and losses; and (v) the expected timing of recognition as revenue or expenses. In addition, a study by Wei and Taylor (2009) on fair value information disclosure among Australian extractive companies, reports that there is a lack information regarding source/input of valuation on hedging instruments and items. It

is found that the sampled companies only provide basic fair value information on financial instruments. However, Taylor et al. (2008) reported that mandatory disclosure on hedging activities by companies in Australian extractive industries has increased, but still, some of the companies refuse to comply with the accounting standard. Interestingly, it is also reported that some of the companies voluntarily disclose other relevant information on hedging activities. A recent study by Birt et al. (2013) further examined the disclosure level and the quality of financial instruments as a consequence of the issuance of AASB 7 (Financial Instruments: Disclosures) in Australia. They claimed that the extent of financial instruments disclosure under the new IFRS requirements (i.e., AASB 7 equivalent to IFRS 7) still varies greatly across a sample of Australian metal and mining firms. Nearly half of the companies do not disclose the purpose of their use of derivatives, either for hedging or speculative purposes. They also revealed that sampled companies use a range of instruments for hedging purposes, with forward rate agreements being the most common. The most common item found to be disclosed by companies is "policy notes". With regards to hedging activities disclosure, they documented that none of the companies shows separate line-items in the body of the financial statements. The extent of detailed information disclosed to investors on the nature of financial risk and how it is being managed also differs.

Similar findings are also reported in other countries, such as the US, the UK and some other European countries (e.g., Blankey, Lamb, & Schoroeder, 2002; Mallin et. al., 2004; Hamlen & Largay, 2005; Lopes & Rodrigues, 2007; Roulstone, 1999; Woods & Marginson, 2004). Many of them have highlighted that the disclosure practices of

derivatives used for hedging are diverse in terms (i.e., phrases), are not clear, have less details and are inconsistent. In the US, studies by Blankley et al. (2002) and Roulstone (1999) have found that hedging activities among companies are not presented in accordance with the Securities and Exchange Commission's (SEC) requirements. Roulstone (1999) reported low disclosure of information regarding hedging gains and losses and the terms used for specific hedges. Although there has been an increase of HAD after the introduction of *Statement of Financial Accounting Standard* (SFAS) 133, Roulstone (1999) claimed that there is a lack of contextual information to link quantitative market risk exposure and the use of derivatives for hedging activities.

A study by Blankey et al. (2002) also reported that compliance with qualitative disclosure requirements concerning companies' derivatives used for hedging and its management is high, but detailed disclosures for the quantitative items are still incomplete or lacking. Both of these studies concluded that there is still room for improvement, particularly on the details of quantitative measures of market risk and the discussion of risk management on hedging activities. The findings are supported by Bhamornsiri and Schroeder (2004) who found that disclosure of hedging activities with quantitative disclosure aspects is less consistent than compliance with the qualitative aspects. They revealed that companies in the investigation do not clearly disclose several types of information. These include: (i) types of hedges; (ii) the amount of gains or losses from the use of each type of hedge; (iii) the amount of comprehensive income attributable to cash flow hedge expected to be reclassified into earnings during the next accounting period; and (iv) the level of hedge ineffectiveness.

A study by Hamlen and Largay (2005) also reported the effect of hedging activities disclosures in the financial statement (i.e., hedge-accounting related disclosures) after the implementation of SFAS 133. Unlike Bhamornsiri and Schroeder (2004), Hamlen and Largay (2005) found an improvement in the income effects disclosure of effective and discontinued hedges as well as net investment hedges in foreign operations. Nevertheless, it has been concluded that the overall derivatives and hedging disclosures are inadequate and complex. They also stated that such disclosures are difficult to compare across companies. They proposed that user-oriented disclosures which focus on overall risk and hedging impact should be emphasised by standard-setting bodies.

In a recent study, Papa and Peter (2013) revealed that several companies have failed to comply with the mandated disclosure on HAD. Besides, they also reported that companies limit to voluntarily disclosing additional information on derivative instruments used for hedging. Papa and Peter (2013) found that there is insufficient amount of disclosure of hedged and unhedged risks, including the risks arising from the use of derivatives, which comprise disclosure on quantitative market risks, notional amounts, sensitivity analyses and credit-related risks. They also claimed that companies provide less explanation on hedging strategies which may lead to users' failure to understand the effectiveness of hedging activities. In this case, companies are not focusing on disclosing information related to hedge accounting activity, but are likely to discuss the full range of economic hedging activities that limit the understanding of a company's overall risk management activities.

In the UK, a study by Woods and Marginson (2004) also reported the lack of usefulness on the financial instruments information disclosed by UK banks. They revealed that there is no cross-reference between qualitative and quantitative information, especially for banks that use financial instruments for hedging purposes. Moreover, they found that the narrative disclosure of risk information, including hedge risks, are generic in nature and numerical data is incomplete, and is not comparable and understandable. Woods and Marginson also claimed that disclosures of derivatives used for hedging purposes are limited to help users assess the scale of financial risk exposure, although there are regulations and guidelines on financial instruments reporting (i.e., FRS 13). A survey conducted by El Masry (2006) shows that the lack of usefulness occurs because firms do not understood well and avoid using derivative instruments for hedging. Hence, the author perceived that disclosures of hedging activities are not really significant to the users. The author also highlighted that complicated disclosure requirements enforced under the Financial Accounting Standards Board (FASB) rule is among the reasons why they do not comply with some of the requirements. Besides, the author also mentioned that since the cost of establishing and maintaining the information exceeds their expected benefit, many companies ignore the reporting practices.

In addition, a study by Bamber and McMeeking (2010) supported the weaknesses and the lack of information on hedging activities by some UK companies. It is reported that the companies are likely to use the term ‘hedging’ in relation to derivatives; nevertheless, they do not apply the term ‘hedge accounting’ in their financial reporting

practices. The study also reveals that companies are likely to voluntarily publish more information regarding financial instruments if they do not employ hedge accounting.

In some European Union (EU) countries, a poor level of disclosure on hedge activities is also traceable by some studies. Lopes and Rodrigues (2007) reported a low level of hedging disclosure among Portuguese companies in an unregulated environment. It is also claimed that some of the firms are flexible in releasing the hedge activities information, including: (i) hedging description; (ii) accounting method; (iii) designated financial instruments; (iv) fair values; and (v) types of risk being hedged. Since the study was conducted in the voluntary regime whereby companies still have the choice not to disclose information, the results are not really surprising. In addition, Oliveira, Rodrigues, and Craig (2011) reported deficiency of HAD by Portuguese listed companies. However, they only focused on the issue of risk disclosure and reported that information provided is inadequate and there is a lack of transparency. They also doubted that recent regulations on financial instrument disclosures would be able to improve the quality of risk-related information disclosed, including risk attached to hedge activities.

In another study, Hausin et al. (2008) pointed out that inconsistencies of compliance exist in Swedish companies which report their hedging activities information in accordance with IFRS 7 requirements. They also documented that fair value hedges disclosure information is highly correlated to the IFRS 7 requirements as compared to cash flow hedges and hedges of net investments in foreign operations. In Romania, a study by Alexandrina (2012) showed continuous improvement of accounting practices

and transparency of financial instruments are in accordance with IFRS. The highest improvement in the case of disclosure is related to derivatives and hedging accounting. The lowest disclosure is related to general and risk information related to financial instruments at the consolidation level. Moreover, a recent study by Zango, Kamardin, and Ishak (2015a) in Nigeria showed that only 56% of Nigerian listed banks comply with the requirements of financial instrument disclosure. Indeed, they urged an intensive monitoring and enforcement by the Financial Reporting Council of Nigeria (FRCN) to sustain and improve the disclosure of financial instruments in the long-run.

Based on the previous international studies highlighted above, the inadequacy of information on derivatives used for hedging activities can be observed. Even though there are extensive mandatory requirements that need to be complied with by business entities, some companies are still reluctant to fully comply with the requirements.

2.5.2 Factors associated with disclosure of financial instruments

There are several factors that could explain the level of financial instruments disclosure. Studies before the issuance of accounting standards have shown that the level of financial instruments disclosure is associated with several companies' specific characteristics. A study by Chalmers and Godfrey (2004) provided evidence on the existence of some factors that respond to the voluntary financial instruments disclosure. These factors are companies' affiliations with professional bodies, company size, type of industry and the extent of its media attention. Similarly, Lopes and Rodrigues (2007) provided evidence that company size, type of industry and auditor listing status are significantly related to the extent of disclosure among Portuguese listed companies.

In contrast, a study after the existence of regulations conducted by Hassan et al. (2006) gave a different view on this matter. It is reported that large companies and companies with high price-earnings ratios and debt-to-equity ratios provide more transparent and quality financial instrument disclosures. On the other hand, Wei and Taylor (2009) showed that the strength of corporate governance and leverage are significant factors that positively influence the disclosure of fair value information on financial instruments. Similarly, Taylor et al. (2008) reported that the level of financial instrument disclosures, including information on hedging activities, is positively associated with leverage and strength of corporate governance.

In another study, Oliveira et al. (2011) found that company size, industry, leverage, auditor type and board independence, affect the level of risk disclosure among Portuguese listed companies. This study also considered risk on hedging activities as part of risk disclosure. Meanwhile, Birt et al. (2013) showed that the extent of disclosure on financial instruments is significantly associated with profitability, leverage, type of audit firms, the existence of a RMC and company size. They documented that a large profitable company with high leverage, audited by a Big 4 auditor, is likely to provide more extensive disclosure of financial instruments. Consistent with Birt et al. (2013), a study by Zango et al. (2015a) claimed that the relationship between RMC and the level of financial instruments disclosure among Nigerian listed banks is positively significant. However, in contrast to Birt et al. (2013), a study by Nejad, Hashemi, and Derakhshide (2013) found no relationship between the existence of RMC and the level of financial instruments disclosure among companies listed on the Tehran Stock Exchange.

This study also observed that most previous studies which examined factors associated with the extent of financial instruments disclosure have been set in a voluntary disclosure regime (e.g., Chalmers & Godfrey, 2000; Lopes & Rodrigues, 2007), or in a setting with less extensive disclosure requirements (e.g., Chalmers & Godfrey, 2004; Hassan et al., 2006), and only a few have looked into a more extensive setting (e.g., Birt et al., 2013; Taylor et al., 2008; Zango et al., 2015a). It is also noticed that there are a few studies that have investigated the level financial instruments disclosure on a broad industry base (e.g., Hassan et al., 2006; Lopes & Rodrigues, 2007); or concentrated on specific industries only (e.g., Birt et al., 2013; Chalmers & Godfrey, 2000; Hassan et al., 2006; Taylor et al., 2008; Zango et al., 2015a); or focused on specific aspects of financial instruments disclosure (e.g., Oliveira et al., 2011; Wei & Taylor, 2009). Table 2.1 summarises the related previous studies that have tested some of the factors associated with the level of disclosure of information on financial instruments.

Table 2.1

Summary of related studies on factors associated with the disclosure of financial instruments information

	Dependent Variables: The extent of disclosure (Disclosure index)												
	Chalmers & Godfrey	Hassan et al.	Lopes & Rodrigues	Taylor et al.	Wei & Taylor	Abdullah & Chen	Oliviera et. al	Ismail &Abdul Rahman	Hassan et al.	Nejad et al	Birt et al.	Adznan & Puat Nelson	Zango et al.
Year	2004	2006	2007	2008	2009	2010	2011	2011	2012	2013	2013	2014	2015a
Disclosure items	14	20	54	120	12	61	CA	16	30	61	19	25	12
Sample	500	137	55	30	100	63	81	124	484	63	341	319	14
Country	Aust	Aust	Portugal	Aust	Aust	M'sia	Portugal	M'sia	M'sia	Iran	Aust	M'sia	Nigeria
Firm Attributes													
Size	+	+	+	**0**	**0**		+	+	+		+		
Industry	+	**0**	-	**0**	**0**		+	**0**					
Listing Status			-	**0**									
Multinationality			**0**										
Profitability		+		-	+				**0**		-		
Leverage	**0**	+	**0**	+	+		+	**0**	+		+		
Growth Opportunity		**0**											
Derivative Usage											+		

*Notes: (+) positive relationship and statistically significant; (-) negative relationship and statistically significant; (0) no relationship, * CA=Content analysis (sentences count)*

Table 2.1 (Continued)

	Dependent Variables: The extent of disclosure (Disclosure index)												
	Chalmers & Godfrey	Hassan et al.	Lopes & Rodrigues	Taylor et al.	Wei & Taylor	Abdullah & Chen	Oliviera et. al	Ismail &Abdul Rahman	Hassan et al.	Nejad et al	Birt et al.	Adznan & Puat Nelson	Zango et al.
Year	2004	2006	2007	2008	2009	2010	2011	2011	2012	2013	2013	2014	2015a
Disclosure items	14	20	54	120	12	61	CA	16	30	61	19	25	12
Sample	500	137	55	30	100	63	81	124	484	63	341	319	14
Country	Aust	Aust	Portugal	Aus	Aust	M'sia	Portugal	M'sia	M'sia	Iran	Aust	M'sia	Nigeria
Corporate governance													
Auditor Quality	**0/+**	**0**	+			+	+		**0**	+	+	+	
Firm Affiliation	+												
Analyst Following	+												
Board Independence			**0**				+	-				**0**	
Ownership Structure	+		**0**				**0**						
Substantial Shareholders								**0**					
Existence of Audit Committee						**0**	**0**			**0**	**0**	**0**	
Internal Audit Independence												+	
Strength of CG				+	+								
AC Independence												+	
Risk Management Committee						**0**			+	**0**	+		+

*Notes: (+) positive relationship and statistically significant; (-) negative relationship and statistically significant; (0) no relationship, * CA=Content analysis (sentences count)*

2.5.3 Studies on financial instruments disclosure in Malaysia

In Malaysia, limited studies have been found which address disclosure of financial instruments information. The earliest traceable study was conducted by Hafiz (2003) which is cited in Hassan et al. (2012). Hafiz (2003), as cited by Hassan et al. (2012), provided evidence relating to the relationship between the extent of derivative financial instruments disclosure and two specific company characteristics, i.e., company size and the level of foreign activity. A disclosure index based on the MASB's Exposure Draft 24 (Financial Instruments: Disclosure and Presentations) was used to measure the level of voluntary disclosure. The study provides evidence that the level of voluntary disclosure of derivatives is low, possibly due to the lack of control mechanisms in Malaysia. Hafiz (as cited by Hassan et al. 2012), also provided evidence that the level of voluntary disclosures among companies with a high percentage of foreign subsidiaries is low when compared to companies with a low percentage of foreign companies. Furthermore, he also reported that there is no difference in the level of voluntary disclosure of derivative financial instruments with regards to companies with substantial foreign sales as opposed to those with a low percentage of foreign sales; nor is there an observed difference between companies with large assets and those with small assets. This is argued to be the result of conflicts of interest between management and stakeholders.

Similar to the Australian (e.g., Chalmer, 2001, Chalmer & Godfrey, 2000; Chalmer & Godfrey, 2004) and Portuguese studies (e.g., Lopes & Rodrigues, 2007), Hafiz (2003) also provided evidence on the level of financial instrument disclosure before the issuance of accounting standards. However, the results can be argued as biased since

the disclosure is voluntary in nature and certain companies might have different capabilities in terms of monetary and human resources. Hassan et al. (2012) extended the study by examining the disclosure quality of financial instruments among listed companies in Malaysia prior to and after the issuance of MASB 24. Based on 484 samples of companies selected in the years 1999 till 2003, their findings suggest that the existence of the RMC, company size and profitability are associated with high quality financial instruments information. Although the study only covers 30 items to get the disclosure index, the study provides useful insight on disclosure quality of financial instruments in Malaysia after the issuance of MASB 24, including disclosure of derivatives used for hedging activities.

Moreover, a study by Abdullah and Chen (2010) further examined the level of financial instruments disclosure under FRS 132 (Financial Instruments: Presentation and Disclosure). Unlike, Hassan et al. (2012), the study has developed a financial instruments disclosure index based on 61 items. Based on 63 samples of companies in the year 2008, they reported that on average, the disclosure level of financial instruments information in Malaysia is still low. Besides, the study reveals that the existence of the RMC has no relationship with the extent of financial instruments disclosure. It is explained that this may be due to the lack of an independent and effective RMC. However, they found internal audit independence (i.e., out-sourced internal audit) is significantly associated with the level of financial instruments disclosure. A recent study conducted by Adznan and Puat Nelson (2014) also shows that several requirements of financial instruments disclosure have been omitted by Malaysian companies, although overall results show that companies are complying

with MFRS 7. Based on 319 selected companies as a sample, they reported that audit committee independence, internal audit independence and audit fees are associated with disclosure of financial instruments. They suggested that effective corporate governance may have some influence on the extent of disclosure among companies. In addition to the above studies, there are also a few other studies that have investigated other specific aspects of financial instruments disclosure in Malaysia. By emphasising market risk disclosure, Othman and Ameer (2009) claimed that a large number of companies have complied with the requirement of FRS 132 (Financial Instruments: Presentation and Disclosure). However, they claimed that most of the Malaysian companies are not engaged in hedging any type of market risk. Similarly, Ismail and Abdul Rahman (2011) presented high compliance of risk disclosure in accordance with the mandatory accounting standard (i.e., FRS 132). They also provided evidence that a significant relationship exists between corporate governance mechanisms and risk disclosure (including risk on hedging activities).

Based on the above studies, this study observes that there is a deficiency of reported evidence with respect to disclosure of hedging activities information in Malaysia. Moreover, it can be perceived that the results of some of these studies may be outdated since the surveys were conducted in the period where the revised accounting standard for financial instruments was not available. The recent evidence only covers the early adoption period of the accounting requirement which may not be strong enough to highlight the companies' real behaviour towards the financial instruments disclosure practice. Although Adznan and Puat Nelson (2014) highlighted more recent evidence,

their work does not specifically focus on HAD. Therefore, this study attempts to investigate further the disclosure practice, particularly on hedging activities after a few years since full acceptance of the accounting standard. Moreover, by looking into factors that are associated with the extent of disclosure, it is likewise suggested that the existence of the RMC and some companies' characteristics can show the extent of financial instruments disclosure. Since mixed evidence has been discovered, this study tries to narrow the gap by further exploring the attributes of the RMC in terms of its effectiveness and the effect of ownership concentration.

2.6 Corporate governance and disclosure of financial instruments

This section highlights previous related studies that have examined the influence of corporate governance on the disclosure of financial instruments information. Due to the increased complexity and sophistication of financial instruments that widen the information asymmetry between managers and shareholders, disclosure of derivatives (including information on hedging activities) by companies is expected to reduce the information gap and conflict of interest. However, to ensure the quality of information disclosed by a company, it is proposed that a strong corporate governance mechanism be engaged to ensure managers' opportunistic behaviour can be monitored and controlled (Bassett, Koh, & Tutticci, 2007).

Since some of the MFRS 7 requirements for hedging activities offer discretion, the choices and extensive rules for managers, strong governance is deemed very essential to ensure faithful and relevant information is disseminated to the users. However, looking into recent evidence provided by several studies in developing countries, there

is no conclusive evidence to show that disclosure of information on hedging activities in accordance with the accounting standards is affected by corporate governance mechanisms. This is evidenced by several studies that have shown incompatibility and existence of low level disclosures by business entities (as explained in section 2.5.1). A study by Greco (2011), for example, evidenced that companies still continue to withhold relevant information to the external users and resist changing their disclosure policy even in the presence of new disclosure regulations. The study also reveals that when new mandatory disclosure is introduced, managers exploit discretion and do not change their disclosure policy. In addition, there are also several studies that have attempted to prove that the existence of corporate governance as a control mechanism can influence the extent of financial instruments disclosures. A study by Lopes and Rodrigues (2007) attempted to associate the involvement of independent directors, auditor types and shareholder involvement with the extent of financial instruments disclosure. The study shows that there is no significant relationship between independent BOD and the disclosure of financial instruments, but manages to prove the influence of the external auditor on the disclosure. In contrast, Hassan et al. (2006) found no association between the extent of financial instrument disclosure and the type of auditor.

Only a few aspects of corporate governance mechanisms have been tested on its association with the extent of financial instruments disclosures. A study by Wei and Taylor (2009) examined the effect of corporate governance and financial instruments disclosure by using five corporate governance variables. These five attributes are composite index proxies (i.e., aggregate measures) for internal corporate governance

mechanisms derived from the Australian Stock Exchange (ASX) Corporate Governance Council. Unlike previous works (i.e., Hassan et al., 2006 and Lopes & Rodrigues, 2007), they provided evidence that the strength of corporate governance and the extent of mandatory fair value disclosure for financial instruments has a positive relationship. Taylor et al. (2008) also found similar results. However, unlike Wei and Taylor (2009), Taylor et al. (2008) used thirteen attributes of corporate governance and separated the financial instruments disclosure into mandatory and discretionary disclosures information. A positive relationship is shown between the strength of corporate governance and mandatory financial instruments disclosure but no relationship is found between corporate governance and discretionary disclosures of financial instruments. Although the relationship exists, the study only focuses on one single industry (i.e., extractives industry), and hence, the difficulty to generalise the effect of corporate governance mechanisms on other industries.

In another study, Hassan et al. (2012) provided another view of corporate governance mechanisms and disclosure of financial instruments. Using Malaysian listed companies as a sample, they suggested that the existence of the audit committee and RMC as corporate governance mechanisms can strongly influence the quality of financial instruments disclosures. Consistent with previous studies, they also reported insignificant relationship between board composition (i.e., the involvement of independent directors) and the level of financial instruments disclosures. Although this study provides evidence on the influence of the RMC, the finding might be biased because it was conducted before the extensive requirements were mandated on financial instruments which were subject to low amount of control to be empowered

by business management. Abdullah and Chen (2010) examined the presence of the RMC and disclosure of financial instruments after the introduction of the new accounting standard (i.e., FRS 132). However, their findings are inconsistent with Hassan et al. (2012); their study reveals no relationship between the RMC and disclosure of financial instruments by Malaysian listed companies. In another study, Birt et al. (2013) posited that risk management activity through audit committees do not relate to the disclosures of financial instruments but are significantly influenced by the existence of the RMC. The finding is consistent with Hassan et al. (2012); however, its generalisation is limited because they only emphasised one specific industry in Australia with a small RMC sample firms.

Based on these aforementioned findings, the issue of whether good governance practices ensure mandatory compliance in the context of financial instruments disclosure is still an avenue to be explored. Previous researchers raised concerns only by studying the existence of one single corporate governance attribute and very few have examined different governance attributes in a single study. In addition, several studies have been conducted in developed countries, whereby the findings may not be applicable to emerging economies (like Malaysia) that have different regulatory and cultural environments. Further, it can be seen that prior research on financial instruments disclosure has paid little attention to ownership structure, particularly on ownership concentration that may potentially affect internal corporate governance mechanisms as well as the quality of financial instruments disclosure. Unlike previous recent studies (i.e., Abdullah & Chen, 2010; Birt et al., 2013; Hassan et al., 2012) that

only focused on the existence, the present study further examines the characteristics of the RMC. It is perceived that if a RMC has diligent and independent experts or more members, high compliance and more disclosure may be induced, particularly on hedging activities information. Apart from this, the present study also attempts to investigate the effect of ownership concentration on the relationship between the RMC's effectiveness and the disclosure of hedging activities information. The next sections discuss further about corporate governance and disclosure of financial instruments issues - Sections 2.6.1 and 2.6.2 discuss the effectiveness of the RMC and ownership concentration.

2.6.1 The role and effectiveness of the risk management committee

According to Subramaniam et al. (2009) and Yatim (2009), the RMC is a sub-committee that complements the oversight function of the BOD and reduces the burden of the audit committee in risk management activities. Basically, its role can be viewed as similar to the functions of the audit committee, i.e., to identify, evaluate, access, control and monitor risks (Ng et al., 2013). According to Nejad et al. (2013), in practice, besides being responsible for managing risk, the RMC is also responsible for helping management by providing information which is supposed to be disclosed to the shareholders. This is supported by Hassan et al. (2012) who provided evidence that the formation of a RMC has a significant influence on the disclosure of financial instruments information in the Malaysian listed companies' annual reports. They also claimed that the presence of a RMC not only ensures management closely monitors risk management activities but also plays the role of promoting high quality financial instruments information disclosure.

Although the formation of this committee can ensure company risk management activities are appropriately managed and quality of financial reporting increases (Hassan et al., 2012; Ng et al., 2013; Yatim, 2009), the establishment of the RMC is still voluntary, especially for non-financial companies in most countries, including Malaysia. Thus, it is perceived that the RMC can be an effective way for some companies to manage their financial risk exposure though it may not be the best approach for all companies. Some companies may not have a RMC, because of the potential drawbacks of the committee, such as lack of qualified members, resources and skills (Bates & Leclerc, 2009). Indeed, some companies may establish a RMC just to have an assurance, to legitimise their actions on risk management activities and to demonstrate that they are fully diligent and responsible.

The role and effectiveness of the RMC in risk management is relatively unexplored and the literature in this field is still limited and scant. Abdullah and Chen (2010) argued that the lack of research is because it is difficult to objectively quantify the effectiveness and subjectivity of the risk management process. In this regard, Ng et al. (2013) suggested that the effectiveness of the RMC can be quantified based on certain characteristics of the committee's composition. This is because the RMC engages in numerous risk exercises, such as risk identification, evaluation management and control, which necessitate the committee to have a strong structure, resources and skills. Bugalla, Kallman, Lindo, and Narvaez (2012) proposed that one of the characteristics that the RMC should have is independent features. They suggested that an effective RMC should be independent from the audit committee. De

Lacy (2005) also strongly agreed that the function of this committee should be separated because companies nowadays are facing a more complex and risky environment. A study by Abdullah and Chen (2010) and Nejad et al. (2013) also suggested that the RMC should be an independent committee. Both findings also show that the existence of the RMC is not really effective to remedy weak governance and disclosure of financial instruments in emerging countries. To ensure the effectiveness of this committee, they also suggested that the RMC should have members who have expertise and are diligent.

Companies use financial instruments for hedging to mitigate the variety of financial risks as well as to maximise the firms' value (see Géczy et al., 1997). If the financial instruments are not appropriately monitored, assessed and evaluated, the risks would magnify, resulting in a huge loss to the companies. Hence, disclosure of relevant information regarding these activities is important because if companies withhold some related information, there will be a deficiency of information among the investors/shareholders, which can be presumed by the investors/shareholders as benefiting the self-interest of managers. Hence, a strong RMC must be established by management to carry out responsibilities of risk management on hedging activities as it can safeguard the investors/shareholders' interest and also influence the transparency of the information. As risk management process cannot be observed directly (see Bhat, 2008), thus, strong attributes of a RMC can be the best proxies for the risk management initiative in the company and can induce more disclosure on hedging activities. It is undeniable that the quality of information on hedging activities would have implication if the RMC does not possess some attributes. This is because

the use of financial instruments, particularly on hedging activities, will reflect changes in profit, accounting policies, tax liabilities, as well as investors' expected returns. Therefore, the involvement of the RMC members who have expertise, are diligent and independent of risk management activities of financial instruments, can provide a check-and-balance towards all the related information provided by the internal audit function. As a result, a high level of compliance and disclosure could be expected, particularly on hedging activities. To date, there are no known studies which have addressed the effectiveness of the RMC in the context of HAD; however, there are several studies which have highlighted the effectiveness of the board committee and disclosure of information (e.g., Carcello, Hermanson, & Neal, 2002; DeZoort et al., 2002; Ng et al., 2013). Generally, these quantitative studies have claimed that more independent, skilled and diligent board committees are associated with higher quality of financial reporting. However, evidences to support the argument are mixed. For example, a study conducted by Mangena and Pike (2005) found that financial expertise and independence of the audit committee influence the extent of financial disclosures. However, there is no significant association between size of audit committee and the extent of financial disclosures. On the other hand, Persons (2009) found that independence, size and meeting frequency of an audit committee positively influence the voluntary ethical disclosure of companies in the US.

Based on the above literature, it can be concluded that research on the RMC is still scarce and can be extended. Studies by previous researchers (i.e., Abdullah & Chen, 2010; Birt et al., 2013; Hassan et al., 2012) used a single mechanism (i.e., the existence

of the RMC) which is not enough to clearly explain the management incentives towards disclosures of hedging activities information. Hence, the existence of the RMC in reducing critical tasks and diligent responsibilities in risk management activity for board committee (i.e., BOD and audit committee) are issues that needs to be addressed. Yatim (2009) showed that the status of the RMC is still unclear within the Malaysian context; therefore, the existence of the RMC, be it as one of the control mechanisms or only just for cosmetic reasons, needs to be justified further (see Cohen, Hayes, Krishnamoorthy, Monroe, & Wright, 2009; Gendron & Berdard, 2006). At the very minimum, an effective RMC can ensure the company achieves its objectives, improves the quality of reporting and enhances its reputation (Subramaniam et al., 2009). This includes disclosure decision on information related to hedging activities (see Birt et al., 2013; Hassan et al., 2012).

2.6.2. Ownership concentration

It has been argued that the disparity of shares owned by shareholders will create ownership concentration. When ownership structure is concentrated, the controlling party would play a significant role in monitoring management of those companies (Singam, 2003). This is because the degree of ownership concentration would determine the distribution of power between the officers of the company and its shareholders. According to Shleifer and Vishny (1997), when there is high ownership concentration, the potential expropriation of minority shareholders' rights by the controlling shareholders may exist. This is because they monitor all the company's managerial decisions and gain incentives from this as well as proactively safeguard

their investments. Solomon (2007) noted that this misuse of power by controlling shareholders would be reflected in less transparency and misuse of funds raised. In addition, Singam (2003) also claimed that owners with significant amount of shares may take aggressive actions, either directly or indirectly, over firm decisions, such as the election of board members and replacement of the CEO due to poor management, by utilising their voting power. Briefly, she also explained that controlling shareholders may act in their self-interests, like rewarding themselves a special dividend, being involved in projects that have excessive risk, undertaking unnecessary business activities with other companies that they have control over and jeopardising other stakeholders.

There are several reasons to explain the high level of ownership concentration. La Porta, Lopez-de-Silanez, and Shleifer (1999) explained that high concentration of ownership structure occurs because there is poor legal investor protection, where ownership concentration is seen as a substitute for legal protection. The study views that when there is weak investor protection, the shareholders would closely monitor management to protect their large capital investments. La Porta et al. (1999) also explained that high ownership concentration will take place when small shareholders are discouraged from demanding shares from the company due to low protection. In addition, Roe (2003) highlighted that highly concentrated ownership is also a normal reaction for high managerial agency costs. In this case, ownership concentration is viewed as a direct corporate governance mechanism. Young, Peng, Ahlstrom, Bruton, and Jiang (2008) explained that highly concentrated ownership also occurs because of other reasons, such as product markets, labour markets and takeover markets. Previous

studies have supported that corporate governance in many Asian companies is ineffective in terms of playing its role, mainly due to the poor legal system and enforcement, high concentrated ownership and family-controlled types of companies (Chen et al., 2011; Globerman, Peng, & Shapiro, 2011). Malaysia specifically, is classified as relatively high in legal protection for shareholders (La Porta et al., 1998), but the enforcement of the law is weak (Krishnamurti, Sevic A., & Sevic, Z., 2005). In addition, Malaysian listed companies are also ranked as having one of the highest ownership concentrations among Southeast Asian countries (Claessens, Djankov, Fan, & Lang, 1999; Claessens, Djankov, & Lang, 2000). This is supported by Yunos et al. (2010) who showed that concentration of ownership and control in most Malaysian companies and conglomerates tend to be vested in families, directors and foreign or institutional owners. Due to this, one can perceive that the corporate governance model proposed by western countries which is designed to reduce the conflict between managers and shareholders cannot be applied in Malaysia and the same model will not be able to reduce conflict between controlling and minority shareholders (Chen et al., 2011; Yunos, 2011).

2.7 Moderating relationship (ownership concentration)

Previous studies have expressed concern that corporate governance models adopted from developed countries cannot perform effectively in emerging economies. This is because emerging economies have different institutional background, particularly with regards to concentrated ownership structure. It has been suggested by previous studies that the board committees (i.e., BOD and audit committee) may not be effective due to the dominant role of the insider concentrated owners. For example, Cho and Kim

(2007), in their study on the effect of ownership concentration on the relationship between independent directors on the board and company performance, found that ownership concentration weakens the relationship. In another study, Hu et al. (2010) also showed that ownership concentration of the Chinese listed companies moderates the relationship between board committees and performance. The study reveals that high ownerships by certain groups of shareholders would affect the company's performance by impeding the board committee in performing their monitoring duties.

Similar to Hu et al. (2010), a study by Chen et al. (2011) evidenced that ownership concentration affects the association between corporate governance mechanisms (i.e., CEO duality, board meetings, independent directors and supervisory board) and company performance. In Malaysia, Yunos (2011) investigated the effectiveness of corporate governance on accounting conservatism. The study also examines ownership concentration in moderating the relationship between corporate governance and accounting conservatism. They evidenced that ownership concentration negatively moderates the relationship between company's governance and accounting conservatism. Abdullah et al. (2012), in their study, concluded that the impact of ownership concentration on the relationship between women's participation on boards and performance is mixed and weak. They revealed that government ownership concentration is significantly moderated while family ownership concentration is insignificant.

Based on the aforementioned studies, it can be observed that ownership concentration limits companies' governance mechanism from functioning effectively, as evidenced

by the moderating effect. Moderating effect may signal whether the concentrated owners reduce the functionality of other governance mechanisms. Therefore, it can be argued that testing this argument requires testing the moderating effect of ownership concentration on the relationship between the RMC's effectiveness and the level of hedging activities information.

2.8 Summary of the chapter

This chapter provides the previous literature related to this study. Specifically, this chapter discusses the level of information on HAD, the RMC, as well as ownership concentration structure. Factors that influence the disclosure of hedging activities information are also highlighted in this chapter.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter explains the research methodology applied in the study. The first part discusses the definition of dependent variables, which is the extent of HAD. It also discusses the theoretical framework and hypotheses development to explain the predictor variables for the extent of HAD, as well as the index used to measure the disclosure and measurements used for the independent variables. Finally, this chapter explains the research design adopted and provides the summary.

3.2 The extent of hedging activities disclosure (HAD)

Previous studies have used either the term, 'disclosure quality' or 'disclosure level' by measuring it in different ways in the area of disclosure (e.g., Beretta & Bozzolan, 2004; Botosan, 1997; Lang & Lundholm, 1993). Whatever term is used, it refers to the same objective which is to quantify how much information has been disclosed by companies to their stakeholders. In the case of financial instruments disclosure, the term is used interchangeably by several researchers (e.g., Hassan et al., 2006; Hassan et al., 2012; Taylor et al., 2008; Wei & Taylor, 2009) to explain information transparency. Generally, these studies have quantified how much information on financial instruments has been disclosed voluntarily or mandatorily. Since disclosure quality is subject to be operationalised and accessed (Beattie, McInnes & Fearnley, 2004; Botosan, 1997), researchers in this area have assumed that quantity and quality of information are positively related (e.g., Hassan et al., 2006; Hassan et al., 2012; Taylor

et al., 2008; Wei & Taylor, 2009). In this regard, this study uses the term, 'extent of disclosure', to reflect the amount of information disclosed by companies on their hedging activities. This study emphasises disclosure of information on hedging activities by companies that only manage their risks through the use of derivatives. This study acknowledges that companies can manage their risks in several ways and therefore, may not use derivatives to hedge. The extent of HAD on derivatives in this study comprises both mandatory and discretionary (i.e., voluntary) information. Mandated disclosures on hedging activities are directly derived from MFRS 7 (*Financial Instruments: Disclosure*), while discretionary hedging activities disclosure are extracted and compiled from the accounting literature. This assumption is perceived valid because it has been widely used by many other researchers to study the extent of financial instruments disclosure and other financial reporting disclosures (e.g., Birt et al., 2013; Haniffa & Cooke, 2002; Ku Ismail & Abdullah, 1998; Rahman, Lode, & Othman, 2012; Taylor et al., 2008).

3.3 Theoretical framework

The theoretical framework for this study is based on past literature on the relationship between firms' characteristics, corporate governance structure and the extent of financial instruments disclosure (see Abdullah & Chen, 2010; Birt et al., 2013; Chalmer & Goodfrey, 2004; Hassan et al., 2012; Lopes & Rodrigues, 2007; Taylor et al., 2008; Wei & Taylor, 2009). Unlike previous studies, this study only emphasises the relationships between the effectiveness and characteristics of the RMC and the extent of HAD. Previous Malaysian studies have found mixed evidence on the existence of the RMC and disclosure level of financial instruments (i.e., Abdullah &

Chen, 2010; Hassan et al., 2012) which leads this study to argue that the RMC's formation may not be adequate to explain the variation of information on hedging activities. The existence of the RMC may be just for a cosmetic reason, i.e., to legitimise the management's action on risk management activity, especially on the use of derivatives for hedging activities (see Yatim, 2009; Zaman, 2001). Therefore, this study expects that the RMC in companies plays an important role in enhancing the transparency of disclosure on hedging activities information. Since the RMC's establishment is voluntary, its existence is tested as well. Figure 3.1 demonstrates the research framework that is examined and hypothesises the relationship between the existence of the RMC and the extent of HAD. Nevertheless, it should be noted that this not the main aim of this study.

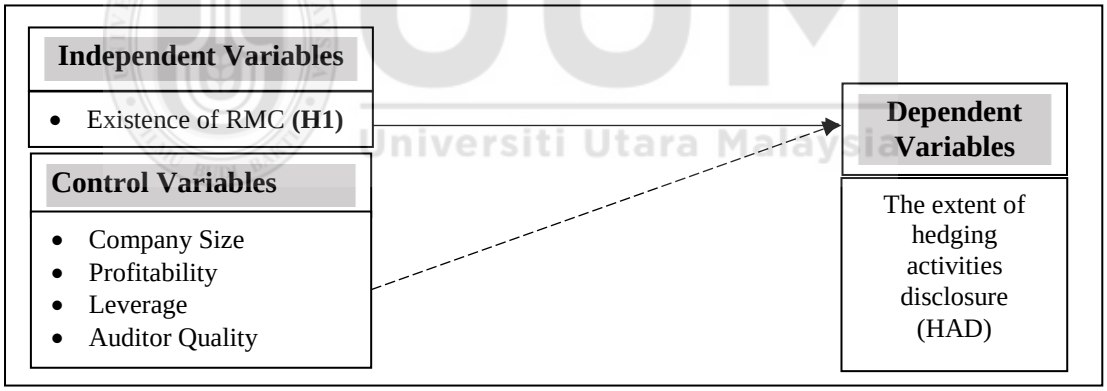


Figure 3.1
The framework of the study

Figure 3.2 exhibits the focal research framework in this study and the hypothesised relationship between the RMC's effectiveness, characteristics of the RMC, control variables and the extent of HAD. With respect to Figure 3.2, this study also argues that ownership concentration may limit the effectiveness of the RMC's functions and subsequently, restrict the disclosure of information on hedging activities. In order to

explain the relationships, this study uses agency theory as the main theory. Besides, this study also uses resource dependence theory as to explain the relationship between RMC effectiveness, its characteristic and the moderating effect of ownership structure towards the extent of HAD. These two theories are explained as follows:

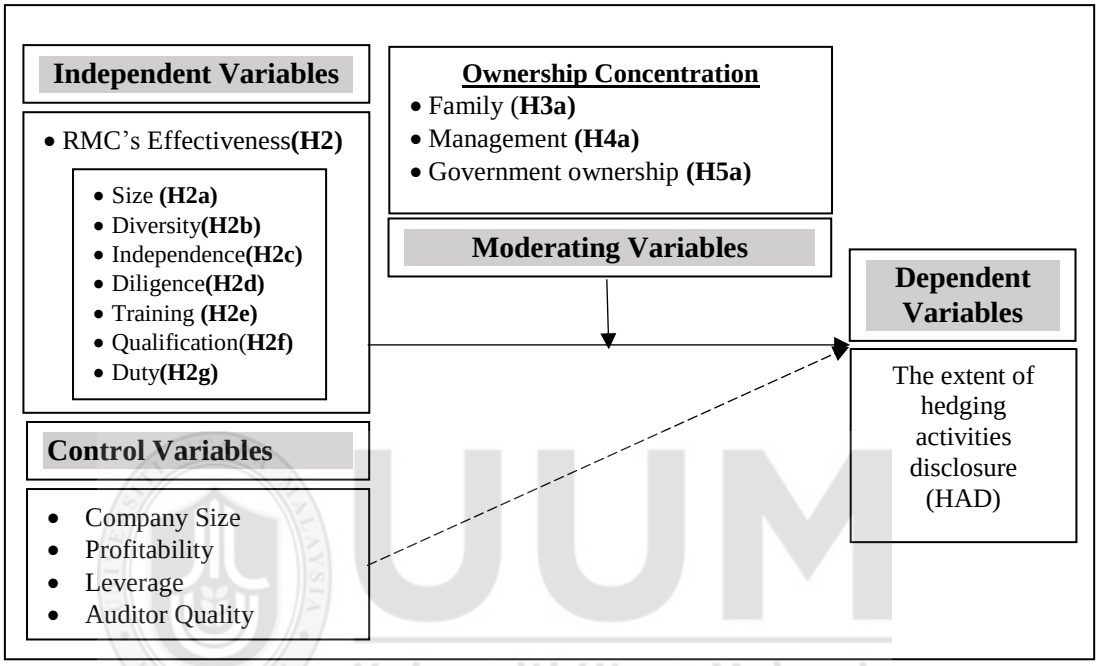


Figure 3.2
The framework of the study

3.3.1 Agency theory

According to Jensen and Meckling (1976), agency relationship is defined as a contract under which one or more persons (the principal/s) engage another person (the agent) to perform some service on their behalf, which involves delegating some decision-making authority to the agent. The theory suggests that when separate ownership and control of management decision of the company occurs, the management has incentives to serve their personal interests at the expense of the owners' (i.e., shareholders') interests. These concerns and preferences give rise to what is known as

'conflict of interest'. In order to resolve the opportunistic behaviour, principals would seek to monitor the actions and decisions made by the agent (i.e., management). Agency theorists recommend that corporate governance structure could be one such control mechanism. This is because good governance structure can check-and-balance the principal's and agent's interests as well as minimise information asymmetry (Eng & Mak, 2003). Alange and Steiber (2009) noted that one of the approaches to good governance is to have BODs perform audit and carry out performance evaluation on the managers.

This study specifically investigates the existence, characteristics and effectiveness of the RMC (i.e., internal control mechanisms) that may affect the disclosure of information on hedging activities in the annual reports of Malaysian listed companies. It is perceived that RMCs with good characteristics can act on behalf of the principal and perform the oversight function of the management (agent) on the usage of derivatives for hedging activities and disclosure of information. In other words, the establishment of a RMC that has good characteristics can protect the shareholders' investment, and this situation will reduce the agency cost and information asymmetry. Since it has been reported that disclosures on financial instruments are weak and varied (including information on hedging activities), the existence of a strong RMC is professed to support the level of transparency of information on hedging activities by companies (Hassan et al., 2012). On the other hand, it is also argued that the establishment of a RMC can lead the agent (management) to disclose additional and related disclosures on hedging activities. Healy and Palepu (2001) showed that solely

fulfilling the financial requirements for annual reports is not enough to provide sufficient reports to the principals. The provision of additional (i.e., voluntary) disclosures which improve the agents' credibility regarding their financial reporting can be a solution to this issue. Therefore, an effective RMC in place is expected to encourage the management to voluntarily disclose additional information regarding hedging activities. The role of the RMC is not only to ensure the information provided by management fulfills the requirements of the accounting standards, but also to provide additional information.

The agency theory has been used by previous studies to examine the corporate governance structure and financial instruments disclosure (see Birt et al., 2013; Chalmer & Godfrey, 2004; Hassan et al., 2012; Lopes & Rodrigues, 2007; Taylor et al., 2008). A positive relationship has been found between corporate governance and disclosure of financial instruments (Lopes & Rodrigues, 2007; Taylor et al., 2008; Wei & Taylor, 2009). However, in terms of board committee structure, findings by Lopes and Rodrigues (2007) do not support the agency theory; the board characteristics, i.e., independent directors do not affect the level of financial instruments disclosure. However, in terms of the RMC, findings by Hassan et al. (2012) and Birt et al. (2013) supported the agency theory whereby the existence of the RMC enhances the disclosure level of financial instruments. However, studies by Abdullah and Chen (2010) and Nejad et al. (2013) did not support the theory. They reported that the RMC does not influence the disclosure of financial instruments information by the company and there is doubt on the effectiveness of the RMCs.

In summary, the agency theory can be used to explain the variation of information on hedging activities by companies. Although some research has claimed that the agency theory is too narrow, emphasising more on human behaviour relationship, many previous disclosure studies have adapted this theory because of its ability to explain corporate disclosure decisions well.

3.3.2 Resource dependence theory

This theory was introduced by Pfeffer and Salancik (1978) to explain the link between a company and its external resources. The theory suggests that a company's resources are a basis of power which has implications on recruitment of board members and employees, company structure and any other external managerial links. According to Erakovic and Goel (2008), decision-makers, such as boards and management, have an active role in seeking external resources, reducing environmental uncertainty and developing various links with other companies. In terms of the board, it is an essential link between the company and the essential resources that it needs to maximise performance (Pfeffer, 1973). Therefore companies need their boards as essential resources to provide a bridge between companies and other external resources.

With regards to this study, it is argued that the RMC as a board committee can be a resource to the company. Members of the RMCs should be able to contribute some of their expertise to the company, for example, by sharing experiences and competencies (Baysinger & Hoskisson, 1990); access to capital resources (Mizruchi & Stearns, 1988; Provan, 1980); and by having a good relationship with other stakeholders (Hillman & Dalziel, 2003). This argument is supported by two separate studies which

conducted by Alange and Steiber (2009) and Ong and Wan (2008). Both studies agree that board members play an important role as suppliers of critical resources, besides acting as a bridge between the external resources and the company. They also play crucial roles in monitoring risk management and protecting shareholders. From another perspective, the resource dependence theory also views that the independent board members, such as members of the RMC, benefit from the board's link with external environment for strategic information (Palmer & Barber, 2001; Stiles & Taylor, 2000). This board link is important and can help in securing essential resources for the company (Ong & Wan, 2008). According to Zahra and Pearce (1989) and Baysinger and Zardkoohi (1986), the ability of the board to link to the crucial resources can be seen as one of the key independent directors' roles, whereby the boards can bring in the outside information to be used by the companies. Hence, this study perceives that such outside information brought in by the independent directors in the RMC may be useful for risk management activities of the company.

In summary, this study uses the resource dependence theory to express the relationships between the RMC's effectiveness, its characteristics and the extent of HAD by companies. Although some researchers have claimed that the resource dependence theory was originally formulated to explain the relationship between organisations, several previous studies have adapted the theory to explain the relationships between board committee characteristics and disclosure of information (see Ismail & Abdul Rahman, 2011).

3.4 Hypotheses development

There are limited published studies which have addressed the effectiveness of the RMC and its characteristics. Hence, this study uses board and audit committee characteristics to explain the variables and construction of the hypotheses. This can be deemed as valid and reliable since the RMC is one of the board committees (see Ruin, 2003; Yatim, 2009).

3.4.1 Existence of the RMC

The establishment of the RMC in Malaysia is still on a voluntary basis for non-financial companies. According to Yatim (2009), the establishment of the RMC is to support the internal audit function of board committees (i.e., BODs and audit committee) as well as to increase risk management effectiveness in the companies. Its main role is to ensure that management is closely monitored and not too involved in high risk activities; the RMC also ensures that firms provide high quality of financial instruments information in their annual reports (Hassan et al., 2012). Companies use derivatives for hedging activities to mitigate a variety of financial risks (see Géczy et al., 1997). However, if the usage of derivatives for hedging is not appropriately monitored, assessed and evaluated by management of a company, it may affect that company, subsequently resulting in huge losses.

Based on the agency theory, one of the conflicts that may arise between agents (i.e., management) and principals (shareholders/investors) is that the agents act in their interests which conflict with the interests of the principals. Agents, in this case, may act to hide their actions, thus creating agency problems and information asymmetry.

Hence, this study argues that the establishment of a RMC, either as a sub-committee or a stand-alone committee, will be able to safeguard the investors'/shareholders' interests through its supervising responsibilities on management's actions on the usage of derivatives for hedging. The presence of a RMC as one of the internal control mechanisms, on behalf of the investors/shareholders, can be seen as important to promote higher quality of information and disclosure (Abdullah & Chen, 2010; Hassan et al., 2012; Yatim, 2009). More reliable and relevant information can be expected with regards to information on hedging activities, both discretionary and mandatory. Hence, the hypothesis is stated as follows:

H1: *The extent of hedging activities information disclosure is positively associated with the existence of the RMC.*

3.4.2 Effectiveness of the RMC

With respect to the resource dependence theory, the existence of the RMC alone can be argued as not having that much of an impact on its effectiveness. This is supported by several studies which have investigated the relationship between board committees and quality of financial reporting (e.g., Abbott, Parker, & Peter, 2004; Afify, 2009; Pucheta-Martinez & Fuentes, 2007). The studies have documented that the effectiveness of a board committee to a certain extent depends on the committee's characteristics (e.g., independence, number of meetings and size). A study conducted by Ika and Mohd Ghazali (2012) used seven board committee characteristics to determine the effectiveness of an audit committee, which is based on the audit effectiveness framework developed by DeZoort et al. (2002). According to DeZoort et al. (2002), an effective board committee should comprise four elements of

effectiveness to protect the stakeholders' interests: 1) composition; 2) authority; 3) diligence; and 4) resources. They also claimed that if a company board committee fulfils all these elements, the effectiveness is most likely to be achieved. With respect to studies by Ika and Mohd Ghazali (2012) and DeZoort et al. (2002), this study argues that if a RMC possesses these elements and fulfils certain board committee characteristics, its function will be more competent, especially in monitoring and reporting the information involved in the use of derivatives for hedging activities.

Since hedging strategies involve crucial processes and planning that will reflect changes in profit, accounting policies, tax liabilities and investors' expected returns, the existence of the RMC members who are independent, with expertise and diligence, can ensure relevant and faithful information is disclosed to the company's stakeholders (see Ng et al., 2013; Yatim, 2010). In addition, it should be noted that the size of the team and ability to discharge its responsibility (authority) may also enhance the effectiveness of the RMC (Bedard, Chtourou, & Corteau, 2004; Pucheta-Martinez & Fuentes, 2007). In this regard, this study assumes that the relationship between the RMC's effectiveness and the extent of HAD is based on the justification that during risk management activity, if the RMC is effective in performing its role, this will bear upon the quality of hedging activities information disclosure. Hence, the hypothesis is stated as follows:

H2: *The extent of hedging activities information disclosure is positively associated with the effectiveness of the RMC.*

For the above hypothesis, the effectiveness of the RMC is aggregately measured based on four dimensions of effectiveness (i.e., composition, authority, resources and

diligence). Each of these dimensions is then operationalised by the RMC's characteristics (i.e., independence, expertise, diversity, duty, size, meeting and training) in order to construct the RMC's effectiveness composite index. These selected characteristics are captured based on previous board and audit committee literature. Since the establishment of the RMC is still voluntary for non-financial Malaysian listed companies, there are no standard requirements that need to be engaged by companies. Hence, this study uses the *Bursa Malaysia Corporate Governance Guidelines 2012* requirements for the board and audit committee as a basis for the RMC's effectiveness score. Further explanation is provided later in section 3.8.2.

Previous studies have shown that the effectiveness of the board committee is also determined by its individual characteristics. For example, Abbott et al. (2004), in their study in the US, documented that the number of independent directors, frequency of meetings and the existence of financial experts significantly decrease the number of companies restating their annual financial statements. Pucheta-Martinez and Fuentes (2007), who studied quality of audit reports, also showed that single characteristics, such as committee size and percentage of independent directors, affect the companies receiving qualified audit report. Hence, the hypotheses is also be tested for each of the individual components of the RMC's effectiveness in this study. The hypothesis relationships are explained in the following sections:

3.4.2.1 Size of the RMC

To perform its functions, a board committee should be supported by adequate resources and authority (DeZoort et al., 2002; Ika & Mohd Ghazali, 2012). Previous

studies have suggested that committee size has an implication on financial reporting and disclosure of information in both positive and negative directions. Based on the resource dependence theory, it is argued that a large committee provides strength and can create diversity of opinions and expertise, which help to more effectively identify and solve any potential problem (Bedard et al., 2004; Pierce & Zahra, 1992). This is because larger committees with more members could offer greater skills, knowledge, controls and various experiences to the interest of their shareholders (Kalbers &Fogarty, 1993; Rashid, Ibrahim, Othman, & See 2012; Xie, Davidson, & DaDalt, 2003). Therefore, it can be expected that a larger RMC will be able to address the usage of derivatives for hedging and effectively disclose relevant information.

From the agency theory perspective, it is argued that a small number of committee members will limit management's opportunistic behaviour, as well as be less likely to withhold information to their own benefit. This is because a large committee is perceived as more likely to promote 'free riders' problem, as the presence of more members tends to comfort the others (Karamanou & Vafeas, 2005). It also will possibly lead to lack of focus and committee members tending to be less active in a committee (Dalton, Daily, Johnson, & Ellstrand, 1999). Therefore, a smaller board is claimed to be more effective in monitoring managerial practices than a larger board and can improve corporate disclosure. However, there is mixed evidence on this. For example, Cerbioni and Parbonetti (2007) found that board size negatively influences the level of intellectual capital disclosure. In contrast, the finding by Lakhal (2005) showed that there is an insignificant and weak association between board size and voluntary earnings disclosure. In another study, Htay, Rashid, Adnan and Meera

(2011) found no relationship between committee size and risk management disclosure. Similarly, Said, Omar and Abdullah (2013) also reported no relationship.

Despite the contradicting evidences, this study argues that size is important to determine the effectiveness of an RMC on the disclosure of information on hedging activities. Based on preliminary observation in the annual reports of Malaysian listed companies, a RMC consists of three to four members, which indicates that the RMC in Malaysia is small-sized. In view of this, small number of board members can be professed to be more conducive for member participation and to have a positive impact on the monitoring function and the decision-making capability of the board, as well as independence from the management (Raheja, 2005). With respect to this, it is argued that the number of members in the RMC can enhance the quality of risk management as well as disclosure of hedging activities information. A smaller size RMC is better for monitoring functions and more hedging activities disclosure can be expected. Therefore, it is hypothesised that:

H2a: *The extent of hedging activities information disclosure is negatively associated with the size of the RMC.*

3.4.2.2 RMC independence

Board composition is an important element in creating boards that are effective in monitoring risks and disclosure of relevant information (Ng et al., 2013; Yatim, 2009). Thus, the RMC is seen to be more effective and efficient if the members consist of outside or independent members. This is because they can preserve the company's interest without promoting the interests of a particular class of shareholders over

another or neglecting the interests of other stakeholders. This is supported by the agency theory as independent boards are important to monitor and control opportunistic behaviour of the directors (Berle & Means, 1932; Jensen & Meckling, 1976; Nicholson & Kiel, 2007). Therefore, it is expected that the involvement of independent directors in the RMC can be seen as a control mechanism to enhance the committee's effectiveness. For this reason, if the RMC is independent and plays the accountability and transparency role for the stakeholders, more and relevant information on hedging activities can be disclosed.

Based on the resource dependence theory, independent directors may usually be considered as experts on decision-making who can positively influence the decisions and considerations of the BODs. This means that the RMC members are valued for their expertise and independence although the RMC can be viewed as playing the role of a sub-committee in advising board committees (i.e., BODs and audit committee), rather than playing a role in decision-making. They will not be intimidated by the power of the CEO and will provide information directly to the board committee who will make decisions and policy implementation for the company. Therefore, more disclosure on hedging activities could be expected if independent directors in the RMC actually carry out their role. Although it can be argued that the involvement of independent directors can influence the extent of HAD, mixed evidence has been found to explain its significance in many other disclosure studies. For instance, Ho and Wong (2001) documented that there is no relationship between the percentage of independent directors and disclosure of information, while Leung and Horwitz (2004) and Cheng and Courtenay (2006) evidenced that the number of independent directors

has a positive relationship with the level of voluntary disclosure. Lopes and Rodrigues (2007) found no relationship between independent directors and the level of financial instruments disclosure. According to Eng and Mark (2003), companies with a large number of independent directors may cause the good effect to disappear with this "super independent board" due to conflicts which lead to the low magnitude of disclosure as they will not be able to effectively carry out their actual roles. Considering all these facts, this study hypothesises that:

H2b: *The extent of hedging activities information disclosure is positively associated with the RMC's independence.*

3.4.2.3 RMC gender diversity

The RMC, in performing board oversight functions, is seen to be more effective and efficient if the members include female directors (diversity). Based on the agency theory, it is argued that the involvement of female directors in the RMC will increase board independence. This is because women can lead to the improvement of the intensity of board monitoring, consequently resulting in the alignment of the management's and the shareholders' interests (Adams & Ferreira, 2009; Huang & Kisgen, 2013; Huse & Solberg, 2006). A study by Kang, Cheng, and Gray (2007) supported this argument as they claimed that the presence of female directors is one of the important factors that increases board independence and gives the potential for a company to increase the level of information disclosure. Therefore, having female directors as members of the RMC in a company, can enhance the RMC's effectiveness, thereby increasing the level of disclosure on hedging activities information. From the

resource dependence theory perspective, this study argues that a RMC with female members can increase the efficiency and effectiveness of the decision-making process, as well as give higher participation. This is because female members are claimed to have greater accountabilities and responsibilities (Adams & Ferreira, 2009; Luckerath-Rovers, 2013). A study by Ibrahim and Angelidis (1994) supported this argument since their results show that female directors are more driven to perform corporate social responsibility and less concerned with company performance. Moreover, involvement of female directors on the board can be argued as being able to increase board effectiveness as they are more committed, diligent, well prepared and able to give different views during discussion; in addition, they give more attention to audit, risk and oversight control (Huse & Solberg, 2006; Stephenson, 2004). Several studies have shown that having female directors on the board has a positive effect on disclosure and company performance, both in financial and non-financial information (e.g., Adams, Almeida, & Ferreira, 2005; Abdullah & Ku Ismail, 2013; Abdullah, Ku Ismail, & Nachum, 2016; Rao, Tilt, & Lester, 2012).

Since female directors possess special personal qualities, such as high commitment, high participation and well-preparedness, it is expected that they will be able to take part in complex debates and decisions on hedging activities of the company. Hence, it is anticipated that the presence of female directors on the RMCs will increase the extent of information on hedging activities made by the company. This leads the study to hypothesise that:

H2c: *The extent of hedging activities information disclosure is positively associated with the existence of female directors on the RMC.*

3.4.2.4 RMC diligence

To perform oversight functions on behalf of the BOD and audit committee, RMCs should be competent in order to ensure management (agent) does not pursue their opportunistic behaviour. Based on the agency theory, a RMC who acts on behalf of the principal can ensure relevant and faithful disclosure if more meetings are conducted. This is because they can regularly meet to check-and-balance the management activities as well as report any issue and conflict that arises. This argument is supported by Laksmana (2008) who found that the board and the compensation committees' frequency of meeting is positively associated with greater disclosure about the executive compensation practices.

Under the resource dependence theory, meeting among the RMC members is a platform to share knowledge, information and for producing a pool of expertise. This is a crucial and critical resource to the company. Low quality of information can be expected when companies hold fewer board and committee meetings during the financial year (see Allegrini & Greco, 2013; Razman & Iskandar, 2004; Saleh, Iskandar, & Rahmat, 2007). Karamanou and Vafeas (2005) found that the frequency of audit committee meetings is positively associated with management's decision to issue an earnings forecast. O'Sullivan, Percy, and Stewart (2008) found that audit quality, measured also by the frequency of meetings of the audit committee, is positively associated with the decision to disclose forward-looking information in the annual report. Therefore, it is proposed that the more the number of RMC meetings,

the more the issues relating to risk management on hedging activities can be discussed and the more the disclosure that can be expected. Hence, the next hypothesis is tested as follows:

H2d: *The extent of hedging activities information disclosure is positively associated with RMC's diligence.*

3.3.2.5 RMC training

The agency theory suggests that continuous training and educational programmes are important board characteristics (Roy, 2011). This is because continuous training attended by RMC members would be able to improve the effectiveness of the committee members in performing their check-and-balance responsibility. According to Roy (2011), good and adequate training also can lead committee members to have strong knowledge in evaluating, implementing and contributing to handle complex corporate issues. Accordingly, it is perceived that RMC members who are regularly trained will be more concerned with and more clear in disseminating information on hedging activities by companies. However, McIntyre and Murphy (2009) claimed that only external training with high accredited elements attended by board members can enhance board expertise.

From the perspective of the resource dependence theory, training may provide a source of competence that is needed by RMC members and the company. RMC members should have adequate training in order to completely understand the company's risk exposure, including understanding of theory, concept of risk, the use of derivatives and the real business operations. An appropriate training programme attended by RMC

members will ensure that the oversight role on risk management activity, particularly on hedging activities, is well performed, consequently inducing high quality of information disclosure. Yatim (2009) also mentioned in her study that members with sufficient risk training would engage more actively in risk management and disclosure of relevant information. Although no study has been found relating to RMC training and the level of financial instruments disclosure, several studies can be used to support this argument. For example, Zona and Zattoni (2007) and Carpenter and Westphal (2001) found a positive relationship between directors' knowledge and skills and the board's monitoring role and strategic decision involvement. Since training is one of the media for board committees to gain ideas, add value and learn from external network (Thomas, Kidd, & Fernandez-Araoz, 2007), this situation leads this study to develop the following hypothesis:

H2e: *The extent of hedging activities information disclosure is positively associated with the number of risk management trainings attended by RMC members.*

3.3.2.6 RMC expertise

Evidence has shown that qualification is one of the important elements for board effectiveness (Akhtaruddin & Haron, 2010; Francis, Ibrahim, & Ossei, 2012; Ismail & Abdul Rahman, 2011). Based on the agency theory, it is argued that the possession of an academic background, such as accounting and finance or industry-specific knowledge by board members, would improve the quality of financial reporting disclosure. In particular, such academic background will be able to reduce information asymmetry (Akhtaruddin & Haron, 2010). One of the arguments that supports this view is that qualified members can easily understand company issues and problems

(Roberts, McNulty, & Stiles, 2005). This argument is strengthened by Chung, Ho, and Kim (2004) and Ho and Wong (2001) who posited that experts on board committees serve as a means of reducing information asymmetry, managerial opportunism and improving disclosure quality. Francis et al. (2012) also supported that the presence of financial experts on board committees positively influences the disclosure practices by companies.

With regards to the resource dependence theory, it is argued that qualification could enhance the effectiveness of resources. Hence, it is expected that the inclusion of more expert directors in a RMC will improve the quality of financial reporting, particularly on hedging activities information. A study by Md Yusof (2010) supported this argument, whereby the finding shows that board committees with higher proportion of financial experts enhance the quality of financial reporting. According to Lorsch (1995), the ability to govern also depends on the knowledge and skills owned by the board members and the argument is supported by Pettigrew and McNulty (1995), that to be effective in monitoring strategic decisions, directors should be individuals with relevant knowledge and expertise. The Bursa Malaysia Listing Requirement (Paragraph 15.09) also mandates that at least one board member, namely of the audit committee, must be a member of the Malaysian Institute of Accountants (MIA). Although RMCs are not compulsory, it is expected that RMC members with finance and accounting background would give more information regarding risk identification on hedging activities. This leads the study to the following hypothesis:

H2f: *The extent of hedging activities information disclosure is positively associated with RMC members' qualification.*

3.4.2.7 RMC duty

RMC's duty refers to the authority given by the management for the committee to perform its task. According to Bedard et al. (2004), a formal documentation of board committee responsibilities (i.e., audit committee) is important as it can be a committee's source of power and also provides guidance to members regarding their duties. In this regard, this study argues that there is a need for a formal documentation of RMC's responsibilities in order to ensure high disclosure on hedging activities information. Based on the agency theory, the existence of the RMC is to protect shareholders' interest through its oversight responsibility on risk management activities. Therefore, if a clear authority is specified for the RMC, the committee may be able to concentrate on its specific responsibilities and facilitate stakeholders, particularly on the use of derivatives for hedging activities.

Although a formal documentation of the committee's responsibilities is crucial in ensuring the effectiveness of RMCs, there is little evidence to address the issue. In this case, only a few studies have been found that address the board committees' responsibilities. For example, Carcello et al. (2002) examined the formal documentation on audit committee responsibilities (i.e., audit committee charter) to assess whether the assigned duties in the charter are actually being performed and disclosed in an audit committee report. In another study, Ika and Mohd Ghazali (2012) aggregately measured audit committee responsibilities as one of the proxies for audit committee effectiveness in assessing the quality of financial reporting (i.e., timeliness). Taylor et al. (2008) examined audit committee responsibility (to measure

the strength of corporate governance) and disclosure of financial instrument information. Bedard et al. (2004) found that the presence of a clear mandate defining responsibilities of a board committee (i.e., audit committee) reduces the probability of aggressive earnings management. Based on the above discussion, this study proposes that the duty of a RMC (i.e., authority dimension) may have some impact on the disclosure of hedging activities information. Hence, this study hypothesises that:

H2g: *The extent of hedging activities information disclosure is positively associated with the existence of RMC's duty authorisation.*

3.4.3 Ownership concentration as a moderating variable

Previous studies have argued that the model of corporate governance in the western countries is not appropriate for Asian countries. One of the reasons documented by several studies (e.g., Abdullah et al., 2012; Akhtaruddin & Haron, 2010; Chen et al., 2011; Cho & Kim, 2007; Hu et al., 2010) is the influence of controlling owners. These studies have argued that companies with high controlling owners (i.e., high concentration) would limit the effectiveness of companies' governance mechanisms. In this respect, this study expects companies that establish and have good characteristics of RMCs would disclose more information on hedging activities. However, this could be affected by the influence of the ownership concentration (i.e., controlling owners) as has been argued by many studies (e.g., see Akhtaruddin & Haron, 2010; Htay et al., 2011; Jiang, Habib, & Hu, 2011). This study addresses this argument based on three types of ownership structure relationships as explained below:

Family ownership

Based on the resource dependence theory, family ownership structure has been proposed as a good resource for a company to have superior monitoring abilities relative to diffused shareholders, especially when family ownership is combined with family control over management and the board (Anderson & Reeb, 2003). This is because the family owners have the tendency and obligation to preserve wealth for the next generation. Moreover, the controlling family is also said to be more committed to human capital and will care more about its long-run value (Bertrand & Schoar, 2006). Although, the resource dependence theory suggests family ownership can serve as good resources for a company, several studies have claimed that managers in family companies tend to face rational conflicts in maintaining professional relationships versus family relationships which may hamper cooperation, efficient decision-making and quality of financial reporting (e.g., Cucculelli & Micucci, 2006; Kellermanns & Eddleston, 2007). This will also reflect the choice of a family member as a board committee member and the impact will be significant if the individual does not have the talent, expertise or competency to run the business (Javid & Iqbal, 2008).

On the other hand, the agency theory asserts that the presence of family ownership may lead to the abuse of power. Previous studies have highlighted that this notion is due to the agency problem between minority and majority shareholders (see Villalonga & Amit, 2006; Munir, Saleh, Jaffar, & Yatim, 2013). It is claimed that family companies that are typically characterised by large controlling owners who are actively involved in management, may influence the management as well as control the information provided to the members (see Claessens et al., 2002; Saleh, Rahman, & Hassan, 2009; Yunos, 2011). In this case, families, like managers in a widely held

company, can abuse their power and utilise corporate resources to their own advantage. As the propensity and the focus of the controlling family are to dominate wealth and not rational to maintain the professional relationship, this study perceives that a higher family ownership concentration will weaken the force of the RMC and be reflected in the level of information on hedging activities. Hence, this leads the study to hypothesise that:

H3a: *The association between the RMC's effectiveness and the extent of information on hedging activities disclosure is weaker for companies with higher family ownership concentration.*

Management ownership

The agency theory argues that separation between equity ownership and control over public listed companies (PLCs) creates conflicts of interest between managers and shareholders (Jensen & Meckling, 1976). The conflict arises because managers prefer to increase their own wealth (e.g., through bonus maximisation) at the expense of shareholders. In this respect, it is argued that as the proportion of management ownership increases, the interest of the shareholders and managers starts to deviate. DeMarzo and Duffie (1995) claimed that when managers hedge pricing fluctuation and disclose such information, it would affect their future wages. This makes sense in that when shareholders know about the use of derivatives to hedge future cash flows, a low earning of that particular company could trigger a lack of confidence in managerial ability to run the business and cut into managerial remuneration. Thus, not disclosing or withholding information on derivatives used for hedging could actually

benefit self-interested managers and at a very high managerial ownership, it can be expected that managers can manipulate and misuse their controlling power towards the disclosure of information to other stakeholders.

With regards to the resource dependence theory, low dispersion of managerial ownership can be perceived as good resources for the company. This is because owning some percentage of the company shares, the corporate directors will be motivated to maximise the supply of important resources in the same line with the business objective and interest like other shareholders (see Desender, 2009). However, if the distribution of the shares among corporate directors is highly concentrated, the supply of resources s no longer exists. This leads to egoism and self-interest decision-making (see Desender, 2009; Fernandez & Arrondo, 2007; Javid & Iqbal, 2008).

In relation to this, this study expects that higher management ownership will lead to more control of managers from misusing their controlling power, weakening the effectiveness of the RMC and affecting the disclosure of information on hedging activities. A study by Akhtaruddin, and Haron (2010) expressed that the quality of monitoring of corporate disclosure is linked to the characteristics of the board committee in companies with high board ownership in Malaysia. Therefore, this study hypothesises that:

H4a: *The association between the RMC's effectiveness and the extent of information on hedging activities disclosure is weaker for companies with higher management ownership concentration.*

Government ownership

In Malaysia, the government holds shares in certain strategic companies (Ismail & Sinnadurai, 2012). These companies are controlled either directly by the government through Khazanah Holdings or indirectly through government-linked investment institutions[4] or referred to as government linked companies (GLCs), whose primary objective of existence goes beyond making profits. Conventional ideas suggest that government ownership has an impact on a company's reporting practices (e.g., Abdullah, Mohamad, & Mokthar, 2011; Amran & Susela Devi, 2008; Mohd-Ghazali, 2007). This is because politicians are likely to manage privatised entities with a view to discharging their accountability to the government and society as a whole, rather than focusing on maximisation of shareholders' wealth (Shleifer & Vishny, 1997).

The agency theory predicts that companies that are highly concentrated by government ownership would disclose more information than non-government ownership companies because of the conflicting objectives of the government and the other shareholders in the company. Companies whose equity is largely owned by a government are predicted to be more willing to disclose information to resolve the conflict (Eng & Mak, 2003). This has been evidenced by several studies that have found a positive association between disclosure levels and government ownership (see Eng & Mak, 2003; Mohd-Nasir & Abdullah, 2004). Although there is a significantly relationship between government ownership and disclosure of information, such

[4] Companies which are controlled by the government basically involve investment institutions which have links with the government, such as Permodalan Nasional Berhad (PNB), Employees Provident Fund (EPF) and Pilgrimage Fund (Tabung Haji) and are also indirectly controlled by the government.

evidence can be argued further based on the resource dependence theory. According to Fraile and Frejedas (2014), when the equity stake of the blockholders (i.e., government ownership) increases, their supervision will also increase, either directly or through their representatives on the BODs (nominee directors). Although the supervision from these representatives can be a beneficial resource to help companies cope with external uncertainties (Agrawal & Knoeber, 2001; Hillman, Withers, & Collins, 2009; Pfeffer & Salancik, 1978); and can facilitate admission to financial resources, such as bank loans (Khwaja & Mian, 2005; Faccio, 2006), indirectly, the existence of these selected representatives may affect the importance of monitoring mechanism in a company as well as reduce information asymmetry (Beuselinck, Cao, Deloof, & Xia, 2015). This is because they will have access to more specific and detailed information which would reduce their need to rely on general purpose financial reports for decision-making. Additionally, they may only look for non-accounting information as their investment valuation inputs (Francis, Schipper, & Vincent, 2003).

Grounded on this opinion, this study expects that government-dominated (i.e., high government ownership concentration) companies will weaken the relationship between the RMC's effectiveness and disclosure of hedging activities information. Therefore, this study hypothesises that:

H5a: *The association between the RMC's effectiveness and the extent of information on hedging activities disclosure is weaker for companies with higher government ownership concentration.*

3.5 Control variables

Following previous studies on financial instruments disclosure, this study includes company size, profitability, leverage, and auditor quality in the regression model as control variables that could affect the level of information on hedging activities disclosures. Each of these variables is discussed below:

Company size

Previous studies on financial instruments disclosure have shown that size of a company positively influences the level of disclosure (see Birt et al., 2013; Chalmer & Godfrey, 2004; Hassan et al., 2012; Lopes & Rodrigues, 2007; Taylor et al., 2008). They argued that large companies are expected to disclose more information on financial instruments based on several reasons which are consistent with prior studies on disclosure policy (e.g., Akhtaruddin & Harun, 2010; Cooke, 1989; Rao et al., 2012; Singhvi & Desai, 1971; Wallace, Naser, & Mora, 1994). One of the reasons is that large companies tend to incur lower information processing cost. Second, large companies are more sensitive to political costs which encourage them to disclose greater information. Looking into the findings of these studies, it can be concluded that company size affects the financial instruments disclosure practices of companies. It also can be postulated that the disclosure of hedging activities information has similar results. Hence, the study expects a positive relationship between company size and the disclosure of information on hedging activities.

Profitability

Previous empirical studies on disclosure have shown that profitable companies are expected to disclose more information (e.g., Ahmed & Courtis, 1999; Ali, Ahmed, &

Henry, 2004; Rahman et al., 2012; Wallace et al., 1994). Previous studies have argued that companies with high profitability tend to disclose more information in order to disseminate good news regarding their position and reputation, hence increasing management compensation.

On the other hand, companies with low profitability level will have a tendency to disclose less information, probably to cover cases of such declining profits or losses, or hide their weak performances (Singhvi & Desai, 1971). With regards to financial instruments disclosure studies, mixed evidence has been found. For instance, Hassan et al. (2012) found no relationship between profitability and disclosure of financial instrument information, while a study by Taylor et al. (2008) found a negative association. However, Hassan et al. (2006) and Wei and Taylor (2009) found a positive relationship. Referring to Hassan et al. (2006) and Wei and Taylor (2009), this study expects that there is a positive link between profitability and hedging activities information disclosure.

Auditor quality

Auditors play an important role in ensuring companies fulfil and comply with the requirements of MFRS 7 (Financial Instrument: Disclosure). According to DeAngelo (1981), large audit firms are said to be associated with high quality of reporting because large audit firms have incentives to maintain their independence due to having many clients. They tend to report any misstatements and non-compliance with reporting requirements so as to protect their reputation. The reputation of large audit

firms can be tainted if their clients provide low quality annual reports (Chalmers & Godfrey, 2004). Therefore, larger audit firms tend to influence their clients to provide more high quality information. Previous studies on financial instruments disclosure have shown positive relationships between size of audit firms and the quality of financial instruments disclosure (see Birt et al., 2013; Hassan et al., 2012; Lopes & Rodrigues, 2007). Similarly, in this study, a positive association is expected between large audit firms and the level of hedging activities disclosure.

Leverage

A company's financial leverage is one of the factors that can explain the variation of financial reporting disclosure. Previous disclosure studies have shown that high leverage companies are more motivated to voluntarily disclose information to accommodate the interests of creditors. This is because such information is used to evaluate the companies' future growth and to convince financial institutions to provide funding (Barako, Hancock, & Izan, 2006; Eng & Mak, 2003). However, there are also some studies that have found no association between leverage and information disclosure in the annual reports (e.g., Abdullah & Ku Ismail, 2008; Aksu & Kosedag, 2006; Tsamenyi, Enninful-Adu, & Onumah, 2007). With regards to financial instruments disclosure, Chalmer and Godfrey (2004) and Lopes and Rodrigues (2007) found that there is no relationship between leverage and disclosure of financial instruments information, while positive relationship was reported by Hassan et al. (2012) and Birt et al. (2013), especially when it is proxied by debt-to-equity ratio and the debt-to-total assets ratio. Therefore, this study expects a positive relationship between high leverage and hedging activities information disclosure.

3.6 Disclosure index

In measuring the extent of financial information disclosure, a few approaches have been commonly used by previous researchers, including management forecasts, metrics based on ranking and self-construct indices (see Botosan, 1997; Lang & Lundholm, 1993; Healy & Palepu, 2001). In this respect, this study applies self-construct indices to examine the extent of HAD. Commonly, this is also known as the "dichotomous disclosure index" approach. According to Marston and Shrives (1991), in using this approach, the researcher can either employ a weighted or un-weighted index. A weighted index requires the conduct of a survey so that financial statement users can rate disclosure items listed by researchers. Meanwhile, the un-weighted index is less subjective (semi-objective), whereby researchers can adopt a dichotomous procedure (i.e., where a score of 1 is given for disclosed items, and 0 otherwise). The index is described as unweighted because each item of disclosure is treated as equally important (Cooke, 1991).

Many previous studies utilised an unweighted index to assess the level of financial instruments disclosure. A checklist of disclosure is designed to capture the disclosure of financial instruments based on the accounting standard. For example, Taylor et al. (2008) developed a 120-item financial instruments disclosure index (FIDI) for an Australian listed company, categoried into mandatory and discretionary disclosure based on AASB 132/FRS132 (Financial Instruments: Disclosure and Presentation). Birt et al. (2013) developed six categories for the index, comprising 24 items based on AASB 7/IFRS 7 (Financial Instruments: Disclosure). Lopes and Rodrigues (2007) utilised voluntary disclosure index of financial instruments for Portuguese companies

based on IFRS 32 (Financial Instruments: Disclosure and Presentation) and 39 (Financial Instruments: Recognition and Measurement). In Malaysia, Hassan et al., (2012) used a financial instrument index based on MASB 24 (Financial Instruments: Disclosure and Presentation) comprising seven components of financial instrument information. Although this approach is assumed valid to measure corporate disclosure, it should be noted that this area of research continues to provoke great debate because disclosure quality remains difficult to define.

3.6.1 Advantages and limitation of disclosure index

The use of unweighted disclosure index is a popular technique in accounting research to investigate corporate financial information disclosure. This is because it offers simplicity of technique for researchers to measure the disclosure practices. This approach is straightforward and able to avoid ambiguities as compared to the weighted index approach; the disclosure index can also be used by various groups of users (Barako et al., 2006; Chakroun, 2013; Hassan et al., 2006). Moreover, users of disclosure index have the option whether to use existing index, adjust the index or develop an entirely new index, whichever is appropriate to the users to meet their objectives. Besides, if users opt to use the existing index, results obtained can be used to perform direct comparisons, thus improving disclosure index reliability (Marston & Shrives, 1991).

Since no single index could explain the disclosure of both mandatory and voluntary information, many studies in this area have shown that researchers choose to adapt and

modify the existing index. However, unweighted disclosure index has several drawbacks, such as its inability to differentiate between good and weak disclosure; it treats all individual disclosure as equally important; it may possibly provide imbalanced reports; certain items used for company disclosure practices may not be applicable; and the element of subjectivity in the coding used to obtain the index (Ahmed & Courtis, 1999; Coy, Tower, & Dixon, 1993; Marston & Shrives, 1991).

In the case of applicability problem, a number of studies have argued that companies should not be penalised for the items that are not applicable to them. Using actual disclosure of information against a possible maximum number has been suggested to overcome this problem (Ahmed & Courtis, 1999; Aripin, Tower, & Taylor, 2009; Hassan et al., 2012). Krippendorff (2004) suggested that the issue subjectivity in the coding used can be reduced if several researchers code the data.

3.6.2 Hedging activities information disclosure index

This study applies the unweighted disclosure index approach. To measure the extent of HAD, this study designs a disclosure checklist based on two types of disclosures, i.e., mandatory and discretionary. In this respect, three categories of relevant hedging activities information index are developed, comprising disclosure on *Risk Management and Accounting Policy of Hedging Activities, Disclosure Effect of Hedging Activities on Financial Statement and Disclosure of Risks Related to Hedging Activities.* Table 3.1 presents the full 32 items (dimensions) of the disclosure index used in this study.

Table 3.1

The Extent of Hedging Activities Disclosures (HAD)

COMPONENTS OF HEDGING ACTIVITIES DISCLOSURE		
RISK MANAGEMENT & POLICIES INFORMATION OF HEDGING ACTIVITIES		
Mandatory disclosures		**REFERENCE**
1	Specify the accounting policies related to hedging activities	MFRS 7, Para 21 Para 22 (a), (b), (c)
2	Describe firm's financial risk management objective and how derivatives are being applied to manage risks (i.e., objectives for holding or issuing derivatives.)	
3	Disaggregation of derivatives assets and liabilities by hedge accounting category (i.e., fair value hedges, cash flow hedges and hedges of net investment in a foreign operation)	
4	A description of each type of hedge	
5	A description of the financial instruments designated as hedging instruments and fair value at reporting date	
6	The nature of the risks being hedged.	
Voluntary disclosures		
7	Information on non-designated derivatives-disaggregation between trading derivatives and derivatives that are economic hedges (i.e., they do not qualify as accounting hedges)	Papa and Peter (2013), Bhamornsiri and Schroeder (2004), Bamber and McMeeking (2010), Huang (2012)
8	Explanation on hedging strategies (e.g., describing items being hedged and explaining related strategies justification)	
9	Quantitative amount of hedging ratio (i.e., describes expected change in value of hedged instrument/expected change in value of hedged item. Hedging ratio can be expressed in terms of number of risk factors or in monetary terms)	
10	Disclosure of the expected sources of ineffectiveness (e.g., basis risk due to the mismatch of maturity or underlying risk factor, time value of options).	
11	Methods and assumptions to determine the hedging effectiveness	
DISCLOSURE OF EFFECTS OF HEDGING ACTIVITIES ON FINANCIAL STATEMENTS		
Mandatory disclosures		
Fair value hedges		MFRS 7 Para 23 and 24
12	Gains or losses on the hedging instruments	
13	Gains or losses on the hedged item attributable to hedged risk	
Cash Flow hedges		
14	The period when the cash flows are expected to occur and when they are expected to affect profit or loss	
15	A description of any forecast transaction for which hedge accounting had previously been used, but which is no longer expected to occur	
16	The amount that was recognised in equity during the period	
17	The amount removed from equity and included in profit and loss for the period, showing the amount in each line-item in the I/S.	
18	The amount removed from equity and included in the initial cost or carrying amount of non-financial asset/liability	
19	The ineffectiveness recognised in profit or loss	
Net investment in foreign operations		
20	The ineffectiveness recognised in profit or loss	
Voluntary disclosures		
21	Fair value hedges — breakdown of hedged item including amount hedged versus amount unhedged and balance sheet item categorisation	Papa and Peter (2013), Bamber and McMeeking (2010)
22	Fair value hedges — disclosure of cumulative gains or losses of hedging instrument and hedged item for fair value hedging relationships	
23	Disclosure of the impacts of hedges on cash flows (e.g., within operating, investment or financing categories of the cash flow statement)	

Table 3.1 (Continued)

DISCLOSURE OF RELATED RISK ON HEDGING ACTIVITIES		
Mandatory Disclosure		
24	A description of the exposure of risk on derivative instruments	MFRS 7 Para 34,39 40,41
25	Risks analysis for derivative instruments (e.g., maturity analysis, sensitivity analysis, methods and assumptions used in preparing/changes in previous period in the methods and assumption used)	
26	Maximum exposure to credit risk on derivatives financial instruments (i.e., hedging and trading)	
27	Disclosure of fair value hierarchy of derivative financial instruments (including method and assumption used)	
Voluntary Disclosures		
28	Notional amount	Papa and Peter (2013), Bamber and McMeeking (2010), Huang (2012)
29	Notional amount disaggregated by risk type and by use (i.e., hedging versus trading)	
30	Credit risk of derivatives counterparties [e.g., disaggregation into credit rating buckets of derivatives assets and provision of details of underlying credit quality of each bucket (e.g., probability of default)	
31	Disclosure on funding liquidity risk — derivatives related covenants	
32	Disclosure summary on the effect of company profit after tax (before and after hedging)	

For mandatory requirement disclosure items, all the hedging activities information is extracted from MFRS 7 accounting standard. Specifically, such disclosure items include all the hedge accounting part of MFRS 7 (paragraph 22-24) and other related hedging activities disclosure requirements. In order to avoid unsystematic evaluation processes and ensure the reliability of the design disclosure checklist, this study further cross-checks such disclosure items with the PWC's IFRS Presentation and Disclosure Checklist 2012. The PWC's disclosure checklist is taken because it presents a practically tested auditing tool, where this study assumes that high assurance on disclosure of hedging activities information can be counted on. This study recognizesd that the requirements of MFRS 7 and the PWC's Disclosure checklist 2012 are identical to the design disclosure checklist's criteria. Besides mandatory disclosures, the disclosure checklist also consists of several voluntary disclosure items for each category of hedging activities information. The voluntary disclosure items used in the design disclosure checklist are selected and chosen from several accounting literature

(i.e., Bamber & McMeeking, 2010; Bhamornsiri & Schroeder, 2004: Huang, 2012; Papa & Peter, 2013; Rahmat & Hoffmann, 2011). Besides that, this study also extracts some of the voluntary disclosure items from MFRS 9 *(Financial Instruments: Hedge Accounting and amendments to MFRS 9, MFRS 7 and MFRS 139*). Since MFRS 9 will be adopted and become effective by the year 2018, this study perceives that the requirements of hedging disclosure under this standard are still regarded as voluntary.

3.7 Measurement of dependent variables

This study measures the dependent variable, the extent of HAD, based on the disclosure score. It should be noted that the dependent variable is a ratio in nature. A score of 1 for each dimension of hedging activities di,sclosure is assigned in the HAD index if it is disclosed in the annual report or 0 otherwise. Similar to previous disclosure studies, this study also does not penalise the mandatory requirement disclosure items if the item is not relevant to the company. Such items are given NA which means that information is not relevant to the company and would be deducted accordingly from the score of the company's total possible disclosure score. The extent of disclosure is measured by dividing a company's actual total score by its total possible score. This assumption is considered valid since this study deals with mandatory and voluntary disclosure (see Rahman et al., 2012; Taylor et al., 2008). Below is the formula used to measure the disclosure level of hedging activities information:

$$HAD_i = \frac{\text{Total number of Hedging Disclosure}}{\text{Total possible Hedging Disclosure (32)} - \text{(non-applicable items)}}$$

Where,
HAD_i = The extent of hedging activities disclosure for company i

In order to ensure the measurement of hedging activities disclosure is valid and reliable, this study takes some preliminary actions by providing rules/guidelines. According to Marston & Shrives (1991), researchers in previous years did experience a number of practical problems in awarding scores, but researchers can mitigate this problem by providing clear instructions for measuring the disclosed and non-disclosed information, like Buzby (1974) and Cooke (1989) did in their papers. Buzby (1974) and Cooke (1989) also claimed that the use of disclosure indices in accounting research is considered reliable if the index scores awarded to companies can be replicated by another researcher. In this regard, this study considers the hedging activities disclosure scores that are extracted from annual reports valid and reliable because they remain constant over time and there is no obstacle for repetition. Besides, some of the scores of the index have already been applied by several studies on financial instruments disclosure (e.g., Birt et al., 2013; Hassan et al., 2006; Hassan et al., 2012. Taylor et al., 2008).

There are three types of disclosure categories in each of the hedging activities information checklist (see Table 3.1). In order to evaluate the first component of *Risk Management and Accounting Policy of Hedging Activities,* this study, firstly looks at the mandatory items. A score of 1 is given for the first and second items if the company explicitly discloses financial risk management objective and policies on hedging activities in the company's annual report. This information is basically disclosed by companies in the notes to their financial statements. The next item which should be disclosed is the policy for designated fair value hedges, cash flow hedges and hedges of a net investment in a foreign operation. This study does not focus on the specific

disclosure of each type of hedge; the disclosure score consideration is only applied exclusively to the separation of the information provided. Since MFRS 7 requires companies to disclose separately the three different types of hedging (i.e., fair value hedges, cash flow hedge and hedges of a net investment in a foreign operation), 0 score is given to the companies that do not separately disclose the information. The company can be awarded a maximum of three points for the information provided when it discloses all the following conditions in the annual reports separately: (i) description of the hedge; (ii) a description of the financial instruments designated as hedging instruments and their fair value at the balance date; and (iii) the nature of the risks being hedged. It should be noted that if a company clearly declares that it did not use any derivative financial instrument for hedging activities, therefore, any information about hedging is not relevant to this company. Secondly, the next item evaluated under this category is the voluntary disclosure. A score of 1 is given to companies if they provide any of the items listed in the checklist, and 0, otherwise. These items are: (i) information on non-designated derivatives (i.e., information on trading derivatives and derivatives that are economic hedges which do not qualify for hedge accounting); (ii) information regarding their hedge strategies; (iii) hedging ratio; (iv) sources of ineffectiveness; and (v) methods and assumptions to determine the hedging effectiveness. The total score for all the items under this category is 11.

The next component of hedge activities information is *Disclosure Effect of Hedging Activities on Financial Statement.* There are nine items which represent the mandatory requirement disclosure and three items that represent the voluntary disclosure. For

evaluation criteria on fair value hedge, a score of 0 is given if the companies only provide information regarding the net gain or losses of fair value hedges and a score of 1 if the companies separately provide information on their gains or losses both on hedging instrument and the hedged item. This is because the company is considered as not fulfilling the accounting standard requirement, since the standard explicitly requires companies to present information on both hedging instrument and the hedged item regarding gains or losses. Companies are awarded a maximum of two points if they separately disclose the information in their financial statement.

For evaluation of cash flow hedges, six items of information are recognised in each of the companies' financial statement. Similar to evaluation on fair value hedge, a score of 1 is given if a company provides the information and 0, otherwise. However, for information item (d) in Table 3.1 under this component, this study rejects it and the score of 0 is given to those entities that only present information concerning the amount that was removed from equity and/or included in profit or loss for the period. This is due to the fact that MFRS 7 requires information about the amount included in each line-item in the income statement. For the criteria regarding ineffectiveness recognised in profit or loss for cash flow hedges (item 19), this study considers those cases where information is disclosed that no hedges were ineffective during the period. If the company only provided data on ineffectiveness on an aggregate level and included in the same line-item, a score of 0 is given and is not accepted. According to the standard, ineffectiveness needs to be presented individually for each kind of hedge. Similarly, this procedure also applies for the evaluation of hedges in net investments

in foreign operations (item 'a'). With regards to voluntary disclosure items, this study awards a score of 1 if the information on fair value hedges is being separately disclosed, including hedged and unhedged amount as well as balance sheet item categorisation. Also, a score is given if cumulative gains or losses of hedging instrument and hedged item for fair value hedging relationships are disclosed. Lastly, a score of 1 is given if the company discloses cash flows hedge impact (e.g., within the categories of cash flow statement) and 0, otherwise.

The last component of hedge activities information is *Disclosure of Risk Related to Hedging Activities.* A company can be awarded a maximum of nine points when it discloses all the information under this category in the annual report. For mandatory disclosure items, a score of 1 is awarded for each item if the companies adequately provide the following information: (i) a description of the exposure of risk on derivative instruments; (ii) risks analysis for derivative instruments; (iii) maximum exposure to credit risk on derivatives financial instruments; and (iv) disclosure of fair value hierarchy of derivative financial instrument. With regards to voluntary disclosure under this category, a score of 1 is given for each of the disclosure items if the companies disclose five types of information, which are notional amount, notional amount disaggregated by risk type and by use, counterparties risk, disclosure of funding liquidity risk and disclosure summary on the effect of company profit after tax (before and after hedging); and 0, otherwise.

3.8 Measurement of independent variables

This section explains the measurement of independent variables used in this study. All these independent variable measurements are explained as follows:

3.8.1 The existence of the RMC

To identify the existence of the RMC in implementing risk management in the companies, their annual reports are checked for the availability of the RMC or whether any risk management function is mentioned under other board committees (e.g., audit committee or internal audit committee). This study assumes the existence of the RMC if a company has a single stand-alone committee (i.e., a committee with the title of risk management committee) or sub-committee (i.e., risk management committee as part of the audit committee/any combination of tasks and responsibility of risk management with audit committee) that is responsible for risk management activities. For the purpose of this study, if a company has a RMC, it is coded as 1 and if a company has no RMC, a value of 0 is coded. This criterion has been used by previous studies, such as Birt et al. (2013), Hassan et al. (2012), Abdullah and Chen (2010) and Yatim (2009).

3.8.2 Effectiveness and characteristics of the RMC

The RMC's effectiveness is aggregately measured based on DeZoort et al.'s (2002) audit committee effectiveness framework. According to DeZoort et al. (2002), the effectiveness of an audit committee can be achieved if the committee has four elements of effectiveness. These elements are good composition (qualified members), adequate authority, resources and diligent efforts. Ika and Mohd Ghazali (2012) used these elements and created an audit committee effectiveness index by further dividing these four elements into seven characteristics (i.e., independence, expertise, audit committee

charter, duty, size, frequency of meeting and voluntary disclosure) to be met by an audit committee. This study uses the same approach as Ika and Mohd Ghazali (2012), but applied to the RMC. Different from their study (i.e., Ika & Mohd Ghazali, 2012), this study includes RMC gender diversity as one of the composition components and RMC training as a component of diligence. Bearing in mind that the establishment of RMC is still voluntary for non-financial companies, this study uses the guidelines as stipulated in Bursa Malaysia Guidelines [5] for audit committees and some other characteristics that have been examined in prior studies as a basis to measure the effectiveness of the RMC (i.e., Abbott et al., 2004: Bedard et al., 2004; Mangena & Pike, 2005). This is assumed valid because a RMC can be considered as one of the board's committees (Ng et al., 2013).

To measure the effectiveness of the RMC, this study develops a composite index based on four dimensions of effectiveness as suggested by DeZoort et al. (2002), which includes composition, authority, resources and diligence of RMCs. Each of these dimensions is represented by one or several RMC's characteristics. Table 3.2 presents the dimensions and characteristics of the RMC's effectiveness index. Except for the authority dimension, a score of 1 is given if a company fulfills the RMC's characteristics and 0, otherwise. With regards to the RMC's authority dimension, this study assesses the dimension differently. A score of 1 is given if a company provides a brief statement regarding RMC's responsibility. A brief statement refers to simple

[5] Bursa Malaysia Listing Requirements have required a listed company to appoint an audit committee which meets the following requirements: (i) must be composed of not fewer than three members; (ii) a majority of the audit committee members must be independent directors; and (iii) at least one member of the audit committee must be a member of the Malaysian Institute of Accountants (MIA) or possesses sufficient accounting experience and qualification, or deemed "financially literate" by the Stock Exchange.

sentences that only describe the responsibility of the RMC. If a company provides detailed explanation as well as explains the actions on how to perform a particular responsibility (e.g., stating the scope and the result of the review), it is awarded a score of 2, and if a company does not disclose at all, it is awarded 0. It should be noted that the score of the RMC's duties in this study is the total score of each stated responsibility. To measure the level of RMC's effectiveness, the score of all the RMC's effectiveness components is summed up. The maximum possible score for each company is 12 and this study assumes that a high score is indicative of an effective RMC.

Table 3.2
Components of the RMC's effectiveness index

Dimension	**RMC Characteristics**	**Proxies**	**Score**	**Previous studies**
Composition	Independence	A majority of RMC members must be independent directors	1,0	Bedard et al. (2004)
	Expertise	A least one of the RMC members has educational background and experience in accounting or finance.	1,0	Mangena & Pike (2005)
	Gender Diversity	The existence of female directors in the RMC.	1,0	Abdullah et al. (2013)
Authority	Duty	Review and recommend to the board regarding risk management strategies, policies and risk tolerance levels.	2,1,0	Ng et al. (2013), Ika &Mohd Ghazali, (2012)
		Review and evaluate how effective are risk management policies and framework in identifying, measuring, monitoring and controlling risks.	2,1,0	
		Review if resources needed for risk management are adequate and report all risks periodically.	2,1,0	
Resources	Size	RMC members comprise at least three members.	1,0	Ng et al. (2013)
Diligence	Meeting	RMC meets at least four times in a year.	1,0	Abbott et al. (2004)
	Training	RMC members attend at least two types of training related to risk management in a year.	1,0	Suhaimi, (2015), Bugala et al. (2012)

As mentioned in the previous section of this study, many studies have examined the association between board committees and financial reporting quality based on a single characteristic. Hence, this study also tests each characteristic of the RMC (i.e., the components of the RMC's effectiveness). It should be noted that in cases where the RMC is a sub-committee of the audit committee (AC), this study selects some of the RMC's characteristics based on the AC's characteristics. This is assumed valid because the RMC performs similar roles (Birt et al., 2013). The explanation of the measurement for each of the single characteristics of the RMC is as follows:

RMC size (RSIZE)

This study measures the RMC's size based on the total number of active RMC members until the end of the financial year. This study considers a RMC member as active, if he or she serves on the committee for at least six months and above. Several previous studies have used this measurement (e.g., Farinha & Viana, 2009; Ng et al., 2013; Pucheta-Martinez & Fuentes, 2007).

RMC independence (RINDE)

RMC independence refers to the proportion of independent non-executive members on the RMC. The data can be accessed through the directors' profile and composition of RMC sections in the companies' annual report. The proportion is the number of independent non-executive members divided by the total number of RMC members (see Abbott et al., 2004; Ismail & Abdul Rahman, 2011; Lopes & Rodrigues, 2007; Mangena & Pike, 2005; Ng et al., 2013).

RMC gender diversity (RDIVER)

This study operationalises gender diversity as the proportion of women to total RMC members. The data is accessed through the directors' profile and board committee information section in the companies' annual reports. Abdullah et al. (2012), Abdullah, Ku Ismail, & Nachum, (2016) and Rahman & Ku Ismail, (2016) for example, applied this type of measurement.

RMC diligence (RDILI)

This study uses the number of RMC meetings held during the financial year to operationalise RMC diligence. The data are directly obtained from the companies' annual reports regarding RMC meetings. This measurement for the RMC has been practiced by Xie et al. (2003), Abbott et al. (2004), Farinha and Viana (2009), O'Sullivan et al. (2008) and Ng et al. (2013).

RMC training (RTRAIN)

Normally, there are various trainings offered to RMC members as they are board committee members. Usually, the trainings are organised by the regulators, authorities and professional bodies, such as the Securities Commission (SC) of Malaysia, Bursa Malaysia and the MIA. For the purpose of this study, RMC training is measured based on the total number of risk related trainings attended by RMC members during the accounting year (see Bugalla et al., 2012; Suhaimi, 2015).

RMC expertise (REXPERT)

To measure RMC expertise, the information of directors' profile in the annual reports is scrutinised in order to identify the qualification of the RMC members. The study considers the formal accounting or finance educational background of RMC members and the academic level with at least a bachelor's degree and above as proxies for qualification. The proportion of RMC qualification is measured based on the total number of RMC members with qualification divided by the total number of RMC members (see Ismail & Abdul Rahman, 2011; Yatim, 2009).

RMC duty (RDUTY)

To measure RMC duty, the information regarding the RMC responsibilities is scrutinised from the annual reports and is assessed based on three different types of score of responsibility. A score of 1 is given if a company provides a brief statement regarding responsibility. A brief statement refers to simple sentences that only describe the responsibility of the RMC. If a company provides detailed explanation as well as explains the actions on how to perform a particular responsibility (stating the scope and the result of the review), a score of 2 is awarded, and if a company does not disclose at all, a 0 score is awarded. The percentage score of the RMC's duties in this study is calculated based on the total scores of each stated responsibility divided by its maximum possible score. This measurement is supported by Ika and Mohd Ghazali (2012) and Bedard et al. (2004).

3.9 Measurement of moderating variables

This study operationalises ownership concentration for each of the sampled companies into three types of ownership, i.e., family ownership, management ownership and government ownership. In order to identify each group of ownership concentrations, the percentage of shares owned by each type of ownership is accounted for. These data is obtained from the disclosure of 30 shareholders and substantial shareholder section in the annual reports, sourced from the Bursa Malaysia website. In order to identify family involvement in the sampled companies, the "*Directors Profile*" section is firstly examined for the details of family relationships between each director and the CEO. A director or shareholder is defined as having a family relationship with the CEO of a company when he/she is closely related by blood or marriage to the CEO (see Amran & Ahmad, 2013; Anum Mohd Ghazali, (2010); Saleh et al., 2009; Ismail & Sinnadurai, 2012). Second, at least two family members in the management, and families have ownership (direct and indirect shareholdings) of a minimum of 20% in the company (see La Porta et al. 1999; Villalonga & Amit, 2006). Once the family relationship is recognised, then shareholding of the CEO, directors and non-directors is calculated to obtain the percentage of family ownership (direct shareholding).

Management ownership is the percentage of shares owned by inside shareholders (i.e., directors and executives). This study defines managerial ownership as the proportion of direct shareholding held by directors and executives over the total number of shares issues. The information on the directors' and executives' shareholding is also extracted from the '*Directors Shareholdings*' in the notes to the Financial Statement. Data pertaining to ownership by government is captured by summing up the ownership

percentage by government institutions, agencies or GLCs. Entities classified as Government-related investors include the following principal categories: Khazanah Nasional Bhd, the investment arm of the Malaysian Federal Government; social welfare institutions, such as the Employees Provident Fund Board, Lembaga Tabung Angkatan Tentera (Armed Forces Fund Board); Lembaga Tabung Haji, a savings fund that provides financial aid to assist members in making their pilgrimage to Mecca and development corporations of each state (i.e., corporations entrusted with facilitating the relevant state's economic development).

3.10 Measurement of control variables

The sections below explain the measurement of the control variables used in this study. The explanations are as follows:

Company size: This study measures company size as the total assets owned by the company. The data of total assets are accessed through the Datastream and the statement of financial position. The use of this variable and measurement is common among previous studies on financial instruments disclosure and other disclosure studies (e.g., Akhtaruddin & Haron, 2010; Birt et al., 2013; Chalmer & Godfrey, 2004; Hassan et al., 2012; Ismail & Abdul Rahman, 2011; Lopes & Rodrigues, 2007).

Profitability: Profitability has been shown to affect disclosure levels by many previous studies. In this study, return on assets (ROA) is used as a proxy of profitability as used in many other studies (e.g., Cheng & Courtenay, 2006; Gul & Leung, 2004; Hassan et al., 2012; Rao et al., 2012).

Auditor quality: Auditor quality is measured by the size of audit firms. Big 4 in this study refers to the four largest international audit firms in the world: PricewaterhouseCoopers, Deloitte Touche Tohmatsu, Ernst & Young and KPMG. In order to collect the information, the study inspects the bottom of the 'auditor's report' section to identify the auditor of the company. If the audit firm is one of the Big 4, the data is coded as '1' and '0', otherwise. Many studies have used this criterion for their research (e.g., Akhtaruddin, & Haron, 2010; Hassan et al., 2012; Yatim, 2010).

Leverage: This study measures leverage as the ratio of total debt of a company to the total assets owned (i.e., total debts divided by the total assets). Studies which applied this rule for the variable measurement include Francis et al. (2012), Ismail & Abdul Rahman (2011) and Yatim (2010).

3.11 Research design

This section explains the sample selection procedure, empirical model and statistical analysis.

3.11.1 Data collection

This study use secondary data collected from two separate sources: DataStream and companies' annual reports. Financial data (i.e., ROA, total assets and leverage) are obtained from the Datastream. Data on ownership structure and RMCs are extracted from the annual reports manually. In this case, ownership structure information is collected by analysing the shareholding section and directors' profile in the annual reports, whereas information on the RMC's characteristics is extracted from the BODs' profile and '*Risk Management Report*' section. This study acknowledges that

annual reports are not the only source of corporate reporting. However, focusing on this source will not reduce quality of information disclosure since it is generally believed that the annual report is still relevant as one of the important sources of corporate information (Botosan, 1997; Hassan et al., 2012). Moreover, all information disclosure regarding hedging activities, ownership and RMCs have been audited and presented in accordance with the Bursa Malaysia regulations and the Malaysia Companies Act, 1965.

In order to collect the data on HAD, this study uses the ‘word search’ function in Adobe Reader. The keywords looked for and the basis for selecting them are listed in Table 3.3. By using the 'word search' function, all of the 11 key words in Table 3.3 are searched in every annual report. If one of them is found in the document, the paragraph where the word is located is read carefully and a judgment is made whether the company uses derivatives in hedging activities. If the reporting company clearly mentions the use of derivatives for hedging purposes, it is selected as a sample company; otherwise, the company is not included in the sample. All these data are then gathered into a worksheet. Then, the information on RMC’s effectiveness (aggregately measured), RMC characteristics, ownership structure and the extent of HAD are collected from the sampled companies’ annual reports.

Table 3.3
Keywords used to search in this study

Keywords	Reasons
Financial Instruments	Under the MFRS 132, the derivative is a type of financial instrument
Financial Asset Financial Liabilities Fair value	MFRS 139 adopts the full-fair-value measurement that all entities must recognise all financial instruments, including derivatives, as assets or on the balance-sheet and measure those instruments at fair value, and changes in the derivatives fair value are to be recognised in the current earnings unless specific hedge accounting criteria are met.
Derivatives Forward contract Warrants Convertibles bonds Foreign Currency swap	Previous studies have reported that forward contract, futures, warrants, convertible bonds and foreign currency swaps are the most popular derivative products used by Malaysian listed companies (see Hassan et al., 2012; Ameer et al., 2011; Ameer 2010, Othman and Ameer, 2009)
Risk	MFRS 7 requires that an entity shall disclose each type of risk arising from financial instruments: 1) the exposures to risk and how they arise; 2) its objectives, policies and processes for managing the risk and the methods used to measure the risk; and 3) any changes in (1) or (2)
Hedging	MFRS 7 requires that an entity shall disclose separately for each type of hedge (i.e., fair value hedges, cash flow hedges, and hedges of net investments in hedging foreign operations): 1) a description of each type of hedge; 2) a description of the financial instruments designated as hedging instruments and their fair values at the reporting date; and 3) the nature of the risks being hedged.

3.11.2 Sample selection

This study is limited by its cross sectional design. The population for this study is all companies listed on the Main Market of Bursa Malaysia except for the financial services sector, REITs, Close-End Fund, Exchange Trade Fund and PN17 companies. These companies are omitted because they are subject to other regulations with respect to financial reporting. Large companies in Malaysia are likely to use derivatives in their risk management policy (Ameer et al., 2011); hence, this study presumes that large companies' involvement in hedging activities is to mitigate their financial risk. This assumption is considered concrete and is backed by Hassan et al. (2012). Hassan

et al. (2012) claimed that financial instruments information will be disclosed more by large companies rather than small companies. Hence, for the purpose of this study, 500 large companies based on total assets (stratified by sectors), listed in 2013 are chosen as a sample for this study.

The sample size is assumed sufficient because many previous financial instrument disclosure studies have not referred to any rule in determining their sample size. For example, Abdullah and Chen (2010), who examined the relationship between the committee responsible for risk management and the level of financial instruments disclosure, only employed 63 listed companies on Bursa Malaysia as their sample. Subsequently, Lopes and Rodriques (2007), in examining the factors that influence the degree of financial instruments disclosure by Portuguese companies, randomly selected 67 listed companies. Taylor et al. (2008) only used 30 companies as their sample in investigating the disclosure level of financial instruments by Australian resource companies. Yet, a recent survey conducted by Adznan and Puat Nelson (2014) used 319 companies as their sample in examining the extent of financial instruments in Malaysia. Moreover, this study also notes that the sample size employed by previous financial instruments disclosure studies (e.g., Abdullah & Chen, 2010; Birt et al., 2013; Hassan et al., 2012; Adznan & Puat Nelson, 2014) satisfy the rule of thumb proposed by Field (2013) who suggested that a sample size larger than 30 and less than 500 companies is appropriate for most researchers.

In order to adequately represent the general Malaysian companies, this study stratifies the companies by taking about 65% of the companies from each of the 10 key sectors

of Bursa Malaysia[6]. Table 3.4 shows the classification, population and the number of companies sampled. The grouping of companies is also shown in the Table 3.4[7]. Out of the 500 original sampled companies, only 221 companies used derivatives to hedge their financial risk exposure (see Table 3.5). Consistent with Ameer (2010) and Othman and Ameer (2009), this study also finds that forward contracts are highly used by companies to hedge market risks followed by future and swap contracts. Out of the 221 companies, 166 companies (75%) have established a RMC (see Table 3.5). Thus, to test whether the RMC affects the extent of HAD, only these 166 companies are observed.

Table 3.4
Classification of sample companies

TYPES OF INDUSTRY		TOTAL		NUMBER OF COMPANIES
1. Manufacturing	Consumer Products	131	86	240
	Industrial Products	236	154	
2. Properties & Construction	Properties	86	57	84
	Construction	42	27	
3. Trading and services		182	119	119
4. Others	Plantation	41	27	57
	Technology	30	20	
	IPC	6	4	
	SPAC	2	2	
	Mining	1	1	
	Hotel	4	3	
	TOTAL	761	500	**500**

* IPC= *Infrastructure Project Company*, SPAC = *Special Purpose Acquisition Company*

[6] Finance, REITs, Close-End Fund and Exchange Trade Fund (ETF) are excluded in the study.
[7] The classification into four industrial sectors is based on Abdullah and Ku Ismail (2008) and Awang, Mohamed Zain and Ibrahim (2004).

Table 3.5
Summary of sample selection procedure

Selection Criteria	No. of companies
Total sample companies	500
Less: Companies not using derivatives for hedging	279
Companies which use derivatives for hedging	221
Less: Companies not having a RMC	(55)
Companies which use derivatives and have a RMC	166

The 2013 financial year is chosen in this study because it is the third year where accounting standards for financial instruments became mandatory for all Malaysian listed companies. The three-year period is considered sufficient for companies to understand and apply the accounting standards. Besides, this study argues that data on the early adoption period (i.e., 2011 and 2012) can be biased as it is a learning year for companies to understand the accounting standards (see Chapter 2).

Furthermore, due to the announcement made by the MASB in the year 2014 that the replacement of the current accounting standards is to be deferred to the year 2018, this study considers that using one year data (i.e., year 2013) instead of data of several years (i.e., longitudinal data) is sufficient to fulfil the objectives of this study. This is because some prior studies on risk management and derivatives disclosure (including hedging activities information) have revealed that the extent of information disclosed is not significantly different between years. For example, a study conducted by Abraham and Shrives (2014) and Miihkinen (2013) highlighted that pattern of the disclosure of risk related information remains the same over five years. Even though a study by Miihkinen (2013) showed the disclosure level has slightly increased, the

analysis shows that the increment is not statistically significant. In Malaysia, Embong (2014) and Abdullah, Abdul Shukor, Mohamed, and Ahmad (2015) observed that there is an insignificant increase of voluntary disclosure of risk management information and suggested that voluntary disclosure policy in Malaysia did not change in a short duration (particularly a period of five years). Since this study focuses on the disclosure of mandatory and voluntary hedging activities information, it is valid to assume that focusing on one year data is relevant and will contribute to the body of knowledge.

3.11.3 Statistical analysis

Several statistical techniques are employed in this study to test the relationship between the dependent and predictor variables by applying the SPSS software programme. Firstly, the descriptive analysis is used to describe the characteristics of the sampled companies. Next, this study conducts the regression assumption tests of normality, heteroscedasticity, multicollinearity, linearity and autocorrelation. Finally, regression analyses are conducted to analyse the relationship among the variables based on the hypotheses developed in the previous section.

3.11.3.1 Regression Analysis

This study employs multivariate regression to examine if the existence of a RMC influences the extent of HAD. Besides, the study also tests the relationships between characteristics of the RMC at an aggregate level (i.e., RMC's effectiveness) and individual level with the extent of HAD. In addition, multiple hierarchical regression is conducted to test the moderating effect of ownership concentration (namely, family

ownership, management ownership and government ownership) on the relationship between the RMC's effectiveness and the extent of HAD. The models utilised are as follows:

Model 1: The existence of RMC

This model examines the relationship between the existence of the RMC at company level and control variables with the extent of HAD.

$$HAD_i = \alpha + \beta_1 REXIST_i + \beta_2 CSIZE_i + \beta_3 PROF_i + \beta_4 LEV_i + \beta_5 AUDITOR_i + \varepsilon_i$$

Where,

HAD	:	Total score of information on hedging activities disclosure = company's actual disclosure score/company's total possible disclosure score.
REXIST	:	Dichotomous variable, 1 for company with RMC, 0 otherwise.
Control Variables		
CSIZE	:	Log of total assets
PROF	:	Return on assets
LEV	:	Debt to total assets ratio
AUDITOR	:	Dichotomous variable, 1 if audited by Big 4, 0 otherwise
ε	:	Error term

Model 2: The effectiveness of RMC

This model examines the relationship between the extent of HAD and the RMC's effectiveness (REFF) and control variables. The RMC's effectiveness is aggregately measured as a percentage based on the total possible score on RMC's characteristics. In addition, Model 2 also designates the moderating effect of ownership concentration on the relationship between RMC's effectiveness and the extent of HAD. To achieve this objective, multiple hierarchical regression analysis is conducted to test the moderation effects. Three types of ownership concentration are identified, namely

family ownership (FOWN), management ownership (BOWN) and government ownership (GOWN). The interaction effect between REFF with FOWN, BOWN and GOWN are separately multiplied with REFF to represent the effect of ownership structure. This can be illustrated as follows:

$$HAD_i = \alpha + \beta_1 REFF_i + \beta_2 FOWN_i + \beta_3 BOWN_i + \beta_4 GOWN_i + \beta_5 FOWN*REFF_i + \beta_6 BOWN*REFF_i + \beta_7 GOWN*REFF_i + \beta_8 CSIZE_i + \beta_9 PROF_i + \beta_{10} LEV_i + \beta_{11} AUDITOR_i + \varepsilon_i$$

Where,

HAD	:	Total score of information on hedging activities disclosure = company's actual disclosure score/company's total possible disclosure score.
REFF	:	RMC Effectiveness Index = Company's actual score on RMC characteristics/company's total possible score of RMC characteristics (as presented in Table 3.2).
FOWN	:	Percentage of shares owned by family CEO/executives
BOWN	:	Percentage of share ownership by CEO/executive directors.
GOWN	:	Percentage of shares ownership by government institutions, agencies and GLCs

Control variables

CSIZE	:	Log of total assets
PROF	:	Return on assets
LEV	:	Debt to total assets ratio
AUDITOR	:	Dichotomous variable, 1 if audited by Big 4, 0 otherwise
ε	:	Error term

Following Baron and Kenny (1986), the data are regressed in several steps. The first step includes the control variable (size, leverage, profitability and audit quality) and the extent of HAD. In the second step, the independent variables are regressed against the dependent variable, followed by the third step, where the independent variables are multiplied by the moderators and regressed against the dependent variables. Finally,all

of them (the control variable, the independent variables and the interaction between the independent variable and moderators) are regressed with the dependent variables.

Model 3: The Characteristics of RMC

This model examines the relationship between each dimension of RMC's effectiveness (i.e., characteristics of RMC) at the individual level and control variables with the extent of HAD. This model is presented by seven different characteristics of RMC which are: RMC size (RSIZE), RMC independence (RINDE), RMC diligence (RDILI), RMC gender diversity (RDIVER), RMC training (RTRAIN), RMC qualification (REXPERT) and RMC duty (RDUTY). This is illustrated as follows:

$$HAD_i = \alpha + \beta_1 RSIZE_i + \beta_2 RINDE_i + \beta_3 RDILI_i + \beta_4 RDIVER_i + \beta_5 RTRAIN_i + \beta_6 REXPERT_i + \beta_7 RDUTY_i + \beta_8 CSIZEi + \beta_9 PROF_i + \beta_{10} LEV_i + \beta_{11} AUDITOR_i + \varepsilon_i$$

Where,

HAD	:	Total score of information on hedging activities disclosure = company's actual disclosure score/company's total possible disclosure score.
RSIZE	:	Number of RMC members at financial year-end.
RINDE	:	Proportion of independent non-executive members in the RMC
RDILI	:	Number of RMC meetings during the financial year.
RDIVER	:	Proportion of female members in the RMC.
RTRAIN	:	Number of types of risk management training to RMC members
REXPERT	:	Proportion of RMC members with accounting or finance qualification.
RDUTY	:	Total score of a clear mandate defining the responsibilities of RMC= company's actual defining responsibilities/ company's total possible score.

Control Variables

CSIZE	:	Log of total assets
PROF	:	Return on assets
LEV	:	Debt to total assets ratio
AUDITOR	:	Dichotomous variable, 1 if audited by Big 4, 0 otherwise
ε	:	Error term

3.12 Summary of the chapter

This chapter discusses the methodology applied in the study. The theoretical framework is presented together with the theories as the underpinning theories in this study. The chapter also discusses the hypothesis development for each variable of this study. In addition, this chapter explains the data and sample selection, population and sampling design, including the data collection method. Finally, the variables definition and measurements are explained in detail and the data analysis is highlighted at the end of the chapter.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter discusses and presents the findings of this study. It is divided into several sections based on the objectives of the study. Section 4.2 presents the descriptive statistics, followed by Section 4.3 which exhibits the results of the regressions between the existence as well as the effectiveness of the RMC and the extent of HAD. Besides, this section presents the results of the moderating effect of ownership concentration. Lastly, Sections 4.4 and 4.5 provide the results and discussion of additional analysis and the summary of the chapter, respectively.

4.2 Descriptive statistics

4.2.1 The use of derivatives and hedge accounting application

Table 4.1 shows the derivatives used for hedging activities and hedge accounting application of 500 non-financial Malaysian listed companies. Based on these 500 sampled companies, this study finds that only 45% (i.e., 221 companies) used derivatives to hedge their financial risk exposure (see Panel A). Consistent with previous Malaysian studies by Ameer (2010) and Othman and Ameer (2009), this study also finds that most of the companies claimed the purpose of their derivatives usage is to hedge financial risk exposure, especially on foreign exchange and interest rate price risks rather than to apply it for trading or speculative purposes. It is also found that the derivatives used for hedging activities in this study are relatively higher from that accounted by Othman and Ameer (2009). Besides, this study finds that even

though companies claim they use derivatives for hedging purposes, only 22% (49 companies) prefer to apply hedge accounting. Of these, 49 (22%) companies, 47 companies (96%) chose to apply cash flow hedges, nine companies (18%) chose to apply fair value hedges and only four companies (8%) hedged for net investment in foreign operations. This finding is considered low in comparison with what has been found in other studies in developed countries (see Bailey et al., 2003; Glaum & Klocker, 2011; Hausin et al., 2008; Lins et al., 2011). Delving deeper, this study supports the findings by Hausin et al. (2008) who revealed that most non-financial listed companies that actively use derivatives for hedging activities are less likely to opt for hedge accounting. Likewise, this study also documents that cash flow hedge accounting is the highest preference of non-financial Malaysian listed companies.

Based on the work of Ameer et al. (2011), this study argues that the possible reasons for low application of hedge accounting in Malaysia may be due to lack of expertise in the companies or may be because of the high cost to apply hedge accounting (i.e., cost of monitoring and documentation) compared to its benefits. Another reason maybe because larger companies (see Birt et al., 2013; Hassan et al., 2012; Huang, 2012; Ismail & Abdul Rahman, 2011; Oliviera et al., 2011) and companies that frequently use derivatives are more mature companies and those that are more experienced with the accounting standards (Glaum & Klocker, 2011). From another point of view, the choice to apply hedge accounting can be explained by management compensation. It has been argued that a company will forgo hedge accounting if operational exposures are smooth across periods and will apply hedge accounting if the company's risk exposure differs markedly across periods and compensation risk

therefore is high (Pirchegger, 2006). On the other hand, it also can be perceived that high preference to apply cash flow hedge accounting by Malaysian companies shows that cash flow hedge accounting might be used as an earnings manipulation tool for management. This is because it allows for the deferral of gains or losses on the hedging instruments (Papa & Peter, 2013). Studies, for example, by Melumad, Weyns, and Ziv (1999) and Campbell, Downes, and Schwartz (2015) can be used as a basis to support this notion as their findings can be interpreted in that cash flow hedge accounting has been used to mask a company's earnings decline.

Table 4.1
Usage of derivatives and hedge accounting application

Panel A: The derivatives usage and hedge accounting application (N=221)

	No of Companies	Percentage
Total sample companies	500	100%
(-) Companies not using derivatives for hedging	277	55%
Companies using derivatives for hedging	221	45%
Companies that apply hedge accounting	49	22%

Panel B: Uses of different types of hedges (N=49)

	No of Companies *	Percentage *
Fair Value Hedges	9	18%
Cash Flow Hedges	47	96%
Hedges of Net Investment	4	8%

***Some companies used more than one method*

Regarding these findings, it can be viewed that hedge accounting rules and disclosure from the Malaysian perspective only affect a small number of companies and it might be true that the accounting requirements for the usage of derivatives for hedging activities has provided little new and relevant information to the readers of the financial statement (see Bhamornsiri & Schroeder, 2004; Glaum & Klocker, 2011;

Hausin et al., 2008; Papa & Peter, 2013). Although companies are not violating the disclosure requirements of accounting standards for derivatives (i.e., MFRS 7 and MFRS 139), the amount of derivative information, especially on hedging activities, can be perceived as irrelevant and insufficient to inform the users of financial statement, particularly investors, in reaching a wise investment decision.

4.2.2 The extent of hedging activities disclosure (HAD)

4.2.2.1 Overall disclosure

Table 4.2 exhibits the overall disclosure of 32 checklist items related to the information of derivatives used for hedging activities by the sampled companies. As mentioned in the previous chapter, this checklist consists of mandatory and voluntary items which are categorised into three different groups of disclosures, i.e: 1) *Risk Managment and Significant Accounting Policy of Hedging Activties*; 2) *Disclosure Effect of Hedging Activities on Financial Statements; and* 3) *Disclosure of Risks Related to Hedging Activities)*. Table 4.2 shows that the average of HAD is 55% with a minimum value of 0.32 and maximum value of 0.98. In general, this finding indicates that the companies are less likely to provide much information on their hedging activities from the use of derivatives. In relation to mandatory requirements, it is found that the extent of HAD has improved compared to the reported results in some of the previous Malaysian findings (e.g., Abdullah & Chen, 2010; Hassan et al., 2012). This is because the new accounting standard disclosure requirements on hedging activities requires more information. Even though the disclosure requirements are mandatory, the majority of the sampled companies still do not provide full information. Perhaps, these companies

are still strugle (i.e., lack of expertise) to understand all the requirements of the accounting standards on hedging activities (see Ameer et al., 2011). The high level of hedging activities disclosures are mandatory disclosure on '*Risk management and Significant Accounting Policy of Hedging Activities*' and '*Specific Risk Related to Hedging Activities*', where companies disclosed, on average, 93% and 64%, respectively.

Table 4.2
Overall hedging activities information dislcosure

Disclosure of Hedging activities information (N=221)

Disclosure categories		**Mean**	**Std. Deviation**	**Minimum**	**Maximum**
Risk management and significant accounting policy of hedging activities	***M***	0.94	0.15	0.50	1.00
	V	0.41	0.28	0.00	1.00
Disclosure effect of hedging activities on financial statements	***M***	0.17	0.32	0.00	1.00
	V	0.71	0.45	0.00	1.00
Disclosure of risks related to hedging activities	***M***	0.65	0.34	0.00	1.00
	V	0.27	0.21	0.00	1.00
Total disclosure score **(HAD)**		0.55	0.21	0.32	0.98

Note: ***M*** =*Mandatory Disclosure*, ***V*** = *Voluntary Disclosure*

Compared to some previous financial instrument disclosure studies in Malaysia (e.g., Abdullah & Chen, 2010; Adznan & Puat Nelson, 2014; Hassan et al., 2012; Ismail & Abdul Rahman, 2011), this study finds that there is not much difference on the percentage of the disclosure score of accounting policy and risks on hedging activities information. Study by Abdullah and Chen (2010) documented that on average 98% of the companies disclose information on accounting policy and risks by using sample companies in the year 2008 while Hassan et al. (2012) revealed that 91% of companies

comply with financial instruments disclosure accounting policy and risk from year 1999 until 2003. A recent study by Adznan & Puat Nelson (2014) has revealed that 93% of Malaysian companies in the year 2012 disclosed their accounting policy and risks associated with financial instruments information. In this respect, this study views that the trend in disclosing financial instrument's information, including hedge activities information, among listed companies in Malaysia seems to be similar even after several years. It is relevant to make this comparison because those studies used the same method for calculating the disclosure score and also provided each component of the financial instruments disclosure, including hedging activities information.

Although the overall disclosure of mandatory items of hedging activities information score has improved and is quite high, this study perceives that the richness of the information on hedge activities is still insufficient. This is because many disclosure items are not applicable as many companies opt not to apply hedge accounting. Thus, these findings support the notion that the existence of the mandatory requirements towards disclosure on hedging activities information is not enough to provide transparency and enhance the understanding on the use of derivatives for hedging activities by companies, particularly non-designated derivatives used for economic hedges (see Campbell et al., 2015; Hutton, Lee, & Shu, 2012; and Papa & Peter, 2013). It also can be observed from Table 4.2 that the mandatory disclosure mean score of '*Disclosure Effect of Hedging Activities on Financial Statement*' is only at 17%. Table 4.2 also depicts that some companies voluntarily provide additional information about their hedging activities. However, the overall disclosure score of this voluntary hedging activities information is still low except the voluntary information on the

impact of hedging activities in the financial statement (i.e., cash flow statement), whereby on average, 71% of the companies voluntarily disclosed the information. Based on the studies conducted by Hausin et al. (2008) and Hassan (2004), this study also believes that the lack of compliance and voluntary disclosure of hedging activities disclosure will improve with time. This is because understanding accounting standard requirements for financial instruments as well as hedge accounting is a learning process for a company to present, formulate and fulfilling the needs of the users, especially investors. Besides that, regulators also have to actively play their role to educate managers on how to comply with the accounting standard's requirements for hedging activities with confidence among stakeholders, especially the investors. However, voluntary disclosure of additional information on hedging activities also plays a significant role for users of financial statements to forecast, compare the use of derivatives for hedging, evaluate risk exposure and understand risk management practices across companies.

4.2.2.2 Individual disclosure

Tables 4.3, 4.4 and 4.5 illustrate the results of 32 individual disclosure items scored by the sampled companies on hedging activities information in their annual reports. Table 4.3 exhibits the first category of hedging activities disclosure, i.e., *Risk Management and Significant Accounting Policy of Hedging Activities.* It is found that items 1, 2, 5, 6, 7, and 8 are the most popular items to be disclosed among Malaysian listed companies in their annual reports. About one third of the sampled companies comply with the mandatory accounting standard requirements to report their hedging activities. Disclosure items 1 and 2 attain the highest score, indicating that all (i.e., 100%) of the

companies provide their hedging policies related to derivatives used and reveal the objectives of their use of derivative instruments. This is followed by checklist items 5 and 6. On average, 85% and 88% of the sampled companies describe their derivatives instruments and nature of the risk being hedged.

Table 4.3
Disclosure of risk management and significant accounting policy of hedging activities

No.	Disclosures items	Score	
		Companies	%
Mandatory disclosure			
1	Specify of accounting policies related to hedging activities	221	100
2	Describe firm's financial risk management objective and how derivatives are being applied to manage risks (i.e., objectives for holding or issuing derivatives.)	221	100
3	Disaggregation of derivative assets and liabilities by hedge accounting category (i.e., fair value hedges, cash flow hedges and hedges of net investment in foreign operations)	49	22.1
4	A description of each type of hedge	49	22.1
5	A description of the financial instruments designated as hedging instruments and fair value at reporting date	189	85.5
6	The nature of the risks being hedged.	195	88.2
Voluntary disclosure			
7	Information on non-designated derivatives-disaggregation between trading derivatives and derivatives that are economic hedges (i.e., they do not qualify as hedge accounting)	172	77.8
8	Explanation on hedging strategies (e.g., describing items being hedged and explaining related strategies justification)	161	72.9
9	Quantitative amount of hedging ratio (i.e., describes expected change in value of hedged instrument/expected change in value of hedged item. Hedging ratio can be in expressed in terms of number of risk factors or in monetary terms)	90	40.7
10	Disclosure of the expected sources of ineffectiveness (e.g., risk due to the mismatch of maturity or underlying risk factor, time value of options).	27	12.2
11	Methods and assumptions to determine the hedging effectiveness	0	0.0

It is also observed that a majority of companies that applied hedge accounting break down their derivative instruments by instrument type (e.g., Forward contract, Swap and Option) and provide a common description of currency, interest rate or commodity price risk. However, in some cases where derivative instruments do not qualify for hedge accounting, some companies do not clearly explain this information. Concerning the mandatory disclosure items 3 and 4, it can be noted that only 22% of these companies segregate their derivative assets and liabilities by hedge accounting category and provide description of each type of hedge (i.e., fair value hedges, cash flow hedges and net investment in foreign operation hedges).

This low score is not surprising because only 49 out of 221 companies chose to apply hedge accounting; thus, these two items are considered as non-applicable items for the remaining companies (see Table 4.1 in Section 4.2.1). Besides, it is also observed that many of these companies describe each type of their hedges category similar to the definition and description in the MFRS 139 accounting standard. With respect to voluntary disclosure, it is found that disclosure items 7 and 8 are among the items that are most disclosed by non-financial Malaysian listed companies. It is noticed that about 78% of the sampled companies score for disclosure item 7 (i.e., information on derivative that does not qualify for hedge accounting). This indicates that a few Malaysia listed companies do not adequately differentiate the non-designated derivative used for trading or economic hedges. On the other hand, it is seen that only 73% of the companies inform their hedging strategy (i.e., item 8) and 41% disclose their hedging ratio (i.e., item 9). With regards to disclosure item 8 (i.e., hedging strategy), this study finds that some of the information provided by the sampled

companies is not clearly explained, is inconsistent and seems like a '*boilerplate statement*'. Although companies break down the types of their derivative instruments used (e.g., forwards, swap), many of them do not adequately detail out and discuss their justification for their hedging strategies. Based on a survey conducted by Hausin et al. (2008), this poor hedging strategy information disclosure can be explained by the competitive advantages that a company enjoys. Based on interviews with analysts, they claim that many companies try to camouflage their active trading positions as hedging transactions to give less justification to investors and mask the embedded risk in hedging instruments.

It is also noted that there is low score regarding voluntary disclosure item 10 (i.e., expected source of ineffectiveness). On average, only 12% of the sampled companies voluntarily offer the anticipated source of ineffectiveness of their hedging activities. Additionally, in many cases, this information is not discussed in detail and not clearly identified. This low score is not surprising because such information is voluntary. However, it can be perceived that the lack of this information may not enable users of financial statements (especially investors) to assess the economic hedge's effectiveness, as well as the effectiveness of risk management strategies. With regards to disclosure item 11 (i.e., the method applied to determine hedge effectiveness), none of the sampled companies provides this information and many of them only state that their hedging activities are highly efficient. Hence, this study perceives that by only stating that hedging transactions are effective without providing justification (i.e., the method applied), this information would create different perceptions among the investors for their analysis, judgement and awareness of the impact of hedging activities (see Khediri, 2010; Judge, 2002; Papa & Peter, 2013).

Table 4.4
Disclosure effect of hedging activities on Financial Statements

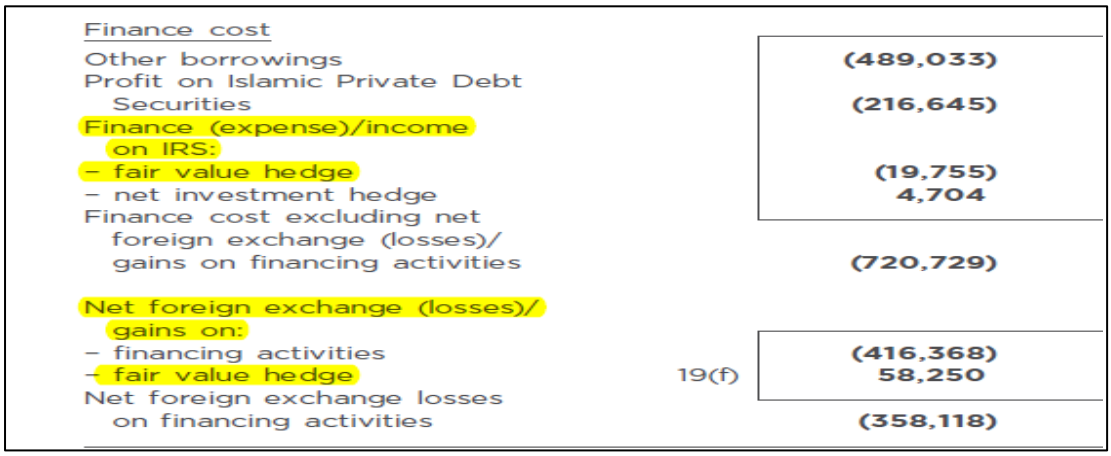
No	Disclosures items	Score	
		Companies	**%**
Mandatory disclosure			
Fair value hedges			
12	Gains or losses on the hedging instruments	7	77.8
13	Gains or losses on the hedged item attributable to hedged risk	7	77.8
Cash flow hedges			
14	The period when the cash flows are expected to occur and when they are expected to affect profit or loss	47	100
15	A description of any forecast transaction for which hedge accounting had previously been used, but which is no longer expected to occur	43	91.5
16	The amount that was recognised in equity during the period	45	95.7
17	The amount removed from equity and included in profit and loss for the period, showing the amount in each line-item in the I/S.	31	65.9
18	The amount removed from equity and included in the initial cost or carrying amount of non-financial asset/liability	3	6.38
19	The ineffectiveness recognised in profit or loss	21	44.6
Net investment in foreign operations			
20	The ineffectiveness recognised in profit or loss	4	100
Voluntary disclosure			
21	Fair value hedges-break down of hedged item, including amount hedged versus amount unhedged and balance sheet item categorisation	0	0
22	Fair value hedges-disclosure of cumulative gains or losses of hedging instrument and hedged item for fair value hedging relationships	2	22.2
23	Disclosure of the impacts of hedges on cash flows (e.g., within operating, investment or financing categories of the cash flow statement)	162	73.3

Table 4.4 exhibits the second category of the disclosure of information on hedging activities (i.e., *Disclosure Effect of Hedging Activities on Financial Statements*). Since only 49 of the sampled companies chose to apply hedge accounting, several of the disclosure items under this category are not applicable to the remaining companies. Table 4.4 also illustrates the result of the analysis on the disclosure of hedge accounting in the financial statements based on different types of hedges (i.e., fair

value hedges, cash flow hedges and net investment hedges) chosen by Malaysian companies. As stated in Section 4.2.1, only nine of the sampled companies are identified as using hedge accounting for fair value hedges, 47 companies apply cash flow hedges and four companies apply net investment hedges. Additionally, it is found that 11 companies employ two different cases of hedge accounting at the same time and none of these companies has used all three types of hedge accounting. In this regard, it is expected that all these companies follow the disclosure requirements of hedge accounting as stipulated in the accounting standards.

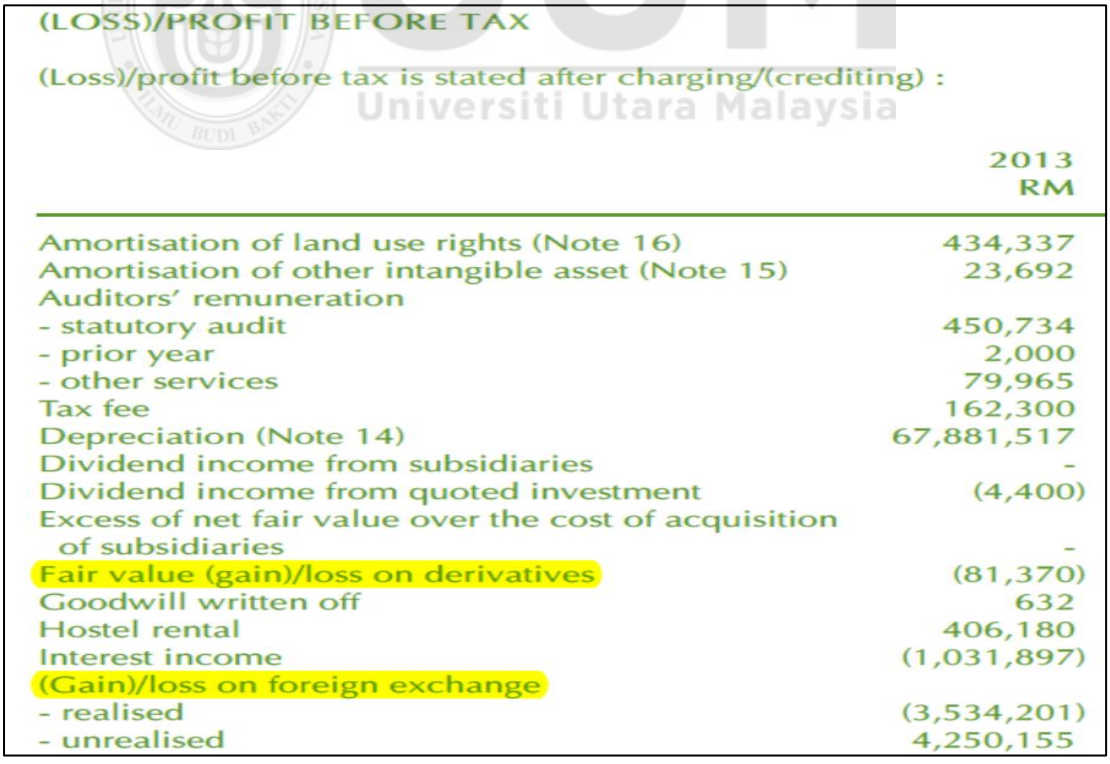
Based on Table 4.4, it can be observed that the recognition of fair value hedges in the financial statements is not fully complied with by companies. The assessment of those two mandatory requirements under fair value hedges requirement (i.e., items 12 and 13) has found that only seven out of nine companies disclose gains/losses on hedging instruments and gains/losses of their hedge items. This is because the other two companies just disclose gains/losses for one side of the hedge relationship or present the information regarding gains/losses just as a net result. Furthermore, this study identifies that some of these companies directly recognise the gains/losses of hedging instruments and hedge items in their profit and loss and some prefer to sort it out as a financial cost. Besides, they do not clearly differentiate between hedging instruments and hedge items in both categories. Figures 4.1 and 4.2 exemplify two print screens from the 2013 annual reports of the sampled companies as an example of the disclosure of fair value hedges on the financial statements (i.e., *Axiata Group Berhad and Evergreen Fireboard Berhad*). As a basis for disclosure score in this study, it should

be noted that a 0 score is given to any aggregated/net result of a hedge relationship disclosed by the companies (for example, see Figure 4.1). This is because the accounting standard (i.e., MFRS 7) requires a clear disclosure of gains/losses on both hedge instruments and hedged items.



Finance cost		
Other borrowings		(489,033)
Profit on Islamic Private Debt Securities		(216,645)
Finance (expense)/income on IRS:		
– fair value hedge		(19,755)
– net investment hedge		4,704
Finance cost excluding net foreign exchange (losses)/ gains on financing activities		(720,729)
Net foreign exchange (losses)/ gains on:		
– financing activities		(416,368)
– fair value hedge	19(f)	58,250
Net foreign exchange losses on financing activities		(358,118)

Figure 4.1
Print Screen of Axiata Group Berhad Annual Report 2013 (page 253)



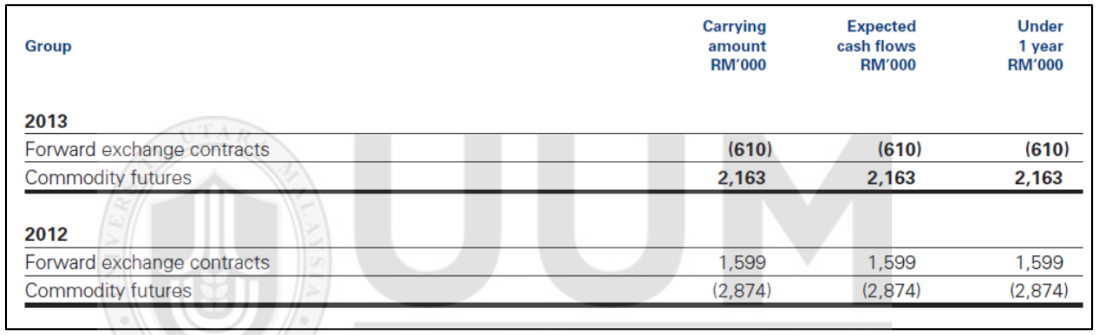
(LOSS)/PROFIT BEFORE TAX

(Loss)/profit before tax is stated after charging/(crediting) :

	2013 RM
Amortisation of land use rights (Note 16)	434,337
Amortisation of other intangible asset (Note 15)	23,692
Auditors' remuneration	
- statutory audit	450,734
- prior year	2,000
- other services	79,965
Tax fee	162,300
Depreciation (Note 14)	67,881,517
Dividend income from subsidiaries	-
Dividend income from quoted investment	(4,400)
Excess of net fair value over the cost of acquisition of subsidiaries	-
Fair value (gain)/loss on derivatives	(81,370)
Goodwill written off	632
Hostel rental	406,180
Interest income	(1,031,897)
(Gain)/loss on foreign exchange	
- realised	(3,534,201)
- unrealised	4,250,155

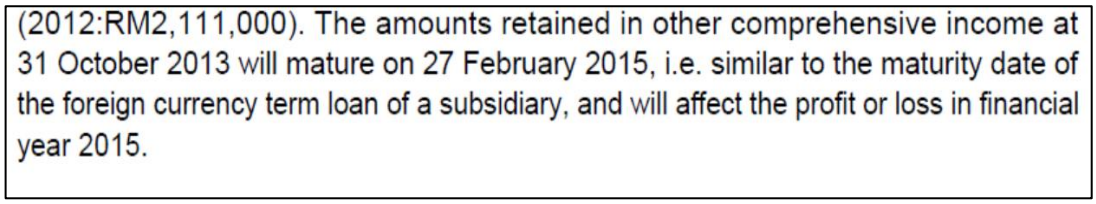
Figure 4.2
Print screen of Evergreen Fireboard Berhad Annual report 2013 (page 66)

With regards to cash flow hedges, this study finds that not all mandatory disclosure items are really being fulfilled by the sampled companies, except for disclosure item 14 (i.e., the period when the cash flows are expected to occur and when they are expected to affect profit or loss). It is observed that all or 100%t of sampled companies comply with this requirement. However, it is identified that such disclosure is differently disclosed by each of these companies. Figures 4.3 and 4.4 demonstrate the print screen of two different samples of 2013 annual reports as an example of how this information is disclosed.



Group	Carrying amount RM'000	Expected cash flows RM'000	Under 1 year RM'000
2013			
Forward exchange contracts	**(610)**	**(610)**	**(610)**
Commodity futures	**2,163**	**2,163**	**2,163**
2012			
Forward exchange contracts	1,599	1,599	1,599
Commodity futures	(2,874)	(2,874)	(2,874)

Figure 4.3
Print screen of Nestle Berhad Annual Report 2013 (page 80)



(2012:RM2,111,000). The amounts retained in other comprehensive income at 31 October 2013 will mature on 27 February 2015, i.e. similar to the maturity date of the foreign currency term loan of a subsidiary, and will affect the profit or loss in financial year 2015.

Figure 4.4
Print screen of Selangor Properties Berhad Annual Report 2013 (page 109)

Table 4.4 also presents the score of sampled companies that provide information regarding any forecast transaction for which hedge accounting had previously been used, but which is no longer expected to occur (i.e., disclosure item 15). It is found

that 91% of these companies comply with this requirement and there are several companies that do not state this information at all. Figure 4.5 presents the print screen of one annual report of MHB as an example of how this requirement is met.

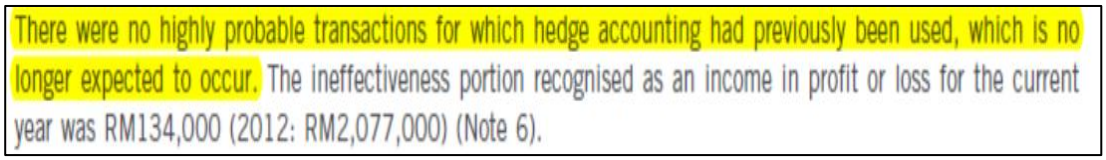
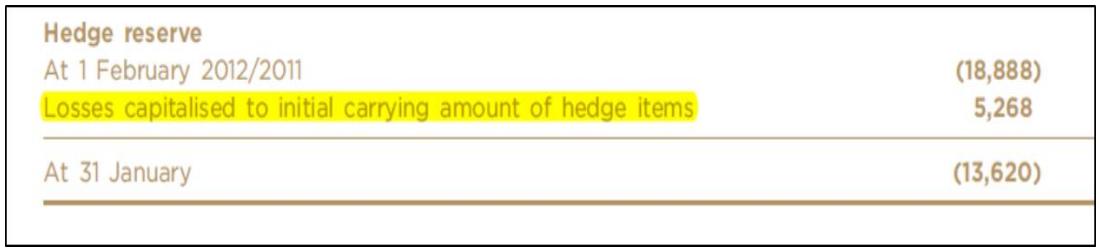

There were no highly probable transactions for which hedge accounting had previously been used, which is no longer expected to occur. The ineffectiveness portion recognised as an income in profit or loss for the current year was RM134,000 (2012: RM2,077,000) (Note 6).

Figure 4.5
Print screen of MHB Annual report 2013 (page 151)

Furthermore, it is noted from Figure 4.2 that 96% (45 companies) of the sampled companies comply with disclosure item 16, i.e., regarding the amount recognised in other comprehensive income during the reporting period. This information can also be found in the consolidated statement of changes in equity. With regards to disclosure item 17, it is identified that only 31 (66%) companies provide information about the amount removed from equity and included in profit or loss statement.

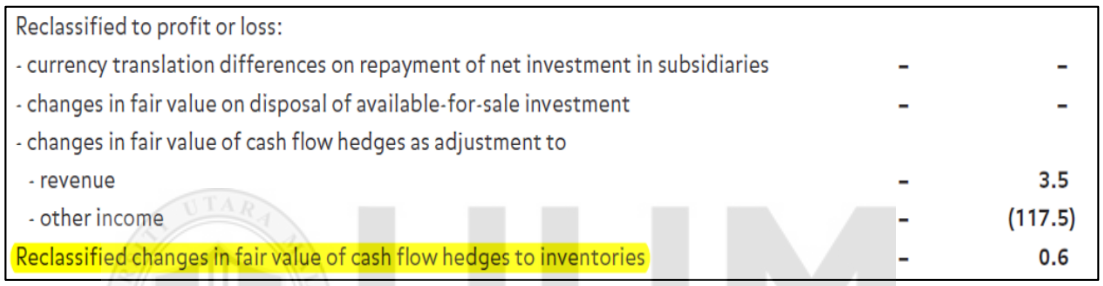
Disclosure item 18 evaluates the disclosure of the amount removed from equity and included in the initial cost or carrying amount of non-financial asset/liability whose acquisition or occurrence was a hedged highly probable forecast transaction. Based on Table 4.4, it is found that only three companies provide this information. It is also observed that some of the sample companies clearly mention that they are not involved in hedging any non-financial asset/liabilities and not apply for this basis of adjustment (see Figure 4.8 as an example); thus, this requirement is not applicable to them. Besides, it is found that some of these companies do not recognise it in the income statement, but provide this information in a written text (see Figure 4.9 as an example);

thus, a score of 0 is given. Figures 4.6 and 4.7 demonstrate an example of how companies meet this disclosure requirement.



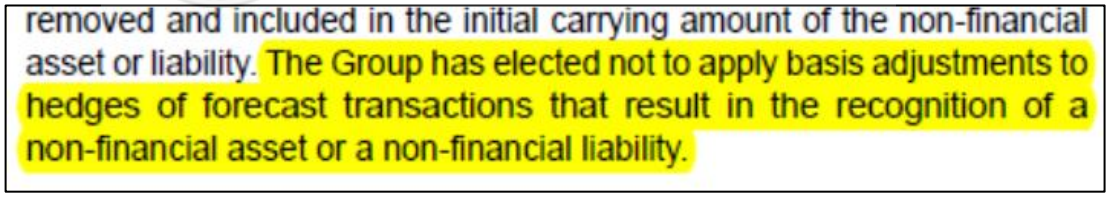
Hedge reserve	
At 1 February 2012/2011	(18,888)
Losses capitalised to initial carrying amount of hedge items	5,268
At 31 January	(13,620)

Figure 4.6
Print screen of Sapura Kencana Petroleum Annual report 2013 (page 153)



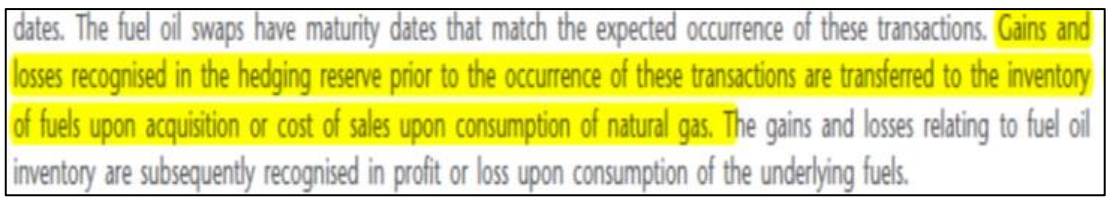
Reclassified to profit or loss:		
- currency translation differences on repayment of net investment in subsidiaries	-	-
- changes in fair value on disposal of available-for-sale investment	-	-
- changes in fair value of cash flow hedges as adjustment to		
- revenue	-	3.5
- other income	-	(117.5)
Reclassified changes in fair value of cash flow hedges to inventories	-	0.6

Figure 4.7
Print screen of Sime Darby Annual report 2013 (page 196)



removed and included in the initial carrying amount of the non-financial asset or liability. The Group has elected not to apply basis adjustments to hedges of forecast transactions that result in the recognition of a non-financial asset or a non-financial liability.

Figure 4.8
Print screen of Selangor Properties Berhad Annual report 2013 (page 75)



dates. The fuel oil swaps have maturity dates that match the expected occurrence of these transactions. Gains and losses recognised in the hedging reserve prior to the occurrence of these transactions are transferred to the inventory of fuels upon acquisition or cost of sales upon consumption of natural gas. The gains and losses relating to fuel oil inventory are subsequently recognised in profit or loss upon consumption of the underlying fuels.

Figure 4.9
Print screen of YTL Corporation Berhad Annual report 2013 (page 171)

Since the ineffectiveness portion of cash flow hedges and hedges of net investments in foreign operations are accounted in the same way, it is found that only 45% of the annual reports (i.e., 21 companies) disclose mandatory information regarding the ineffectiveness recognised in the income statement for cash flow hedges (i.e., item 19). However, in the case of hedges of net investments in foreign operations, all the companies meet this disclosure requirement. It is viewed that the fulfilment of hedges of net investments in foreign operations by these companies is either achieved by stating an explicit number in the income statement in the form of a table or by providing the information as written text within various sections of the annual report. Instead of presenting the results of mandatory disclosure score items of hedging activities in financial statements, Table 4.4 exhibits the score of voluntary disclosure of hedging activities information by companies in their financial statement. It can be observed that none of the companies' separately provides its hedged item, including amount hedged versus amount unhedged and balance sheet item categorisation. However, it is found that only two companies provide disclosure of cumulative gains or losses of hedging instruments and hedged items for fair value hedging relationships. With regards to disclosure item 23, it is observed that many companies show the impacts of hedging activities in their cash flow statements. On average, Table 4.4 shows that 73% of 221 companies provide this information in their annual report.

Table 4.5 exhibits the third category of hedging activities information disclosure in this study (i.e., *Disclosure of Specific Risks Related to Hedging Activities*). It can be observed that there is insufficient amount of information on risk disclosure related to hedging activities by the sampled companies. Based on Table 4.5, only 55% to 56%

(i.e., for items 24 and 25) of the companies describe their associated risks related to derivative instruments and disclose their risk analysis to demonstrate the impact of derivative usage for hedging activities. However, with respect to disclosure items 26 and 27, it is found that 70% and 77% of the companies comply with disclosure of their maximum exposure to credit risk, and provide fair value hierarchy (including method and assumption) on the use of derivatives for hedging activities, respectively.

Table 4.5
Disclosure of specific risks related to hedging activities

No.	Disclosure items	Score	
		Companies	%
Mandatory disclosure			
24	A description of the exposure of risks on derivative instruments	12	55.2
25	Risks analysis for derivative instruments (e.g., maturity analysis, sensitivity analysis, methods and assumptions used in preparing/changes in previous period in the method and assumption used)	124	56.1
26	Maximum exposure to credit risk on derivative financial instruments (i.e., hedging and trading)	155	70.1
27	Disclosure of fair value hierarchy of derivative financial instruments (including method and assumption used)	169	76.5
Voluntary disclosure			
28	Notional amount	156	70.6
29	Notional amount disaggregated by risk type and by use (i.e., hedging versus trading)	54	24.4
30	Credit risk of derivatives counterparties (e.g., disaggregation into credit rating buckets of derivative assets and provision of details of underlying credit quality of each bucket-probability of default)	63	28.5
31	Disclosure on funding liquidity risk-derivatives related covenants	4	1.8
32	Disclosure summary on the effect of company profit after tax (before and after hedging)	20	9.1

With respect to voluntary information disclosed, Table 4.5 shows that disclosure item 28 (i.e., notional amount) is likely to be disclosed by the sample companies. On average, 71% of the companies provide the notional amount of derivative instruments. However, only some of them disaggregate the notional amount by risk type and by use (i.e., item 29). Moreover, it can be observed that disclosure items 30, 31 and 32 are less disclosed in the annual reports. For disclosure item 30, only 29% (63 companies) provide the information on counterparty risk on derivatives. Some of these companies explicitly detail the credit evaluation and some provide only a simple general statement. Furthermore, it can be seen that there is limited information on funding liquidity risk related to derivative covenants (i.e., item 31). Out of 221 companies, only four companies voluntarily disclose this information. Besides, it is also observed that only 20 companies present the effect of company profit after tax before and after hedging (i.e., item 32).

4.2.2.3 Information content of hedging activities disclosure

This section discusses the information content of hedging activities disclosure in the annual reports of the sampled companies. Since one of the research objectives in this study is to identify the extent of hedging activities information, analysing the information content based on the objectives of MFRS 7 accounting standard is deemed relevant and may provide some insights, particularly on the nature of its information (see Dunne, Fox, & Helliar, 2007). Several prior accounting studies (e.g., Bhomornsiri & Schoeder, 2004; Lopes & Rodriques, 2007) have examined the information content by sorting the disclosed information on derivatives information into two categories, which are qualitative and quantitative information. Different from them, this study

classifies hedging activities information based on the objective of MFRS 7, and then employs the t-test to examine whether there is a statistical significance between the different types of hedging activities information. MFRS 7 requires a company to provide two main categories of disclosure of financial instruments information in the annual report: (1) information about the significance of financial instruments for the entity's financial position and performance; and (2) information related to the nature, extent of risks arising from financial instruments to which the entity is exposed to during the period and at the reporting date and how the entity manages those risks. In order to categorise the disclosure checklist items into the objectives of MFRS 7 accounting standard, hedging activities information disclosure items are divided into two new groups (F1 and F2). Group F1 represents the first objective of MFRS 7 and F2 represents the second objective of MFRS 7.

Table 4.6
Summary of paired sample t-test for information contents of hedging activities disclosure (N=221)

Panel A: Sample Statistic			
	Mean	**Std deviation**	**Std. Error Mean**
F1-Performance	0.643	0.189	0.127
F2-Risks	0.436	0.257	0.173
Panel B: Paired sample test			
Paired differences	0.207	0.176	0.1185
t = 17.46			
df = 220			
Correlation = 0.728			
Sig. (2-tailed) = 0.00			

Note: F1 *= Information about the significance of financial instruments for the entity's financial position and performance,* ***F2*** *= Information related to the nature, extent of risks arising from financial instruments to which the entity is exposed during the period and at the reporting date, and how the entity manages those risks*

Table 4.6, Panel A shows that the mean values of FI and F2 are 64% and 43%, respectively. The difference of 21%, as shown in Table 4.6, is statistically significant as the p-value of the t-test is less than the significance level of 0.01. The result indicates that non-financial Malaysian listed companies disclose significantly higher amount of information about the impact of hedging activities of their financial position and performance than those related to information on the risks of using derivative instruments for hedging activities. This finding provides some useful insights to confirm the lack of disclosure on risk information on hedging activities (i.e., mandatory and voluntary disclosure) in the annual reports. In line with previous arguments, the reason that might explain the low disclosure of risk related information on hedge activities by Malaysian listed companies is the agency problem. Several studies (i.e., Abdullah et al., 2015; Gao, 2014; Huang, 2012; Rahmat & Hoffmann, 2011; Stulz, 2004) can be used as a basis to support this notion. These studies have indicated that the low disclosure of risk information associated with hedging activities exists because managers prefer to hide bad news so as to secure their job placement since this information would have an impact on corporate values.

4.2.3 Validity of hedging activities disclosures information (Disclosure Index)

The validity and reliability issue based on the disclosure index has been criticised by some researchers because its usefulness depends on the items included in the construction of the index (Marston & Shirves, 1991). According to Botosan (1997), this is because the selection of the items included in the index is very subjective. However, she claimed that an index can be considered valid if it has some meaning as a measure of information disclosure to that particular research environment. This is

because researchers always adapt and change the existing indices to meet their own objectives. Several approaches have been employed by previous studies (e.g., Gul & Leung, 2004; Hassan et al., 2006) to examine the reliability and validity of the disclosure index based on the work of Botosan (1997). This study identifies that Botosan (1997) validates her disclosure index when there is a correlation between: 1) the disclosure index and firm characteristics similar to prior research; 2) the disclosure index and the score assigned by the Association of Investment and Management Research (AIMR); and 3) the components of the disclosure index, number of analysts following the firm and the number of Wall Street Journal (WSJ) articles. Additionally, Cronbach's coefficient alpha is used to assess the degree to which the correlation among the categories of the disclosure index is attenuated due to random error.

Although there have been different approaches to validate the disclosure index by Botosan (1997), there is no single rule to be used in choosing these approaches. For example, Hassan (2004) only applied three procedures to validate his financial instruments disclosure index. He examined: 1) the correlation between each element of disclosure index; 2) the correlation between disclosure quality and firm characteristics; and 3) the disclosure score of companies in the extractive industries which received either gold, ash gray or bronze awards from the Australasian Reporting Awards Inc. (ARA). In another study, Gul and Leung (2004) only employed two approaches to validate corporate voluntary disclosure index, i.e., by analyzing the correlation between the disclosure index and firm characteristics of prior studies and Cronbach's alpha coefficient. In this respect, the disclosure index in this study is validated by examining: 1) correlation coefficients among the variables; 2) correlation

coefficients between firm characteristics and the extent of hedging activities disclosure; and 3) Cronbach's alpha coefficient.

Table 4.7 presents the correlation between disclosures of hedging activities components. It shows that all the hedging activities components are positively and significantly correlated with the other variables at $p < 0.01$ and $p < 0.05$, except the disclosure of mandatory requirement in the financial statement component (i.e., ISM) and the voluntary disclosure (i.e., ISV). Moreover, to ensure internal consistency of the categories of disclosure index, this study examined the Cronbach's coefficient alpha. It is identified that the Cronbach's coefficient alpha for the three categories of the disclosure index is 0.784, suggesting that the correlation is free from random measurement error. As a value of 0.7 to 0.8 is an acceptable value for an alpha to indicate good reliability (see Gul & Leung, 2004), it is valid to assume that the HAD index is reliable.

Table 4.8 exhibits the correlation between company characteristics and the extent of HAD. It can be observed that company size, leverage and auditor quality are positively correlated with the extent of HAD. The positive correlations between the extent of HAD and these company characteristics are consistent with the results of some previous studies that have examined the association between company characteristics and disclosure of information in annual reports (e.g., Abdullah & Chen, 2010; Birt et al., 2013; Hassan, 2004).

Table 4.7
Correlation between disclosure components index

	HAD	RPM	RPV	ISM	ISV	RRM	RRV
HAD	1						
RPM	.752**	1					
RPV	.856**	.596**	1				
ISM	.521**	.236**	.475**	1			
ISV	.570**	.450**	.378**	.057	1		
RRM	.874**	.550**	.634**	.393**	.459**	1	
RRV	.805**	.447**	.634**	.533**	.365**	.716**	1

**. *Correlation is significant at the 0.01 level*

Table 4.8
Correlation between variables

	HAD	CSIZE	PROF	LEV	AUDITOR
HAD	1	.			
CSIZE	0.457**	1			
PROF	-0.058	0.064	1		
LEV	0.298**	0.237**	-0.206**	1	
AUDITOR	0.230**	0.410**	0.048	0.55	1

**. *Correlation is significant at the 0.01 level*

Variable definition

HAD	=	Total score of information on hedging activities disclosure = company's actual disclosure score/company's total possible disclosure score.
RPM	=	Mandatory disclosure of risk management and significant accounting policies of hedging activities
RPV	=	Voluntary disclosure of risk management and significant accounting policies of hedging activities
ISM	=	Mandatory disclosure of the effect of hedging activities on Financial Statement
ISV	=	Voluntary disclosure of the effect of hedging activities on Financial Statement
RRM	=	Mandatory disclosure of risks related to hedging activities
RRV	=	Voluntary disclosure of risks related to hedging activities
CSIZE	=	Log of total assets
PROF	=	Return on assets (ROA)
LEV	=	Debt to total assets ratio
AUDITOR	=	Dichotomous variable 1 if audited by Big 4, 0 otherwise

4.2.4 Descriptive statistics of independent and other variables

This section presents the descriptive statistics of independent and other variables in this study. Table 4.9 presents the descriptive statistics of the continuous and dichotomous variables, respectively.

Table 4.9
Descriptive statistics of independent variables

Panel A: Descriptive statistics on the existence of RMC (N=221)				
Categorical variables		**Frequency**	**No. of Companies**	**Percentage**
REXIST		Yes	166	75%
		No	55	24%
AUDITOR		Yes	147	67%
		No	74	33%
Continuous Variables	**Mean**	**Std. Deviation**	**Min.**	**Max.**
CSIZE (RM million)	13.95	1.59	11.3	18.4
PROF (%)	6.1	7.29	-22.34	60.2
LEV (%)	22.6	16.10	0.00	78.03
Panel B: Descriptive statistics on the effectiveness of RMC (N=166)				
Categorical variables		**Frequency**	**No. of Companies**	**Percentage**
AUDITOR		Yes	114	69%
		No	52	31%
Continuous Variables	**Mean**	**Std. Deviation**	**Min.**	**Max.**
REFF (%)	64.2	15.7	25	100
RSIZE (Num. of members)	3.8	1.21	2	11
RINDE (%)	64.1	32.97	0	100
RDILI (Num. of meetings)	3.9	1.74	0	12
RTRAIN (Types of training)	2.2	1.28	0	6
RDIVER (%)	9.0	14.60	0	50
REXPERT (%)	41.5	22.03	0	100
RDUTY (%)	56.3	24.4	0	100
FOWN (%)	24.7	26.1	0	76.0
MOWN(%)	32.8	26.1	0	78.9
GOWN (%)	10.5	16.8	0	74.6
CSIZE (RM million)	14.2	1.65	11.3	18.4
PROF (%)	7.1	8.29	-22.3	60.2
LEV (%)	22.2	15.2	0.0	58.5

Panel A of the Table exhibits the descriptive statistics of 221 sampled companies on the existence of the RMC and control variables. It is observed that 75% (166) of the sampled companies have established a RMC. Consistent with some of the previous studies in Malaysia, for example, Abdullah and Chen (2010) and Hassan et al. (2012), this finding indicates that Malaysian companies are concerned with having a RMC as part of their internal control mechanism, although its establishment is still voluntary (especially for non-financial companies). However, this finding should be viewed with caution because the existence of the RMC reported in this study refers to the establishment of the RMC, either as a sub-committee under the audit committee, a combined RMC and audit committee, or a stand-alone committee. Panel A also exhibits that the mean of company size (CSIZE) of the sample companies is about RM 14 million and the mean of PROF (i.e., Return on Assets) of the sample companies is about 6%. The mean of Debt to Total Assets Ratio (LEV) is at 22%. Panel A also indicates that 67% (147) of the 221 sampled companies are audited by Big 4 audit firms.

Panel B exhibits the descriptive statistics of 166 sampled companies that have established a RMC and used derivatives for hedging activities. It also presents the descriptive statistics on the effectiveness of the RMC and each of its attributes. The mean value for RMC's effectiveness (REFF) is 64%. With regards to each attribute of RMC's effectiveness, it is found that the size of RMC committee (RSIZE) has a mean of 3.8 members (approximately 4). Consistent with a study conducted by Ng et al. (2013), it is observed that the size of RMC exceeds the minimum requirement of three members (i.e., as required by Bank Negara Malaysia 2010 for financial companies) although its establishment is voluntary. The largest RMC has eleven members and the

smallest has two. The mean value of 64% for RMC independence (RINDE) indicates that on average, the number of independent directors in the RMC is slightly higher than non-independent directors. In other words, RMCs in Malaysia have a balanced composition, in general, although such balance is voluntary in nature. Based on the sample, the most independent RMC comprises all independent directors, while the least comprises all non-independent directors. On average, RMCs conduct meetings four times yearly; however, one company did not conduct any RMC meeting at all. The highest number of meetings among the sampled companies is 12 times. Moreover, Table 4.8 shows that on average, RMC members go for at least two different types of training related to risk management (i.e., RTRAIN) during the financial year. The maximum types of training attended by RMC members related to risk management during the financial year are six types. The presence of female directors in the RMC is about 9% (i.e., RDIVER); meanwhile, the mean for REXPERT is 42%, representing the proportion of RMC members with accounting or finance qualification. The mean of RDUTY is 56% indicating that there is little authority given to the RMC to perform its supervisory risk management function, particularly on hedging activities.

With respect to ownership structure, Panel B in Table 4.9 shows that the percentage of government shareholdings for the sample companies ranges from 0 to 75% with a mean value of 11%. In terms of family ownership, the percentage shareholding among sampled companies varies from 0 to about 76%, with a mean value of 26%. This mean value is lower than what was reported by Amran and Ahmad (2013) for listed Malaysian companies. Amran and Ahmad (2013) reported that the value of mean for family ownership is at 43.4%. However, the low mean score for family ownership in

this study is not so surprising because the sampled characteristics used in this study are different from Amran and Ahmad (2013), whereby they reported that Malaysian companies are dominated by family ownership based on 916 sampled companies within the period 2003 to 2007. Although the mean value for family ownership is low, this study still acknowledges that the business environment in Malaysia is essentially built upon family businesses. Moreover, it can be observed that management ownership for the sample ranges from 0 to 79% with an average shareholding of about 33%. The average score for managerial ownership in this study is slightly higher than figures reported by Anum Mohd Ghazali (2010) by 10% but lower than Amran and Ahmad (2013) of 12%. Similar to family ownership, this average score is expected due to the different sample characteristics used in this study as compared to prior researchers. It is also noted that the higher mean on managerial ownership as compared to family ownership in this study is because directors do own a substantial number of shares and most of them are from family companies.

With regards to control variables, Panel B demonstrates that the mean of Return on Assets (PROF) of the 166 sampled companies is 7% and the mean of Debt to Total Assets Ratio (LEV) is approximately at 22%. The negative sign of the minimum score of PROF implies that some companies experienced a loss during the investigation period. It is also observed that the average company size (i.e., Total Assets) of the sample companies is about RM 1.5 million. As the standard deviation is low, it shows that the assets owned by these companies do not exhibit a high degree of variability. The largest company is RM 18.4 million, while the smallest is RM 11.32 million. Panel B also reveals that two-thirds of the sampled companies are audited by Big 4 audit firms.

4.3 Regression results

To test all the hypotheses, this study performed regression analysis. In this respect, all the assumptions of regression for the dependent and independent variables for the models were tested. The main assumptions are normality, heteroscedasticity, linearity, multicollinearity and autocorrelation.

4.3.1 Diagnostics test

4.3.1.1 Normality

The assumption of normality is required when applying regression analysis. This assumption implies that if there is a sufficiently large deviation of data distribution from normality, the statistical results may be invalid (Hair, Black, Babin, Anderson, & Tatham, 2010). There are a number of ways to test normality in regression analysis, such as using a histogram with normality plot, Kolmogorov Smirnov, Shapiro Wilk, skewness and kurtosis values. Since the Kolmogorov Smirnov and Shapiro Wilk normality tests are sensitive tests, this study used standard skewness and kurtosis value to test the normality of each variable separately. According to Haniffa and Hudaib (2004), the data of a variable is reasonably close to being normal if the standard skewness is within ±1.96 and the standard kurtosis is within ±3. However, for skewness, Kline (2005) suggested a higher threshold of ±3 and for kurtosis, a higher threshold ±10.

Following this guideline, this study used several approaches to transform each variable which is not normally distributed in a normal format. This study transformed total assets (as measure of company size) by using natural log. Besides, the transformation

also include the use of square root as to tranformed return on assets (measure as profitability) and debt to equity ratios (measure as leverage). Furthermore, this study also use the normal scores as to transform the extent of hedging activities disclosure score (HAD), the composite score of RMC effectiveness (REFF), each of RMC characteristics (i.e., RSIZE, RINDE, RDIVER, RDILI, RTRAIN, REXPERT and RDUTY) and the percentage of ownership concentration (i.e., FOWN, MOWN and GOWN). Tables 4.10 and 4.11 exhibit the normal distribution of skewness and kurtosis before and after the transformation.

Table 4.10
Results of normality test (N=221)

Before Transformation				
	Skewness		Kurtosis	
	Statistics	Std. error	Statistics	Std. error
HAD	-0.525	0.164	-0.704	0.326
REXIST	-1.114	0.164	-0.765	0.326
CSIZE	4.530	0.164	25.525	0.326
PROF	3.452	0.164	17.404	0.326
LEV	0.446	0.164	-0.377	0.326
AUDITOR	-0.705	0.164	-1.517	0.326
After Transformation				
	Skewness		Kurtosis	
	Statistics	Std. error	Statistics	Std. error
HAD	0.042	0.164	-0.279	0.326
REXIST	-1.114	0.164	-0.765	0.326
CSIZE	0.661	0.164	-0.244	0.326
PROF	0.004	0.164	-0.230	0.326
LEV	0.099	0.164	-0.368	0.326
AUDITOR	-0.705	0.164	-1.517	0.326

Table 4.11
Results of normality test (N=166)

	Skewness		Kurtosis	
	Statistics	Std. error	Statistics	Std. error
Before Transformation				
HAD	-0.952	0.188	0.250	0.375
REFF	0.194	0.188	-0.384	0.375
RSIZE	2.087	0.188	8.293	0.375
RINDE	-0.495	0.188	0.528	0.375
RDILI	0.696	0.188	2.989	0.375
RDIVER	1.241	0.188	0.085	0.375
RTRAIN	0.830	0.188	0.685	0.375
REXPERT	0.089	0.188	-0.190	0.375
RDUTY	0.294	0.188	-0.457	0.375
FOWN	0.446	0.188	-1.263	0.375
MOWN	2.207	0.188	4.631	0.375
GOWN	2.207	0.188	4.631	0.375
CSIZE	3.931	0.188	19.033	0.375
PROF	3.452	0.188	16.859	0.375
LEV	0.434	0.188	-0.522	0.375
AUDITOR	-0.813	0.188	-1.356	0.375
After Transformation				
	Skewness		Kurtosis	
	Statistics	Std. error	Statistics	Std. error
HAD	0.022	0.188	-0.330	0.375
REFF	-0.024	0.188	-0.309	0.375
RSIZE	0.240	0.188	0.031	0.375
RINDE	0.138	0.188	-0.495	0.375
RDILI	0.040	0.188	-0.027	0.375
RDIVER	0.818	0.188	1.705	0.375
RTRAIN	0.119	0.188	-0.233	0.375
REXPERT	0.068	0.188	-0.467	0.375
RDUTY	0.294	0.188	-0.457	0.375
FOWN	0.674	0.188	-0.562	0.375
MOWN	0.183	0.188	-0.548	0.375
GOWN	0.618	0.188	-0.600	0.375
CSIZE	0.460	0.188	-0.526	0.375
PROF	0.005	0.188	-0.266	0.375
LEV	0.054	0.188	-0.371	0.375
AUDITOR	-0.813	0.188	-1.356	0.375

4.3.1.2 Heteroscedasticity

The second assumption in multiple regression analysis is heteroscedasticity. The assumption of heteroscedasticity expects that the variation of a variable must be constant, showing the similar amounts of conflict across the range of values for the independent variable. According to Tabachnick and Fidell, (2007), heteroscedasticity is the result of non-normality of one of the variables and it is commonly found in cross-sectional studies. This is because there are huge diversities in size among observations. Heteroscedasticity problem will exist when there is an absence of homoscedasticity, indicating that the variance of residuals is not randomly dispersed throughout the predicted value of the dependent variable. In this respect, this study employed graphical and statistical tests to detect the existence of heteroscedasticity problem.

To detect the heteroscedasticity problem by using graphical test, the residuals from the model were plotted against the predicted value of the extent of HAD and residuals of each explanatory variable to determine whether the error terms of the model have constant variances. If a model is well-fitted, there should be no systematic pattern in the residuals plotted against the fitted values. Figures 4.10, 4.11 and 4.12 exhibit the scatter plot graphs of the distribution of residuals. It can be observed that the spread of data does not form any pattern, indicating that there is no severe heteroscedasticity problem in this study.

Moreover, to detect the heteroscedasticity problem statistically, this study also performed White's test as suggested by Gujarati (1995). This test includes the regression of the square error from the ordinary least squares (OLS) regression on the

dependent variable in the model. The regression results of the White test show that the significant value of F statistic exceeds the p-value 0.05 for all models in this study (*i.e., Model 1, Sig-value = 0.952, Model 2, Sig-value =0.456 and Model 3, Sig-value =0.648).* Hence, this study rejects the null hypothesis for the test of variance homogeneity which means that the data used in this study (the sample) are free from heteroscedasticity.

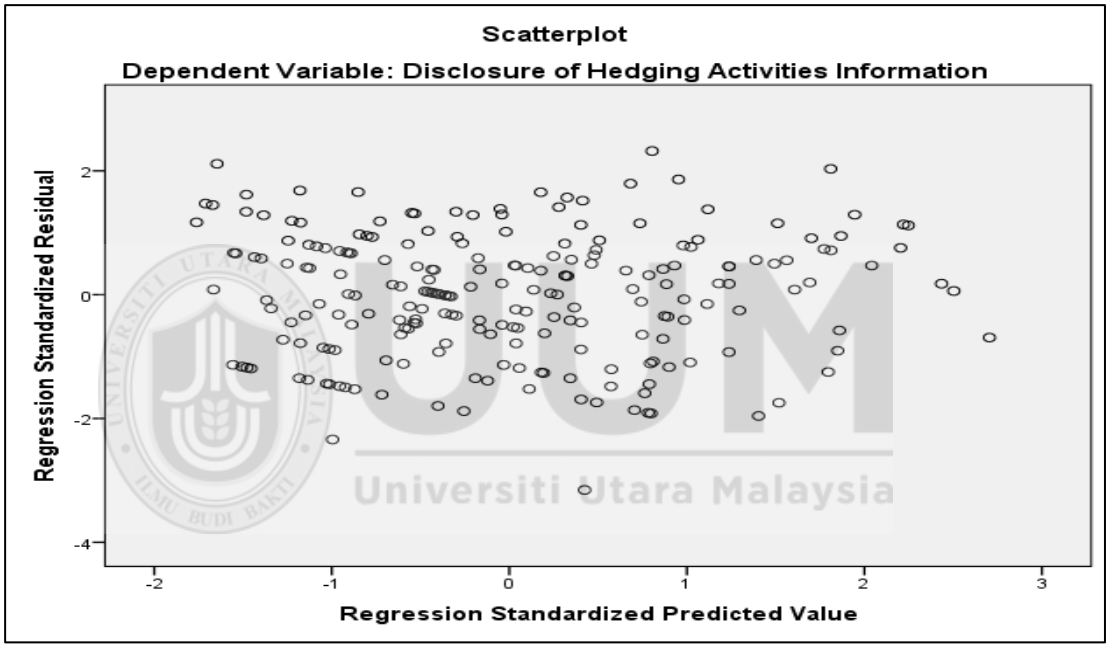


Figure 4.10
Graphical test for heteroscedasticity- The existence of RMC

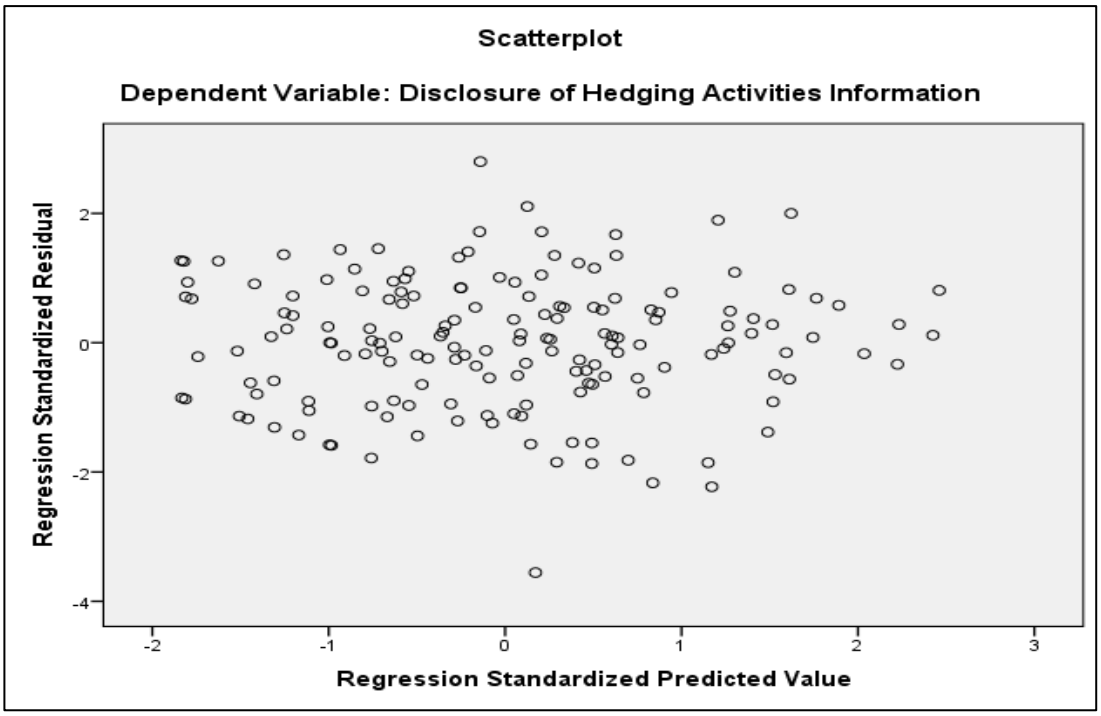


Figure 4.11
Graphical test for heteroscedasticity- The effectiveness of RMC

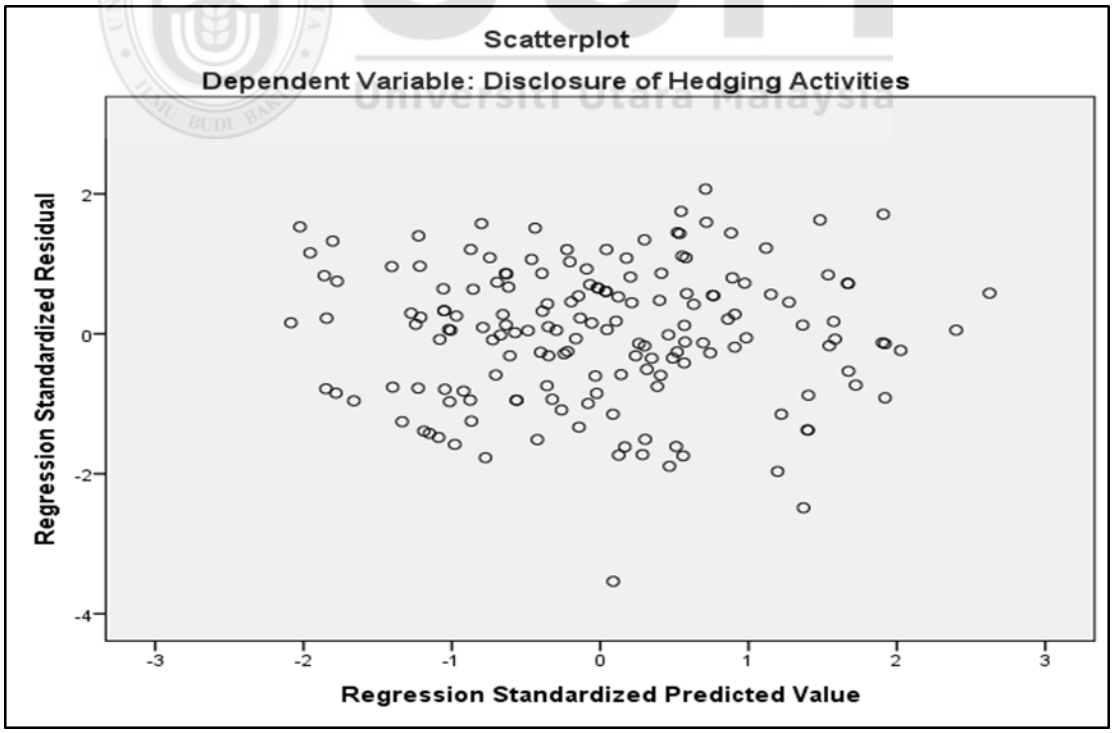


Figure 4.12
Graphical test for heteroscedasticity- The characteristics of RMC

4.3.1.3 Multicollinearity

Multicollinearity is the inter-correlation of the independent variables; the existence of multicollinearity will pose a serious problem in regression models because the effect of each of the independent variable on the dependent variable becomes difficult to identify (see Hair, et al., 2010; Field, 2013). In order to test the existence of multicollinearity effect, the Pearson correlation test was conducted. Tables 4.12 and 4.13 present the Pearson correlation coefficient among the independent variables by the different samples. The Tables show that the correlation coefficient in both samples is less than 0.7, which indicates that there is no severe multicollinearity problem in this study. As a rule of thumb, multicollinearity may be a problem if a correlation is more than 0.70 in the correlation matrix formed by all the independent variables (Hair et al., 2010). In addition, this study also performed further checks by looking at the variance inflation factor (VIF) for each independent variable. According to Haniffa and Cooke (2002), Kline (2005) and Hair et al. (2010), when the VIF is higher than 10, multicollinearity is a serious problem. As shown in Tables 4.14 and 4.15, all values of VIF are lower than 10. So, these values of VIF indicate that there is no serious problem of multicollinearity.

Table 4.14
The results of Standard test on VIF- The existence of RMC (N=221)

	Collinearity Statistics	
	Tolerance	VIF
REXIST	0.903	1.107
CSIZE	0.712	1.404
PROF	0.941	1.063
LEV	0.893	1.120
AUDITOR	0.826	1.210

Note: REXIST= The existence of RMC, dichotomous variable, 1 for company with RMC, 0 otherwise; **CSIZE** = Ln (total assets); **PROF**= Return on assets (ROA); **LEV** = Total *debt outstanding/total assets;* AUDITOR= 1 if firms are audited by a big 4 auditor, 0 otherwise

Table 4.15

The results of standard test on VIF-The effectiveness of RMC and RMC Characteristics (N=166)

	Collinearity Statistics	
	Tolerance	VIF
REEF	0.841	1.206
RSIZE	0.743	1.346
RINDE	0.475	2.106
RDILI	0.865	1.156
RDIVER	0.733	1.365
RTRAIN	0.925	1.081
REXPERT	0.727	1.375
RDUTY	0.637	1.571
FOWN	0.387	2.582
MOWN	0.355	2.818
GOWN	0.627	1.595
CSIZE	0.677	1.478
PROF	0.919	1.088
LEV	0.872	1.146
AUDITOR	0.803	1.245

Note: REEF= RMC effectiveness Index; **RSIZE**= Number of RMC members at financial year-end, **RINDE** = Proportion of independent non-executive members in the RMC; **RDILI=** Number of RMC meetings during the financial year; **RDIVER**= Proportion of female members in the RMC; **RTRAIN** = Number of types of risk management training to RMC members; **REXPERT**= Proportion of RMC members with accounting or finance qualification; **RDUTY**= Total score of a clear mandate defining the responsibilities of RMC; **FOWN=** Percentage of shares owned by family CEO/executives; **MOWN=** Percentage of share ownership by CEO/executive directors; **GOWN=** Percentage of share ownership by government institutions, agencies and GLCs**; CSIZE** = Ln (total assets); **PROF**= Return on assets (ROA**); LEV** = Total debt outstanding/total assets; **AUDITOR**= 1 if firms are audited by a big 4 auditor, 0 otherwise.

Table 4.12
Pearson Correlation-The existence of RMC (N=221)

	HAD	REXIST	CSIZE	PROF	LEV	AUDITOR
HAD	1					
REXIST	0.149*	1				
CSIZE	0.440**	0.297**	1			
PROF	-0.053	0.083	0.064	1		
LEV	0.307**	0.045	0.237**	-0.206**	1	
AUDITOR	0.249**	0.064	0.410**	0.048	0.055	1

Note: **. Correlation is significant at the 0.05 level (1-tailed); **. Correlation is significant at the 0.01 level (1-tailed);* ***HAD*** *= The extent of hedging activities information disclosure;* ***REXIST****= The existence of RMC, dichotomous variable, 1 for company with RMC, 0 otherwise;* ***CSIZE*** *= Ln (total assets);* ***PROF****= Return on assets (ROA);* ***LEV*** *= Total debt outstanding/total assets;* ***AUDITOR****= 1 if firms are audited by a big 4 auditor, 0 otherwise*

Table 4.13
Pearson Correlation-The effectiveness RMC and RMC Characteristics (N=166)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	**HAD**	1															
2	**REFF**	.116	1														
3	**RSIZE**	.065	.201**	1													
4	**RINDE**	.010	.641**	-.407**	1												
5	**RDILI**	.137*	.204**	-.033	.262**	1											
6	**RDIVER**	.014	.282**	.005	.147*	-.031	1										
7	**RTRAIN**	.242**	.475**	.195**	.158*	.004	.036	1									
8	**REXPERT**	.047	.309**	-.102	.415**	.149*	.074	.153*	1								
9	**RDUTY**	.065	.780**	.128	.456**	-.083	.065	.307**	.101	1							
10	**FOWN**	-.190**	-.078	-.136*	.039	.084	-.085	.000	-.006	-.114	1						
11	**MOWN**	-.259**	-.201**	-.142*	-.051	.045	-.147*	-.067	-.079	-.190**	.765**	1					
12	**GOWN**	.420**	.248**	-.011	.112	-.006	.114	.181**	.102	.261**	-.360**	-.446**	1				
13	**CSIZE**	.613**	.377**	.085	.151*	.050	.151*	.431**	.243**	.253**	-.241**	-.350**	.568**	1			
14	**PROF**	-.031	.008	.020	-.009	-.051	.138*	-.045	.006	.007	.000	-.021	.111	.046	1		
15	**LEV**	.405**	.007	-.004	.054	.020	-.111	.159*	.136*	-.010	-.015	-.030	.104	.313**	-.185**	1	.
16	**AUDITOR**	.304**	.259**	.067	.119	-.068	.075	.310**	.024	.225**	-.128	-.150*	.303**	.419**	.033	.160*	1

Note: * Correlation is significant at the 0.05 level; **. Correlation is significant at the 0.01 level; **HAD** = The extent of hedging activities information disclosure; **REEF**= RMC effectiveness Index; **RSIZE**= Number of RMC members at financial year-end, **RINDE** = Proportion of independent non-executive members in the RMC; **RDILI=** Number of RMC meetings during the financial year; **RDIVER**= Proportion of female members in the RMC; **RTRAIN** = Number of types of risk management training to RMC members; **REXPERT**= Proportion of RMC members with accounting or finance qualification; **RDUTY**= Total score of a clear mandate defining the responsibilities of RMC; **FOWN=** Percentage of shares owned by family CEO/executives; **MOWN=** Percentage of share ownership by CEO/executive directors; **GOWN=** Percentage of share ownership by government institutions, agencies and GLCs**; CSIZE** = Ln (total assets); **PROF**= Return on assets (ROA**); LEV** = Total debt outstanding/total assets; **AUDITOR**= 1 if firms are audited by a big 4 auditor, 0 otherwise.

4.3.1.4 Linearity

In order to employ regression analysis, it is assumed that the relationship between the dependent variable and independent variables is linear. To test the linearity assumption in the regression model, a histogram of distribution of the residuals was plotted. The line of distribution shows a normal curve, which in turn, shows that the data are in accordance with normal assumption. According to Hair et al. (2010) and Field (2013), the linearity of the relationship between the dependent and independent variables represents the degree to which the change in the dependent variable is associated with the independent variables. Therefore, in regression, nonlinearity is not a problem if the standard deviation of the dependent variable is more than the standard deviation of the residuals. Table 4.16 below shows that the standard deviation of the dependent variable is more than the standard deviation of the residuals.

Table 4.16
The standard deviation of the extent of HAD and the residuals

Variable	Standard Deviation					
	N	**Model 1**	**N**	**Model 2**	**N**	**Model 3**
HAD	221	0.9711	166	0.9675	166	0.9675
Residuals	221	0.8427	166	0.7015	166	0.7024

***Note**: **HAD** = the extent of Hedging Activities Disclosure*

4.3.2 Relationship between Risk Management Committee (RMC) and the extent of hedging activities disclosures

This section presents and discusses the results of the regression analysis on the relationship between the existence, effectiveness and characteristics of the RMC and the extent of HAD. The detailed results and discussions are as follows:

4.3.2.1 The existence of the RMC and the extent of hedging activities disclosure

Table 4.17 presents the result of the regression analysis between the existence of RMCs and the extent of HAD. It can be observed that this model explains 25.2% of the variation in the level of HAD, which is relatively low. The low R^2 is expected because previous corporate governance and financial instruments disclosure studies have shown that it is common to have a low R^2 (see Birt et al., 2013; Hassan et al., 2012, Lopes & Rodriques, 2007). Regarding the existence of the RMC, Table 4.17 shows that the existence of the RMC does not significantly influence the extent of HAD. This finding indicates that hypothesis H1 in this study is not supported and is inconsistent with prior studies on financial instruments disclosure (see Hassan et al., 2012; Birt et al., 2013). However, this finding is consistent with studies conducted by Abdullah and Chen (2010), in which they indicated that the existence of the RMC does not actively force companies to disclose information on hedging activities. According to Abdullah and Chen (2010), this might be due to the lack of the committee's effectiveness because the establishment of a RMC among non-financial Malaysian listed companies is still voluntary.

Based on this result, this study argues that the establishment of a RMC to act as an internal monitoring mechanism to enhance the quality of financial reporting is not the best approach for all companies, especially on disclosure of hedging activities information. This is because some companies may not establish a RMC due to the potential drawbacks of the committee, such as lack of qualified members, resources and skills (Bates & Leclerc, 2009; Dionne & Trikir, 2005). Indeed, some companies may establish a RMC just to provide an assurance and legitimise their actions on risk

management activities so as to demonstrate that they are fully diligent and responsible, especially on the use of derivatives in hedging. Therefore, this may provide a justification that the existence of the RMC as part of the corporate governance mechanism in influencing hedging activities information disclosure seems to not really play its role in enhancing financial reporting quality. Perhaps, the existence of a RMC is just for cosmetic reasons (see Blessy Sekome & Taddesse Lemma, 2014; Zaman, 2001). With regards to control variables, this study finds that company size (CSIZE) is significantly related to the extent of HAD. Similar to prior derivatives research (e.g., Hassan et al., 2012; Ismail & Abdul Rahman, 2011; Lopes & Rodriques, 2007; Taylor et al., 2008; Wei & Taylor, 2009), this finding also supports the fact that large companies incur lower information-processing costs as well as higher political costs than do small companies, thereby encouraging large companies to disclose more information.

Table 4.17
Summary of the multiple regression results-The existence of RMC and the extent of hedging activities information disclosure (HAD)

Model 1	**Predicted Sign**	**Coeff.**	**SE**	***t*-stat**	***P*-value**
(Constant)		-3.360	0.546	-6.150	0.000
REXIST	+	0.052	0.137	0.380	0.705
Control Variables					
CSIZE		0.232	0.043	0.380	0.000***
PROF		-0.047	0.060	-0.048	0.434
LEV		0.193	0.062	3.093	0.002***
AUDITOR		0.133	0.133	0.997	0.320
R^2	: 0.252	**P value**	: 0.000		
Adjusted R^2	: 0.235	**N**	: 221		
F statistic	: 14.506				

Note: ****Significant at the 0.01 level, **significant at the 0.05 level, *significant at the 0.1 level.*

In addition, Ng et al. (2013) argued that large companies are more likely to operate internationally and therefore be subjected to market risks associated with foreign currency and interest rate fluctuations, resulting in the need to deal with such disclosure. With respect to profitability (i.e., PROF), this study does not support the notion that company profitability has an impact on the extent of HAD. One factor that could explain the finding is the impact of the global systemic economic crisis (i.e., Eurozone debt and world petroleum price fluctuations) in the year 2008. The recovery planning after the crisis that occurred during the period of this study (i.e., 2013) may have affected the profitability of the sampled companies. However, the prediction that disclosure of hedging activities information is affected by leverage (LEV) is supported. The result is consistent with some previous studies (e.g., Birt et al., 2013; Hassan et al., 2012; Taylor et al., 2008; Wei & Taylor, 2009), which found that the level of fair value, financial instruments and risk management disclosures, under a mandatory regime pursuant to IAS32 (*Financial Instruments: Presentation and Disclosure*), are related to leverage levels. The extent of disclosure increases with increasing financial risk, wherein companies with higher leverage increase disclosure to reduce potential agency costs associated with external funding and their asset replacements. With regard to auditor quality (AUDITOR), this study finds that Big 4 audit firms do not significantly influence the extent of HAD.

4.3.2.2 The effectiveness of RMC and the extent of hedging activities disclosure

This section reports the results of regression analysis on the relationship between RMC's effectiveness and the extent of HAD. As mentioned in Chapter Three, to measure the effectiveness of a RMC, a score is rendered based on the aggregate score

of seven RMC characteristics. It is expected that an increase/decrease in RMC's effectiveness will lead to an increase/decrease in the extent of HAD. The method used is based on the idea of DeZoort et al. (2002) and Ika and Mohd Ghazali (2012) who aggregately measured the effectiveness of audit committee based on some committee characteristics. They perceived that the effectiveness of the internal corporate governance mechanism may be achieved via different attributes and that a particular mechanism's effectiveness may depend on each of these attributes. A study by O'Sullivan et al. (2008) supported this notion by arguing that investigating the overall corporate governance mechanisms gives a stronger effect of measurement than just examining them individually. Applying the same reasoning, this study examines whether RMC characteristics as a whole (i.e., aggregately measured) within the sampled companies, are associated with the extent of HAD. Table 4.18 shows the result of regression between the effectiveness of RMC (REFF) and the extent of HAD.

Table 4.18
Summary of the regression results-RMC's effectiveness and the extent of hedging activities information disclosure (HAD)

Model 2	**Predicted Sign**	**Coeff.**	**SE**	***t*-stat**	***P*-value**
(Constant)		-4.775	0.582	-8.209	0.000
REFF	+	-0.114	0.065	-1.753	0.082*
Control Variables					
CSIZE		0.329	0.042	7.777	0.000***
PROF		-0.018	0.060	-.296	0.768
LEV		0.216	0.064	3.359	0.001***
AUDITOR		0.134	0.137	0.976	0.330
R^2	: 0.439	**P value**	: 0.000		
Adjusted R^2	: 0.421	**N**	: 166		
F statistic	: 25.014				

***Note: ******Significant at the 0.01 level, **significant at the 0.05 level, *significant at the 0.1 level.*

Based on Table 4.17, it can be observed that RMC's effectiveness negatively influences the extent of HAD and is significant at the 10% level. Thus, this finding rejects the hypothesis (i.e., H2) that the effectiveness of RMC leads to better HAD. This indicates that the characteristics of RMC's effectiveness that are expected to enhance the monitoring mechanism are not related to the amount of information disclosed on hedging activities in the annual reports of Malaysian non-financial companies. Indeed, this finding does not support the positive relationship between the level of effectiveness of internal governance mechanisms with corporate information disclosure as reported by some previous studies (e.g., DeZoort et al., 2002; Ika & Mohd Ghazali, 2012; Zango et al., 2015a).

One possible explanation for this finding is that the establishment of RMCs by Malaysian non-financial listed companies is still voluntary; hence the effectiveness of the RMC might be related to other specific strategic business considerations (see Bugalla et al,. 2012; Ng et al., 2013). From another point of view, the unexpected finding also may be due to the members' lack of the technical and financial knowledge or training needed to understand the complicated hedge activities report and hedging strategies presented to them. Eventhough RMCs are independent and faithful in performing their role, they could unconsciously vote for resolutions that do not increase the quality of HAD.

Another possible reason that may explain this finding is that the roles played by RMC members are mixed. Since many of the sampled companies prefer to establish the RMC through the audit committee (i.e., RMC as a sub-committee), the mixed roles

played by RMC members as well as audit committee members can weaken the committee's functions (see Birt et al., 2013; Blessy Sekome, & Taddesse Lemma, 2014). This is because time constraints and members' fatigue are more likely to occur in combined committees, which consequently inhibit the desire and ability of the committee members to make more rigorous review in hedge activities reports (see Subramaniam et al., 2009). Hence, the existence of the RMC can be less effective, especially in influencing the extent of HAD.

With respect to control variables, it can be observed that the results of the control variables support the results of the previous studies on financial instruments disclosure (e.g., see Birt et al., 2013; Hassan et al., 2012). The findings of this study reveal that both company size (CSIZE) and leverage (LEV) are significant at the 1% level, respectively, except company's profitability (i.e., PROF).

4.3.2.3 RMC characteristics and the extent of hedging activities disclosure

This section discusses the results of the regression analysis of each individual characteristic of the RMC. Table 4.19 exhibits the findings of the regression analysis and it can be observed that only two out of the seven characteristics of RMC (i.e., RMC independence and diligence) are significantly associated with the extent of HAD. Moreover, the results presented in Table 4.19 also exhibit significant results for control variables. The findings reveal that both company size (CSIZE) and leverage (LEV) are significant at the 1% level, respectively.

Table 4.19
Summary of the multiple regression results-RMC characteristics on the extent of hedging activities disclosure

Model 3	**Predicted Sign**	**Coeff.**	**SE**	***t*-stat**	***P*-value**
(Constant)		-4.416	0.618	-7.143	0.000
RSIZE	-	-0.041	0.074	-0.554	0.580
RINDE	+	-1.836	1.039	-1.767	0.079*
RDILI	+	0.164	0.065	2.508	0.013***
RDIVER	+	-0.018	0.072	-0.253	0.801
RTRAIN	+	-0.027	0.080	-0.339	0.735
REXPERT	+	-0.081	0.071	-1.140	0.256
RDUTY	+	0.024	0.291	0.083	0.934
Control Variables					
CSIZE		0.323	0.044	7.323	0.000
PROF		-0.012	0.060	-.198	0.843
LEV		0.232	0.064	3.615	0.000
AUDITOR		0.157	0.139	1.131	0.260
R^2 : 0.473		**P value**	: 0.000		
Adjusted R^2 : 0.436		**N**	: 166		
F statistic : 12.575					

Note: ****Significant at the 0.01 level, **significant at the 0.05 level, *significant at the 0.1 level.*

Further discussions are outlined as follows:

RMC Size

As shown in Table 4.19, there is an insignificant relationship between the size of the RMC and the extent of HAD (t-value = - 0.554, P > 0.10). This result does not support hypothesis H2a, which predicts the size of RMC may affect it monitoring functions and more hedging activities disclosure can be expected. This result is inconsistent with the study by Ng et al. (2013) that found large RMC size is more resourceful and efficient to address various risk issues and more effective in controlling risk-taking by a company. However, this finding is in line with the results of several studies related to internal governance mechanisms that committee size does not have a significant

relationship with the level of corporate information disclosure (e.g., Mak & Li, 2001; Htay et al., 2011; Lakhal, 2005; Zango, Kamardin, and Ishak, 2015b).

With respect to these previous findings, one of the possible reasons that might explain it is the absence of real application of principles and appropriate standards for the establishment of RMCs. This is because the establishment of RMC is still voluntary among non-financial Malaysian listed companies. Another explanation for the insignificant relationship between RMC size and HAD by non-financial companies in Malaysia is that the number of directors on the RMC might not reflect the directors' skills and knowledge, which are more valuable for a committee to function effectively; or it has not shown serious attention to HAD. A study by Ameer et al. (2011) revealed that most Malaysian companies lack the necessary skills and adequate understanding of the accounting standard requirements on hedging activities. Thus, it is valid to assume that the size of the committee is only a factual number of directors, and does not reflect the directors' skills and knowledge, which are more valuable to a committee to function effectively. Intrinsically, one can realise that the size of the RMC is not an issue if the board members possess the relevant skills to monitor the financial reporting process (see Bonn, 2004).

RMC independence

Table 4.19 shows that the proportion of independent directors in the RMC is significant in explaining the extent of HAD at t-value = -1.767 and $P < 0.1$. However, the coefficient is negative, suggesting that the high proportion of independent directors

in the RMC does not influence the extent of HAD. This is contrary to the stated hypothesis H2b in this study, whereas the negative sign does not underpin the statements of the agency and resource dependence theories to claim that the presence of a high number of independent directors can enhance the committee's effectiveness (Cheng & Courtenay, 2006; Fama & Jensen, 1983; Leung & Horwitz, 2004; Pfeffer & Salancik, 1978). This finding goes against the findings of Ng et al. (2013) that evidenced that the presence of more independent directors in RMCs makes them more objective in decision-making and members will communicate better risk information to the stakeholders. The finding also contradicts Adznan and Puat Nelson (2014) and Dionne and Triki (2005) that evidenced that the proportion of independent directors positively influences the level of financial instruments disclosure. This finding is also inconsistent with the results of Lopes and Rodrigues (2007) that revealed the proportion of independent directors has no relationship with the extent of financial instruments information disclosure.

On the other hand, this finding is inconsistent with the results of other accounting research that has found that independent directors enhance the role of the committee (i.e., board and audit committee) in monitoring the management and enhancing the quality of financial reporting in companies. For example, it has been found that the independent directors reduce financial statement fraud (Beasley, 1996; Agrawal & Knoeber, 2001); reduce earnings management (Peasnell, Pope, & Young, 2005; Klein, 2002); improve audit quality (Salleh, Stewart, & Manson, 2006); and reduce abnormal accruals (Koh, Laplante, & Tong, 2007).

One possible reason to explain the finding may be that a RMC with a high number of independent directors may cause the good effect to disappear. This is because "super independent committee" may create internal conflicts which lead to the low magnitude of information disclosure as they will not be able to effectively carry out their actual roles (see Al-Musalli & Ismail, 2012; Eng & Mak, 2003; Haniffa & Cooke, 2002; Huafang & Jianguo, 2007; Khodadadi, Khazami, & Aflatooni, 2010; Li, Mangena, & Pike, 2012). Another explanation for the negative relationship between RMC independence and the extent of HAD by non-financial companies in Malaysia may be because independent directors are unclear about their expected roles as board and RMC members (see Al-Musalli & Ismail, 2012; Mujtaba & William, 2011; Eng & Mak, 2003). In this regard, they actually lack the competence to exercise their power and complement their monitoring role to force management to disclose more hedging activities information. Perhaps, it seems that the presence of independent directors in the RMC is just to meet the requirements of the code of corporate governance. Therefore, when it involves HAD, the effectiveness of the RMC not only depends on the proportion of independent directors. In this case, the talented and skilful RMC members who can understand in-depth the hedging activities as well as clearly understand their expected roles as board and RMC members, are also crucial.

RMC gender diversity

Table 4.19 shows the results of analysis between the presence of women directors in the RMC (labelled as RDIVER) and the extent of HAD. It is observed that RDIVER does not significantly influence the extent of HAD (t-value = -0.342, P > 0.10). This finding is inconsistent with several previous studies to support the argument that the

presence of female directors is one of the important factors that increases committee effectiveness and gives the potential for a company to increase the level of information disclosure and performance (e.g., Abdullah & Ku Ismail, 2013; Adams et al., 2005; Ibrahim & Angelidis, 1994; Kang, et al., 2007; Rao, et al., 2012; Zango et al., 2015b). This finding also does not support the notion that female members can increase the efficiency and effectiveness (due to greater accountabilities and responsibilities) in the decision-making process (see Adams & Ferreira, 2009; Luckerath-Rovers, 2013; Zango et al., 2015b). Although some previous evidence has claimed that women are committed, diligent, well prepared and able to give different views and more attention to audit, risk and oversight control, thus leading to the quality of financial reporting (see Huse & Solberg, 2006; Stephenson, 2004; Zango et al., 2015b), this finding reveals that the presence of women as RMC members does not increase the effectiveness of RMC towards the disclosure of information on hedging activities. This assertion is consistent with studies conducted by Marimuthu and Kolandaisamy (2009), and Shukeri, Shin, and Shaari (2012) that documented that gender diversity is not associated with company performance.

One possible reason that may explain this finding is the small number of female directors in RMCs. The descriptive statistics show that the average proportion of female directors appointed to be RMC members in this study is only at 1%; thus, it seems that the presence of women could not affect the dominant power by management and other directors in the RMC (see Van der Walt & Ingley, 2003). In this respect, their role in RMCs to be involved in discussions and making judgement as well as participating in complex arguments on the disclosure of the relevant

information on hedging activities, may be affected. However, this study argues that women directors in the RMC should have the knowledge of hedging activities in order to give different views and more attention to disclosure of information. Intrinsically, it is not gender that matters, but the knowledge on hedging activities that is more important (see Ameer et al., 2011).

RMC diligence

This study operationalises RMC diligence based on the frequency of meetings during the financial year. The results of this study show that HAD is positively related to the frequency of meetings of the RMC at the t-value of 2.49, and $P < 0.05$. This indicates that as the number of meetings increases, the level of hedging activities information disclosure also increases. Thus, Hypothesis 2d in this study is supported. This result is consistent with Laksmana (2008) and supports O'Sullivan et al. (2008), who argues that the frequency of meetings is a measure of committee activity, which enhances its effectiveness. Frequent meetings can improve the RMC's effectiveness because the hedge activities information asymmetry is high and independent directors are usually less knowledgeable about company operations than their executive colleagues (Roberts et al., 2005; Pye & Pettigrew, 2005). Hence, the meetings are the times for direct, face-to-face communication and for the exchange of ideas. This notion is also supported by Lorsch (2012) who claimed that the time the committee spends in meetings is the most important time because during the meetings, all committee members are engaged where the ideas can be developed and argued upon through a collective view before they are conveyed to the management. In this regard, this study expects that the RMC meeting is the platform on which all the members learn the most

about their hedging activities and make joint decisions. Through frequent meetings, the independent directors will get the information that can help them to protect the interests of shareholders through discussions with their executive colleagues. Hence, the frequency of meetings is important for the RMC members to make decisions to protect the interests of shareholders and increase the extent of hedging activities information disclosure. Although there are some evidences that go against this finding and reveal that RMC and board meetings are not associated with risk and the level of financial instruments information disclosure (e.g., Ng et al., 2013; Zango et al., 2015b), this study believes that the number of meetings held by RMCs is a factor that can influence the extent of HAD. Further, this study also argues that without meetings, the other characteristics of the RMC will be useless.

RMC training

This study measures RMC training by looking at the types of risk management training attended by the RMC members. Based on Table 4.19, it can be observed that RMC training does not influence the extent of HAD (t-value = -0.245 and P > 0.05). Therefore, Hypothesis 2e is not substantiated. This indicates that the different types of training throughout the financial year regarding risk management attended by RMC members do not improve the effectiveness of the committee members in performing their check-and-balance responsibility towards the disclosure of hedging activities information. This finding is consistent with a study conducted by Chan and Li (2008) who suggested that continuous training of directors does not increase the effectiveness of the committee. However, this finding fails to support findings by Zona and Zattoni

(2007) and Carpenter and Westphal (2001) who found that trainings (i.e., based on knowledge and skills) can improve board's monitoring roles and strategic decision involvement.

A possible reason that can explain the above finding is the risk management training does not provide a source of competence that is needed by RMC members, particularly on the disclosure of hedge activities information. Directors may attend the training just for the sake of fulfilling the governance requirement guidelines. This may be true because it can be noticed that on average, only two different types of risk management trainings were attended by RMC members per year, which can be considered insufficient. Hence, this suggests that members with insufficient risk management training are unable to engage more actively in risk management activities and may also be less likely to recognise relevant hedging activities information to be disclosed.

Another reason that can explain the insignificant finding is the variable measurement. This study measures the RMC training based on the number of different types of risk management training attended by RMC members; the measurement does not tell whether the directors are really trained and exposed to hedging activities reporting. Even so, the measurement used in this study can still be regarded as the best judgement, given that the descriptions of directors' training that appear in the yearly annual reports are brief and difficult to evaluate.

RMC expertise

This study defines financial experts as directors who have qualifications or experience in accounting or finance (see Krishnan & Visvanathan, 2008; Ismail & Abdul Rahman, 2011). It is expected that RMC members who have accounting and finance education background can advise for more disclosure on hedge activities. Based on Table 4.19, it is noted that the relationship between the presence of financial experts in the RMC and the extent of HAD is not significant (t-value = -1.152 and P > 0.05). This implies that financial expertise in the RMC to oversee the hedge activities process does not influence the extent of HAD. Hence, Hypothesis 2f developed in this study is not substantiated. This finding is not consistent with several prior studies that have examined the relationship between the presence of a financial expert in the board committee with financial reporting quality and disclosure (e.g., Bedard et al., 2004; Xie et al., 2003). However, this result is supported by Li et al. (2012) and Ali and Taylor (2014) who found an insignificant relationship between financial expertise in a board committee and corporate information disclosure.

A possible explanation for this insignificant finding is that the financial experts in RMCs may not have the specific expertise in corporate hedging activities. Since hedging activities are complex and sophisticated, RMC members who do not clearly understand hedge accounting and hedge activities may not be able to ask the right questions or understand the answers during meetings. According to Bates and Leclerc (2009) and Bugalla et al. (2012), in order to ensure a strong RMC, the committee should have a member regarded as a 'risk management expert', whereby that individual should have expert training and experience in the industry. Unlike audit

committee members who are often selected based upon their skills and experience related to accounting, a risk committee should comprise directors with a diverse risk management skills-set to strengthen a company's risk management practices. Although the RMC members have qualification or experience in accounting or finance, understanding the accounting standards for financial instruments, especially hedge accounting, may need some effort (see Ali, 2010).

Another possible explanation for this insignificant relationship may be the transition stage and learning process to adopt the new accounting standards for financial instruments in Malaysia. Perhaps, directors, including RMC members, are not ready to consider the complicated decisions for disclosure of information on hedging activities that may affect the interest of shareholders and their position (Hillman & Dalziel, 2003; DeMarzo & Duffie, 1995). This is because disclosure of corporate hedging activities can affect earnings volatility, which may contribute to questionable company performance (see Glaum & Klocker, 2011).

RMC duty

It is expected that when a clear authority is given by the management to the RMC to perform its tasks, there is a tendency for high amount of HAD. Table 4.19 shows that RMC duty does not significantly influence the extent of HAD (t-value = 0.016, and P > 0.05). Hence, Hypothesis 2g is not supported. This result demonstrates that the mandate of supervisory responsibilities given to the RMC is not sufficient to enforce more disclosure for hedging activities information. Consistent with Bates and Leclerc

(2009), this finding supports the notion that RMC is not fully discharging its risk management function and responsibilities. This is because the creation of a RMC by a company without clear guidelines can add an additional bureaucratic layer in the board's risk oversight function. Besides, the existence of RMC could also cause non-committee board members to lose their focus on risk oversight, relying instead too heavily on the expertise of the risk committee members. Hence, an additional committee with risk oversight responsibilities, like the RMC, could cause confusion about the boundaries of other board committees' oversight responsibilities that may cause certain categories of risk to be overlooked or mismanaged, including hedging activities and disclosure of its relevant information. However, this finding should be viewed with caution because the measurement of RMC duty used in this study is based on the information content of RMC's responsibilities disclosed in the annual reports which can be considered subjective. Some of the brief information disclosed may not really capture the supervisory authority given to RMCs, particularly related to hedging activities. Nevertheless, this study acknowledges that the establishment of RMCs and their supervisory duties may be due to other strategic reasons, like for risk management activities and other business frameworks (see Bugalla et al., 2012; Zaman, 2001).

4.3.3 The Moderating Effect of Ownership Concentration

This section exhibits the results of the moderating effect of the different types of ownership concentration (i.e., family, management and government ownership) on the relationship between the effectiveness of RMCs and the extent of HAD. The results provide answers to the final research objective and hypotheses of this study. In order

to test the different effects of ownership concentration as a moderator on the relationship between RMC's effectiveness and the extent of HAD, this study applied hierarchical regression (see Baron & Kenny, 1986; Frazier, Tix, & Barron, 2004; Kim, Al-Shammari, Kim, & Lee, 2008). Hierarchical regression analysis is a commonly used technique and is suggested as an appropriate method for determining the moderating effect of a quantitative variable on the relationship between other quantitative variables (Baron & Kenny, 1986). Besides, hierarchical regression analysis is a straightforward procedure to test the moderating effects (see Aguinis & Gootfredson, 2010; Aguinis, Sturman, & Pierce, 2008).

In order to detect the moderating effect, the interaction terms of the independent variables and moderator are calculated and standardised (see Aiken & West, 1991; Preacher, Curran, & Bauer, 2006). The interaction terms is calculated by multiplying together the *z-score* of the preditor and moderator variables. Since interaction terms (i.e., independent and moderator variables) are typically highly correlated, standardising the interaction terms would reduce the multiconellinerity problem (see Auguinis & Gottfredson, 2010; Frazier et al., 2004). Besides, by standardising *z-score*, the effects of the predictor and moderator will be more helpful in providing a meaningful interpretation (Preacher et al., 2006). After the interaction terms have been created, the moderating effect is tested by structuring a hierarchical regression equation in SPSS. In this respect, each of the related variables are entered into the regression equation through a series of specified blocks or steps in accordance with the suggestion by Baron and Kenny (1986) and Frazier et al. (2004).

The first step begins with the control variables, then followed with an estimation of the unmoderated equation and lastly with the moderated relationship. Based on several previous disclosure studies (e.g., see Al-Ebel, 2013; Al-Musalli, 2013) that have referred to Hair et al., (2010), this study also considers moderator variables to be significant when there is a significant change in R^2.

Table 4.20

The moderating effect of ownership structure on the relationship of between RMC's effectiveness and the extent of hedging activities disclosure (HAD)

Variables	**Step 1 CV**	**Step 2 IV**	**Step 3 MV**	**Step 4 IV*MV**
CSIZE	0.520 (7.579)***	0.562 (7.777)***	0.480 (5.792)***	0.469 (5.610)***
PROF	- 0.014 (-0.222)	-0.018 (-0.296)	-0.026 (-0.430)	-0.035 (-0.571)
LEV	0.232 (3.611)***	0.217 (3.359)***	0.228 (3.533)***	0.232 (3.584)***
AUDITOR	0.050 (0.757)	0.064 (0.976)	0.056 (0.844)	0.069 (1.036)
REFF		-0.114 (-1.753)*	-0.121 (-1.852)*	-0.181 (-2.278)**
FOWN			0.014 (0.155)	0.068 (0.704)
MOWN			-0.059 (-0.604)	-0.103 (-1.012)
GOWN			0.119 (1.549)	0.113 (1.471)
REFF * FOWN				0.192 (1.843)*
REFF * MOWN				-0.166 (-1.502)
REFF * GOWN				0.069 (0.815)
R^2	0.428	0.439	0.453	0.467
Adjusted R^2	0.414	0.421	0.425	0.429
R^2 change	0.428	0.011	0.014	0.014
Significant F change	0.000	0.082	0.264	0.251

Notes: **CV** = Control Variables, **IV**= Independent Variables, **MV**= Moderating Variables. ***Significant at the 0.01 level, **significant at the 0.05 level, *significant at the 0.1 level. The figures in parentheses are the t-statistics

As shown in Table 4.20, when company size, profitability, leverage and types of audit firms are entered as control variables into the regression model in the first step, R^2 (i.e., coefficient of determination) is found to be 0.428, indicating that 42.8% of the change in the extent of HAD is explained by CSIZE, PROF, LEV and AUDITOR. Moreover, by adding the independent variable (RMC's effectiveness or REFF) in step 2, it is observed that R^2 increases to 0.439. The change of R^2 (0.011) is significant which implies that the addition of 1.1% of variation in the extent of HAD is explained by REFF. However, the beta coefficient of REFF is found to be negative in influencing the extent of HAD. These findings do not support the argument of a positive relationship between RMC's effectiveness and the extent of HAD.

Furthermore, Table 4.20 exhibits the results of the regression when the moderator variable is introduced in Step 3. It can be noticed that the R^2 change (0.009) is not significant and this result indicates there is no major effect from the moderator variables on dependent variable. In the last step, when the interactions are entered, it can be observed that the R^2 increases from 0.448 to 0.461. Although the R^2 is changed (0.012), it is not significant. Overall, this implies that the concentration of the ownership structure does not moderate the relationship between RMC's effectiveness and the extent of HAD. However, it can be observed that the beta coefficient for the interaction terms of the family ownership concentration is positive and significant at the 10% level. The following section discusses the results of this analysis.

4.3.3.1 Family Ownership

In order to test the moderating roles of family ownership concentration (FOWN) on the effectiveness of the RMC and the extent of HAD, an interaction term was established between REFF and FOWN. The result is reported in the last panel of Table 4.20. It can be observed that the beta coefficient for the interaction between family ownership and the effectiveness of RMC is positive and significant at the 10% level. This finding suggests that the negative association between RMC's effectiveness and the extent of HAD found in this study is weaker for companies with higher family ownership concentration. Hence, this result does not support Hypotheses 3a. This means that the extent of HAD is high in high family-owned companies due to the family having the ability to control the company. This is because they have the capacity to appoint competent RMC members who can control managers involved in hedge activities, ensure compliance with the accounting standard requirements and communicate relevant information. This finding contradicts several previous ownership structure and disclosure studies which have evidenced that high family-owned companies significantly influence the board committee to disclose less corporate information in their annual reports (e.g., Akhtaruddin & Haron, 2010; Chakroun, 2013; Saleh et al., 2009).

A possible explanation for this finding is family-owned companies are concerned with the competence of RMC members in managing hedging activities. This is because hedging activities involve a huge amount of money, complex transactions and high risk that may affect firm performance. In this respect, family owners are pressured to be cautious about their hedging activities as the use of derivatives could magnify losses

for their company. Hence, the involvement of family members as a part of the management team as well as the RMC may indirectly lead to compliance with the accounting standard requirements and disclosure of more relevant information. This notion might be true and is supported by several studies that have claimed family-controlled companies are really serious and care about their business performance and long-term value in fulfilling the obligations to preserve wealth for future generation owners (see Anderson & Reeb, 2003; Bertrand & Schoar, 2006; Martínez, Stöhr, & Quiroga, 2007). Based on the resource dependence theory, the rationale for more information on hedging activities disclosed by controlling family found in this study can be perceived as high family ownership concentration is a good resource for a company to have superior monitoring abilities relative to diffused shareholders, especially when family ownership is combined with family control over management (see Chakroun, 2013; Lee, 2006; Wan-Hussin, 2009). However, the underlying assumption based on the agency theory that politically powerful families in control of public companies tend to expropriate wealth from minority shareholders is not supported in this study (see Ali, Chen, & Radhakrishnan, 2007; La Porta et al., 1999).

4.3.3.2 Management Ownership

Table 4.20 shows that the interaction of the RMC's effectiveness with management ownership concentration is insignificant ($P > 0.05$) and does not support Hypotheses 3b. This implies that high or low management ownership does not moderate the relationship between the effectiveness of the RMC and the extent of HAD. This finding is not consistent with some previous studies that have evidenced high concentration of management ownership influences the effectiveness of board committee and sub-committee towards the disclosure of corporate information (e.g.,

Akhtaruddin & Haron, 2010; Eng & Mak, 2003). One possible explanation for this finding may be that the managers/directors are the owners, and they are actively engaged in day-to-day activities of the organisation; and as a part of the committee, they can directly obtain full information. This is because the organisational structure has lower information asymmetry and become less complex that may lessen the need for assurance and monitoring (see Desender, 2009; Fernandez & Arrondo, 2007; Javid & Iqbal, 2008; Jensen & Meckling, 1976; Niemi, 2005).

Another explanation for this insignificant relationship might be the broader focus of owner-managers towards risk management activities, may hamper the effectiveness of the RMC towards the disclosure of hedging activities information. Risk management is a broader concept, whereby it encompasses all areas of a company's operations (e.g., technological risk, credit risk, operational risk, strategic risk, etc.) and therefore, in certain circumstances, it may affect the owner/managers to overlook or purposely mismanage the RMC's functions which may lead to its ineffectiveness. This notion is supported by several previous studies that have revealed that when there is high managerial ownership concentration, the effectiveness of board committee/sub committee no longer exists because owner-managers (i.e., CEO/directors) are more likely to cater to their own self-interest decisions than to increase their company's performance (see Desender, 2009; Fernandez & Arrondo, 2007; Javid & Iqbal, 2008). Hence, as the existence of a RMC is being controlled by the owner-managers, it is valid to assume that the quality of monitoring on hedging activities information disclosure in high concentrated managerial ownership companies might be less likely to be associated to the effectiveness of the RMC.

Another reason that may explain this finding is that companies prefer to voluntarily form RMCs through the audit committee. According to Bates and Leclerc (2009), and Birt et al. (2013), a board with a stand-alone risk committee is more effective in handling risk management activities compared to boards that delegate the duties to the audit committee. This is because the roles of RMC members as a part of audit committee may create internal dispute and affect its effectiveness. In this respect, it is valid to assume that even owner-managers in high ownership concentration companies are able to supervise and control RMCs and the unclear roles performed by RMC members may confuse the committee to treat risk management activities, specifically on the disclosure of hedging activities information. Hence, the relationship between RMC's effectiveness and the extent of HAD in high management ownership companies may not be related.

4.3.3.3 Government ownership

Table 4.20 also reveals the interaction between government ownership concentration on the relationship between the effectiveness of the RMC and the extent of HAD. It is observed that the relationship is not significant ($P > 0.05$). This suggests that the concentration of the government ownership does not significantly moderate the relationship between the effectiveness of the RMC and the extent of HAD. This means that Hypotheses 3c is not supported. This finding is not consistent with some previous studies that have revealed that high government ownership may act as a monitoring mechanism to ensure the effectiveness of the board committee towards the goals of government to the public at large and maximisation of political support is being fulfilled (see Abdullah et al., 2012; Abdullah et al., 2011; Amran & Susela Devi, 2008;

Mohd-Ghazali, 2007). A possible explanation for this finding may be the government representatives (i.e., directors) who sit on the board committee as well as the RMC are not a beneficial resource to help companies in risk management activities, especially on hedging activities (see Fraile & Frejedas, 2014; Beuselinck et al., 2015). This may be due to their lack of knowledge and competence in hedge activities which may affect the effectiveness of the RMC as a monitoring mechanism towards the extent of HAD. This notion is supported by Francis et al. (2003) who claimed that the representatives of government-dominated companies do not rely on general purpose of financial reports for decision-making; they only look for non-accounting information as their investment valuation inputs. Moreover, government-controlled companies also can be viewed as manager-controlled companies in which they are more able to be free riders and less likely to be careful monitors of managers than private owners (see Gugler, 2003). Managers in such companies are more likely to benefit from their position to maximise their own interest, where the establishment of RMCs is merely to legitimise their risk management actions. Hence, in this respect, the relationship between RMC's effectiveness and the extent of HAD in government-dominated companies may not exist.

4.4 Further analysis

In order to identify the credibility and gain further insight of the initial results, this study employed alternative measures by using natural logarithm and dummy variable to re-examine RMC's effectiveness (REFF), RMC size (RSIZE), RMC independence (RINDE), RMC diligence (RDILI), RMC diversity (RDIVDER) and RMC expertise (REXPERT). In addition, this section further analyses the influence of RMC's effectiveness on the choice of hedge accounting practices. It is expected that if RMC's

effectiveness has significant relationships with the choice of hedge accounting, more hedging activities information can be expected to be disclosed to confirm the initial finding in this study. This section also analyses the influence of RMC's existence, RMC's effectiveness and RMC's characteristics to the extent of HAD by performing separate analysis between mandatory and voluntary disclosure of hedging activities. The detail of the results and discussions on the additional analysis are provided in the following sections:

4.4.1 Alternative measure for RMC's effectiveness

To measure the level of RMC's effectiveness, this study used the percentage of company's actual disclosure score over company's total possible disclosure score of RMC's effectiveness components (see Chapter 3). Based on the initial results, it is found that the relationship between RMC's effectiveness and the extent of HAD is negatively significant. This result implies that the effectiveness of RMC does not provide good resources and monitoring mechanism to support more disclosure on hedging activities information. This finding also contradicts the prediction that the effectiveness of RMCs will provide strong governance to a company which will positively affect the disclosure of hedging activities information. In order to confirm the credibility of this initial result, this study further re-examined the regression model by using an alternative measure of the '*effectiveness*', which is dichotomous variables. A score of 1 is given if the RMC's effectiveness score is more than 50% and 0, otherwise. This measurement has been applied in several previous studies on board and audit committee (see Bedard et al., 2004; Ika & Mohd Ghazali, 2012). Table 4.21 shows that the relationship between RMC's effectiveness (i.e., labelled as REFF_DUMM) and the extent of HAD is not significant (at P < 10 percent), which is

different from the initial finding. This result indicates that RMC's effectiveness does not have any relationship with the extent of HAD. Consistent with the initial findings, perhaps, the existence and the effectiveness of RMCs among Malaysian listed companies might be related to other strategic risk management activities reasons because the establishment of the RMC is still on a voluntary basis (see Adznan & Puat Nelson, 2014; Bates & Leclerc, 2009; Birt et al., 2013; Hassan et al., 2012; Ng et al., 2013). In this respect, there is a basis to confirm the results of initial findings in this study, whereby the effectiveness of the RMC does not influence the extent of hedging activities information disclosed by Malaysian companies in their annual reports. In addition, it also can be observed that the results of control variables are similar to the initial findings.

Table 4.21
Summary of the regression results-Alternative measure of RMC's effectiveness

Model 2	**Predicted Sign**	**Coeff.**	**SE**	***t*-stat**	***P*-value**
(Constant)		-4.382	0.547	-8.013	0.000
REFF_DUMM	+	-0.089	0.131	-0.679	0.498
Control Variables					
CSIZE		0.307	0.040	7.596	0.000***
PROF		-0.013	0.061	-0.222	0.824
LEV		0.227	0.065	3.510	0.001***
AUDITOR		0.113	0.138	0.818	0.414
R^2	: 0.430		**P value**	: 0.000	
Adjusted R^2	: 0.412		**N**	: 166	
F statistic	: 24.101				

Note: ***Significant at the 0.01 level, **significant at the 0.05 level, *significant at the 0.1 level.

4.4.2 Alternative measure for RMC size

In order to confirm the credibility of the initial results on RMC size, this study further re-examined the regression model with the alternative measure of RMC size by using a dummy variable, labelled as RSIZE-DUMM. Since there is no specific guidelines towards the establishment of a RMC, this study used Bursa Malaysia's audit committee listing requirements guidelines (i.e., the minimum number of the audit committee must be at least three members) as a basis; thus, RSIZE_DUMM is assigned as 1 if the RMC consists of more or at least three members and 0, otherwise. This measurement is assumed valid because a RMC is a subset of an audit committee and the board's effectiveness (see Adznan & Puat Nelson, 2014; Birt et al., 2013; Ng et al., 2013).

Table 4.22
Summary of regression results-RMC size measured by using dummy variable

Variables	**Predicted Sign**	**Coeff.**	**SE**	***t*-stat**	***P*-value**
(Constant)		-5.091	0.623	-8.171	0.000
RSIZE_DUMM	-	0.015	0.295	0.052	0.959
RINDE	+	-1.481	0.930	-1.592	0.113
RDILI	+	0.078	0.035	2.204	0.029**
RDIVER	+	-0.135	0.407	-0.332	0.740
RTRAIN	+	-0.035	0.051	-0.679	0.498
REXPERT	+	-0.290	0.304	-0.954	0.341
RDUTY	+	-0.040	0.281	-0.142	0.888
Control Variables					
CSIZE		0.330	0.045	7.396	0.000***
PROF		-0.011	0.050	-0.231	0.818
LEV		0.112	0.032	3.501	0.001***
AUDITOR		0.136	0.140	0.974	0.332
R^2	: 0.464	**P value**	: 0.000		
Adjusted R^2	: 0.426	**N**	: 166		
F statistic	: 12.123				

Note: ***Significant at the 0.01 level, **significant at the 0.05 level, *significant at the 0.1 level.

As shown in Table 4.22, the coefficient of RSIZE_DUMM is not significant at 1% significance level. Looking into these results, it is therefore valid to confirm the initial evidence that size of the RMC is not associated with the extent of HAD. With respect to other variables, however, this study finds slightly different results from the initial analysis, whereby RINDE (i.e., RMC independence) and the extent of HAD is not significant. In addition, Table 4.22 exhibits that the results are no different from the initial analysis for other RMC and control variables.

4.4.3 Alternative measure for RMC independence

Based on the initial results of the presence of independent directors in the RMC, it is noticed that RMC independence, measured using the proportion of independent directors over total number of RMC members, is negatively significant to the extent of HAD. This finding contradicts the prediction that independent directors, who provide strong governance, more resources, experience and legitimacy to a company, would positively affect the disclosure of hedging activities information. In order to confirm the credibility of the initial results, this study further re-examined the regression model with the alternative measure of '*independence'* by using natural logarithm of number of independent directors (see Wu, 2013; Garg, 2007) and majority threshold (see Bedard et al., 2004: Ika & Mohd Ghazali, 2012; Klein, 2002).

Table 4.23 exhibits the results in which the natural logarithm of the number of independent directors is used as an alternative measure of RMC independence. It is observed that the results of RINDE_LN do not significantly influence the extent of HAD. This result is different from the initial finding (see Table 4.19). Although the

results by using alternative measurement (i.e., natural logarithm of number of independent directors) is different from the initial results, it is observed that the presence of independent directors in the RMC is still not related to the extent of HAD. Moreover, the results on other variables are similar to the initial findings except RDILI (i.e., frequency of meetings) which is significant at the 10% level instead of the 5% significance level.

Table 4.23
Summary of regression results-RMC independence measured by using natural logarithm

Variables	**Predicted Sign**	**Coeff.**	**SE**	***t*-stat**	***P*-value**
(Constant)		-5.451	0.646	-8.437	0.000
RSIZE	-	0.042	0.068	0.617	0.538
RINDE_LN	+	0.124	0.192	0.647	0.519
RDILI	+	0.070	0.039	1.778	0.078*
RDIVER	+	-0.188	0.456	-0.413	0.680
RTRAIN	+	-0.055	0.055	-0.999	0.320
REXPERT	+	-0.251	0.337	-0.745	0.458
RDUTY	+	-0.048	0.274	-0.175	0.862
Control Variables					
CSIZE		0.325	0.048	6.765	0.000***
PROF		-0.033	0.052	-0.624	0.534
LEV		0.116	0.036	3.238	0.002***
AUDITOR		0.110	0.161	0.685	0.495
R^2	: 0.468	**P value**	: 0.000		
Adjusted R^2	: 0.421	**N**	: 166		
F statistic	: 10.071				

Note: ***Significant at the 0.01 level, **significant at the 0.05 level, *significant at the 0.1 level.

Table 4.24 presents the results of regression of RMC independence by using a dichotomous variable as an alternative measurement. The variable representing independent directors is measured based on the majority threshold score. A score of 1 is given if the RMC consists of majority independent directors (i.e., more than 50%)

and 0, otherwise. The majority threshold employed in this study is based on the board and audit committee threshold that have been applied by many previous corporate governance studies (e.g., Bedard et al., 2004; Ika & Mohd Ghazali, 2012; Klein, 2002). Since the RMC is a sub-committee, it is valid to assume that this is also one of the best practices of corporate governance. The dummy variable incorporated in the regression model is labelled as RINDE_DUMM.

Table 4.24
Summary of regression results-RMC independence measured by using dummy variable

Variables	**Predicted Sign**	**Coeff.**	**SE**	***t*-stat**	***P*-value**
(Constant)		-5.169	0.581	-8.894	0.000
RSIZE	-	0.008	0.050	0.167	0.867
RINDE_DUMM	+	-0.199	0.148	-1.346	0.180
RDILI	+	0.074	0.035	2.157	0.033**
RDIVER	+	-0.237	0.407	-0.583	0.561
RTRAIN	+	-0.031	0.052	-0.591	0.555
REXPERT	+	-0.369	0.290	-1.270	0.206
RDUTY	+	-0.238	0.254	-0.939	0.349
Control Variables					
CSIZE		0.339	0.044	7.715	0.000***
PROF		-0.008	0.050	-0.156	0.877
LEV		0.111	0.032	3.474	0.001***
AUDITOR		0.120	0.139	0.862	0.390
R^2	: 0.462	**P value**		: 0.000	
Adjusted R^2	: 0.424	**N**		: 166	
F statistic	: 12.028				

Note: ***Significant at the 0.01 level, **significant at the 0.05 level, *significant at the 0.1 level.

Different from the initial findings, it can be observed from Table 4.24 that there is an insignificant relationship with regards to the association between RINDE_DUMM and the extent of HAD. The results show that the proportion of independent directors as RMC members does not influence the disclosure of information on hedging activities

among non-financial Malaysian listed companies, which is different from the initial finding. In this respect, this study supports the notion that the proportion of independent directors does not add to quality of financial information disclosure that is consistent with previous Malaysian studies, such as Abdullah and Mohd-Nasir (2004), Saleh, Iskandar, & Rahmat (2005) and Wan-Hussin (2009). On the other hand, it is also noticed that the results are no different compared to the initial findings with regards to the other RMC and control variables.

4.4.4 Alternative measure for RMC gender diversity

Based on the initial regression model (see Table 4.19, Section 4.3.2.3), this study measured the presence of female directors (i.e., RDIVER) as the proportion of female directors to total directors in the RMC. The results suggest that the presence of female directors in the RMC (i.e., RDIVER) insignificantly influences the extent of HAD. This finding contradicts the prediction that the presence of female directors (RDIVER) can improve the RMC's oversight functions to be more effective and positively affect the extent of hedging activities information disclosure.

In order to further investigate this initial result, this study re-examined the regression model with the alternative measure of '*gender diversity'* by using a dummy variable to distinguish the existence of one or more female directors from those that have none in the committee. A score of 1 is awarded if the RMC has at least one female director, and 0, otherwise (see Abdullah & Ku Ismail, 2013; Ika & Mohd Ghazali, 2012). The results are shown in Table 4.25. Based on Table 4.25, it can be observed that the result of dummy variable (RDIVER_DUM) represented by the presence of female directors,

does not significantly influence the extent of HAD. This finding is consistent with the initial finding that the presence of female directors as RMC members does not provide good resources for the effectiveness of RMC in enhancing corporate transparency and reducing agency problem for disclosure of information on hedging activities (see Amran, 2011; Marimuthu & Kolandaisamy, 2009; Shukeri et al., 2012; Van der Walt & Ingley, 2003; Wan-Hussin, 2009). With respect to other RMC and control variables, this study finds that only RINDE is not significant at the 10% level compared to the initial finding.

Table 4.25
Summary of regression results-RMC gender diversity measured by using dummy variable

Variables	**Predicted Sign**	**Coeff.**	**SE**	***t*-stat**	***P*-value**
(Constant)		-4.720	0.601	-7.853	0.000
RSIZE	-	-0.027	0.081	-0.330	0.742
RINDE	+	-0.093	0.097	-0.966	0.336
RDILI	+	0.153	0.068	2.253	0.026**
RDIVER_DUM	+	0.030	0.129	0.232	0.817
RTRAIN	+	-0.018	0.073	-0.243	0.809
REXPERT	+	-0.109	0.070	-1.554	0.122
RDUTY	+	-0.015	0.084	-0.183	0.855
Control Variables					
CSIZE		0.325	0.044	7.397	0.000***
PROF		-0.008	0.060	-0.140	0.889
LEV		0.239	0.064	3.709	0.000***
AUDITOR		0.138	0.139	0.994	0.322
R^2	: 0.465	**P value**	: 0.000		
Adjusted R^2	: 0.427	**N**	: 166		
F statistic	: 12.166				

Note: ***Significant at the 0.01 level, **significant at the 0.05 level, *significant at the 0.1 level

4.4.5 Alternative measure for RMC diligence

This study operationalises RMC diligence based on the number of RMC meetings held during the financial year, which is similar to several previous corporate governance and disclosure studies (e.g., Farinha & Viana, 2009; Ng et al., 2013; Zango et al., 2015b). Based on the initial regression model (see Table 4.19, Section 4.3.2.3), it is found that the frequency of meetings is positively associated with the extent of HAD. This finding is consistent with the prediction that the number of meetings reflects RMC's effectiveness to affect the extent of hedging activities information disclosure in the annual reports of non-financial Malaysian listed companies. In order to confirm this initial result, the natural logarithm for number of meetings per year and dichotomous variable are used to re-examine the regression model.

Table 4.26
Summary of regression results-RMC diligence measured by natural logarithm

Variables	Predicted Sign	Coeff.	SE	*t*-stat	*P*-value
(Constant)		-5.051	0.616	-8.198	0.000
RSIZE	-	-0.018	0.082	-0.219	0.827
RINDE	+	-0.064	0.097	-0.658	0.511
RDILI_LN	+	0.199	0.119	1.667	0.098*
RDIVER	+	-0.031	0.082	-0.378	0.794
RTRAIN	+	-0.019	0.073	-0.262	0.794
REXPERT	+	-0.111	0.071	-1.575	0.117
RDUTY	+	-0.031	0.084	-0.366	0.715
Control Variables					
CSIZE		0.332	0.045	7.455	0.000***
PROF		-0.006	0.061	-0.094	0.925
LEV		0.232	0.065	3.559	0.000***
AUDITOR		0.124	0.140	0.889	0.375
R^2	: 0.458	**P value**	: 0.000		
Adjusted R^2	: 0.420	**N**	: 166		
F statistic	: 11.843				

Note: ***Significant at the 0.01 level, **significant at the 0.05 level, *significant at the 0.1 level

Table 4.26 displays the results of regression analysis of natural log of number of RMC meetings per year (labelled as RDILI_LN). It is observed that the result of RDILI_LN is consistent with the initial results as several corporate governance studies which have argued that the frequency of meetings might be a measure of committee activity, which can enhance its effectiveness (see Ebrahim, 2007; Karamanou & Vafeas, 2005; Laksmana, 2008; O'Sullivan et al., 2008; Xie et al., 2003). Besides, it is noticed that that the results of other RMC and control variables are not significant different from the initial analysis.

Table 4.27
Summary of regression results-RMC diligence measured by dummy variable

Variables	**Predicted Sign**	**Coeff.**	**SE**	***t*-stat**	***P*-value**
(Constant)		-4.899	0.616	-7.952	0.000
RSIZE	-	0.016	0.082	.190	0.850
RINDE	+	-0.003	0.096	-.036	0.972
RDILI_DUMM	+	-0.001	0.147	-.009	0.993
RDIVER	+	-0.048	0.083	-.574	0.566
RTRAIN	+	-0.024	0.074	-.325	0.745
REXPERT	+	-0.114	0.071	-1.595	0.113
RDUTY		-0.075	0.086	-.874	0.383
Control Variables					
CSIZE		0.340	0.045	7.547	0.000***
PROF		-0.012	0.062	-0.201	0.841
LEV		0.227	0.067	3.383	0.001***
AUDITOR		0.111	0.141	0.788	0.432
R^2	: 0.448	**P value**	: 0.000		
Adjusted R^2	: 0.409	**N**	: 166		
F statistic	: 11.385				

Note: ***Significant at the 0.01 level, **significant at the 0.05 level, *significant at the 0.1 level

Table 4.27 presents the result of RMC diligence by using the alternative measure of dichotomous variable. Since an effective committee should conduct at least four meetings per year (see Bedard et al., 2004; Abbott et al., 2004), a score of 1 is given

for a company that conducts RMC meetings at least four times, and 0, otherwise. Based on Table 4.27, it is noticed that the result of regression analysis by using dummy variable (i.e., RDILI_DUMM) contradicts the initial finding. With regards to other RMC and control variables, this study finds that there is no significant difference between the results as compared to the initial analysis except RINDE which is found to be not statistically significant to the extent of HAD.

4.4.6 Alternative measure for RMC expertise

In this study, RMC expertise is measured based on the percentage of RMC members who possess qualification in the accounting or finance area. Specifically, the measurement is based on the total number of RMC members with qualification (i.e., accounting and finance) divided by the total number of members in the RMC. Based on the initial regression model (see Table 4.19, Section 4.3.2.3), it is found that the proportion of RMC experts in RMC does not have significant relationship with the extent of HAD. This finding implies that the prediction based on agency and resource dependence theories that the existence of RMC experts as RMC members can influence the extent of hedging activities information disclosure, is not supported. In order to confirm this initial result, a dichotomous variable is used as an alternative measurement to re-examine the regression model. A score of 1 is given if at least one of the RMC members has educational background and experience in accounting or finance, and 0, otherwise (see Mangena & Pike, 2005; Ika & Mohd Ghazali, 2012). Table 4.28 presents the results of REXPERT_DUM by using the alternative measure of dichotomous variable. Based on Table 4.28, it can be observed that the relationship between RMC experts is not significant to the extent of HAD, which is consistent with

the initial findings of this study. The presence of financial experts with accounting and financial background in the RMC is not enough to influence the amount of hedging activities information disclosure. Perhaps, a 'risk management expert' may be needed in order to influence the extent of HAD. This is because with their specific experience on risk management activities, more disclosure of risk management activities information, particularly on hedging activities by the use of derivatives, can be expected (see Bates & Leclerc, 2009).

Table 4.28
Summary of regression results-RMC expertise measured by dummy variable

Variables	**Predicted Sign**	**Coeff.**	**SE**	***t*-stat**	***P*-value**
(Constant)		-4.513	0.605	-7.462	0.000
RSIZE	-	0.003	0.089	0.031	0.976
RINDE	+	-0.101	0.098	-1.026	0.307
RDILI_LN	+	0.149	0.068	2.196	0.030**
RDIVER	+	-0.030	0.082	-0.368	0.713
RTRAIN	+	-0.030	0.073	-0.410	0.683
REXPERT_DUM	+	-0.230	0.234	-0.981	0.328
RDUTY	+	-0.027	0.087	-0.304	0.761
Control Variables					
CSIZE		0.325	0.045	7.256	0.000***
PROF		-0.012	0.061	-0.201	0.841
LEV		0.225	0.065	3.450	0.001***
AUDITOR		0.156	0.139	1.120	0.265
R^2	: 0.460	**P value**	: 0.000		
Adjusted R^2	: 0.422	**N**	: 166		
F statistic	: 11.931				

Note: ***Significant at the 0.01 level, **significant at the 0.05 level, *significant at the 0.1 level

4.4.7 Testing the moderating effect using the alternative measurement of ownership concentration

To test the stability of the hierarchical regression analysis reported earlier, the study repeated the analysis by using a dummy variable as an alternative measurement to represent ownership concentration. Based on several previous studies (e.g., Abdullah et al., 2012; Claessens et al., 2000; Ismail & Sinnadurai, 2012; La Porta et al., 1999), dummy variables can be used to distinguish the different types of ownership concentration (i.e., family, management and government ownership) for each of the sampled companies by using the threshold percentage. Based on Abdullah et al. (2012), this study applied the threshold of 20% to categorise the different types of ownership concentration. A dummy variable is given a value of 1 if, in 2013, at least 20% of a company's equity was owned by family, management or government owners. Otherwise, the other relevant indicator variable is set as 0. Table 4.29 below presents the effect of regression on ownership concentration towards the relationship between RMC's effectiveness and the extent of HAD.

Overall, it is noticed that the results of hierarchical regression are similar to the initial finding. It can be observed that the change of the adjusted R^2 is not significant although the R^2 increases from 0.448 to 0.451 when the interactions are entered. Hence, this confirms the initial analysis that there is no major effect of ownership concentration on the relationship between RMC's effectiveness and the extent of HAD. It is also observed that the beta coefficient for interaction terms of family ownership is positive and no longer significant as compared to the initial finding. Unlike previous Malaysian studies (e.g., see Akhtarudin & Haron, 2010; Amran, 2011), this finding highlights

that ownership concentration of non-financial Malaysian listed companies does not influence the effectiveness of the internal corporate governance mechanism (i.e., RMC) especially when it involves HAD. Perhaps, the voluntary basis for the RMC's establishment as one of the internal corporate governance mechanisms, explains this insignificant relationship or it may be because companies have different strategic reasons for establishing the RMC.

Table 4.29
The moderating effect of ownership structure on the relationship of between RMC's effectiveness and the extent of hedging activities disclosure (HAD)

Variables	**Step 1**	**Step 2**	**Step 3**	**Step 4**
	CV	**IV**	**MV**	**IV*MV**
CSIZE	0.520 (7.579)***	0.562 (7.777)***	0.504 (6.256)***	0.508 (6.234)***
PROF	-0.014 (-0.222)	-0.018 (-0.296)	-0.024 (-0.392)	-0.017 (-0.266)
LEV	0.232 (3.611)***	0.217 (3.359)***	0.221 (3.409)***	0.218 (3.310)***
AUDITOR	0.050 (0.757)	0.064 (0.976)	0.053 (0.805)	0.054 (0.801)
REFF		-0.114 (-1.753)*	-0.111 (-1.706)*	-0.081 (-0.679)
FOWN_DUMM			0.009 (0.106)	0.020 (0.235)
MOWN_DUMM			-0.056 (-0.648)	-0.063 (-0.721)
GOWN_DUMM			0.084 (1.169)	(0.091) (1.239)
REFF * FOWN_DUMM				0.100 (0.772)
REFF * MOWN_DUMM				-0.114 (-0.772)
REFF * GOWN_DUMM				-0.027 (-0.337)
R^2	0.428	0.439	0.448	0.451
Adjusted R^2	0.414	0.421	0.420	0.411
R^2 change	0.428	0.011	0.009	0.003
Significant F change	0.000	0.082	0.454	0.864

Notes: **CV** = Control Variables, **IV**= Independent Variables, **MV**= Moderating Variables. ***Significant at the 0.01 level, **significant at the 0.05 level, *significant at the 0.1 level. The figures in parentheses are the t-statistics

4.4.8 Hedge accounting practices and RMC's effectiveness

To gain further insight into the relationship between RMC's effectiveness and the extent of HAD, this study also analysed the relationship between RMC's effectiveness and the choice to apply hedge accounting. It is argued that if a RMC fulfils certain committee characteristics, this committee will be efficient, especially in monitoring and reporting the information about the use of derivatives for hedging activities (see Birt et al., 2013; DeZoort et al., 2002; Ika & Mohd Ghazali, 2012). Hence, this study believes that if the RMC is effective in performing its role, it will bear upon the application of hedge accounting. This is because hedge accounting involves crucial processes and planning that will reflect changes in profit and accounting policies. Also, the existence of the RMC members who are independent, have expertise and are diligent, can be assumed as being able to provide relevant and faithful reporting (DeZoort et al., 2002; Ng et al., 2013), hence, increasing disclosure on hedging activities information.

By using the existing variables (i.e., REFF, CSIZE, PROF, LEV and AUDITOR), this study further employed a logistic regression to examine the relationships. It is also expected that this result can be a basis to explain and justify the initial finding on the relationship between RMC's effectiveness and the extent of HAD. This is because more disclosure of hedging activities information basically depends on the adoption and choice to apply hedge accounting practices (Papa & Peter, 2013). Thus, it is valid to assume that more disclosure of hedging activities information is strongly related to the choice of hedge accounting. To measure the choice of hedge accounting (HACC), this study operationalised HACC by using a dummy variable 1 if a company applies

hedge accounting, and 0, otherwise. The model is represented by the following structural equation:

$$\mathbf{HACC}_i = \alpha + \beta_1 REFF_i + \beta_2 CSIZE_i + \beta_3 PROF_i + \beta_4 LEV_i + \beta_5 AUDITOR_i + \varepsilon_i$$

Where,

HACC	:	1 if company applies hedge accounting, 0 otherwise
REFF	:	RMC effectiveness Index = Company's actual score on RMC characteristics / company's total possible score of RMC characteristics
CSIZE	:	Log of total assets
PROF	:	Return on assets
LEV	:	Debt to total assets ratio
AUDITOR	:	1 if audited by Big 4, 0 otherwise
ε	:	Error term

Table 4.30 exhibits that the model is significant at predicting the adoption of hedge accounting ($\chi 2$ = 43.25, df= 5, N= 166, p< .001). With respect to the RMC's effectiveness (i.e., REFF), Table 4.30 indicates that the effectiveness of the RMC does not significantly influence the choice of applying hedge accounting. Consistent with the initial finding on the relationship between the RMC's effectiveness and the extent of HAD (see Section 4.3.2.2), this regression results can be a basis to confirm that the RMC's effectiveness does not influence the amount of hedging activities information disclosure. As such, this finding agrees that voluntary existence of the RMC and its effectiveness may be related to other strategic risk management considerations, consistent with several previous studies (see Abdullah & Chen, 2010; Adznan & Puat Nelson, 2014; Ng et al., 2013). From another point of view, this insignificant relationship may be also due to the establishment of RMCs as a sub-committee or

combined committee under the audit committee. According to Bates and Leclerc (2009) and Birt et al. (2013), RMC is not related to the level of accounting standard compliance (including hedge accounting) because such committee seems to perform a similar function.

Table 4.30
Summary of logistic regression results-The choice of hedge accounting (N=166)

Model	Predicted sign	B	SE	Wald	Sign	Odds Ratio
Constant		-10.55	2.380	19.679	0.000	0.000
REFF	+	0.214	0.227	0.890	0.345	1.238
CSIZE	+	0.637	0.158	16.307	0.000**	1.892
PROF	+	0.275	0.221	1.546	0.214	1.316
LEV	+	0.620	0.241	6.611	0.010**	1.860
AUDITOR	+	0.579	0.523	1.224	0.269	1.784

Chi Square : 43.25
Log likelihood : 150.745
Cox & Snell R^2 : 0.229
Nagelkerke R^2 : 0.333

*Note.**CSIZE** = Ln (total assets); **PROF** = Return on assets; **LEV** = Total debt outstanding/Total Assets; **REFF** = Company's actual score on RMC characteristics/ company total possible score of RMC characteristics; **AUDITOR** = 1 if companies are audited by a big 4 auditor, 0 otherwise.*

On the other hand, it is discovered that company size and leverage ensure the application of hedge accounting. Based on Table 4.30, it can be observed that company size (CSIZE) significantly and positively influences the choice to apply hedge accounting at $p < 0.01$. The odd ratios indicate that companies prefer to apply hedge accounting, which improves by 89% when they are large. Consistent with several prior research on derivative disclosures (e.g., see Ameer, 2010; Birt et al., 2013; Lopes & Rodrigues, 2007; Oliviera et al., 2011; Taylor et al., 2008), this study supports the notion that large companies tend to provide more quality information as they incur lower costs of accumulating and disseminating detailed information. Besides, it is also

observed that highly leveraged firms are more likely to adopt hedge accounting in reporting the use of derivatives of hedging activities (i.e., P < 0.05). Consistent with some previous derivatives studies (e.g., Ameer, 2010; Hassan et al., 2012; Ismail & Abdul Rahman, 2011), the adoption of hedge accounting among Malaysian companies, perhaps, can be perceived as reducing earnings volatility. Hedge accounting is a set of special rules designed to ensure that gains and losses on hedged items and hedging instruments are recognised in the same period, thereby preventing earnings volatility that is not economically justified (Glaum & Klocker, 2011).

4.4.9 Testing for mandatory and voluntary disclosure of hedging activities information disclosure.

To gain further insight into the relationship between the existence of RMCs, this study also perfomed separate test regression analysis between the existence of the RMC and the extent of mandatory and voluntary information of HAD. Table 4.31 and 4.32 demonstrates the results of regressions. As shown in Table 4.31, the relationship between the existence of the RMC and the extent of mandatory HAD information is not significant (at P < 10 percent). Similarly, Table 4.32 also exhibits that the regression results between the existence of the RMC and the extent of voluntary HAD is not significant (at P < 10 percent). Looking into these results, it is therefore valid to confirm the initial evidence that the existence of RMC is not associated with the extent of HAD. Consistent with the initial findings, perhaps, the existence of RMCs among Malaysian listed companies might be related to other strategic risk management activities reasons because the establishment of the RMC is still on a voluntary basis (see Adznan & Puat Nelson, 2014; Bates & Leclerc, 2009; Birt et al., 2013; Hassan et

al., 2012). With respect to other variables, however, this study finds slightly different results from the initial analysis, whereby AUDITOR (i.e., the existence of Big 4 audit firms) is found significantly associated with the extent of mandatory HAD information while LEV (i.e., leverage) is associated with the extent of voluntary HAD information.

Table 4.31
Summary of the regression results-The existence of RMC and mandatory information of hedging activities disclosure

Model	**Predicted Sign**	**Coeff.**	**SE**	***t*-stat**	***P*-value**
(Constant)		-2.085	0.562	-3.713	0.000
REXIST	+	0.187	0.139	1.345	0.180
Control Variables					
CSIZE		0.289	0.101	2.855	0.005***
PROF		-0.039	0.064	-0.615	0.539
LEV		0.081	0.064	1.255	0.211
AUDITOR		0.272	0.135	2.009	0.046**
R^2	: 0.133	**P value**		: 0.000	
Adjusted R^2	: 0.113	**N**		: 221	
F statistic	: 6.603				

Note: ****Significant at the 0.01 level, **significant at the 0.05 level, *significant at the 0.1 level.*

Table 4.32
Summary of the regression results-The existence of RMC and voluntary information of hedging activities disclosure

Model	**Predicted Sign**	**Coeff.**	**SE**	***t*-stat**	***P*-value**
(Constant)		-2.688	0.567	-4.742	0.000
REXIST	+	0.087	0.140	0.620	0.536
Control Variables					
CSIZE		0.415	0.102	4.055	0.000**
PROF		0.013	0.064	0.206	0.837
LEV		0.141	0.065	2.165	0.031**
AUDITOR		0.174	0.137	1.274	0.204
R^2	: 0.77	**P value**		: 0.000	
Adjusted R^2	: 0.158	**N**		: 221	
F statistic	: 9.230				

Note: ****Significant at the 0.01 level, **significant at the 0.05 level, *significant at the 0.1 level.*

Furthermore, this study also analysed the relationship between RMC's effectiveness and the extent of mandatory and voluntary HAD information. Based on the initial results, it is found that the relationship between RMC's effectiveness and the extent of HAD is negatively significant. This result implies that the effectiveness of RMC does not provide good resources and monitoring mechanism to support more disclosure on hedging activities information. In order to confirm the credibility of this initial result, this study further re-examined the regression model by separating the extent of HAD into mandatory and voluntary disclosure. Table 4.33 and 4.34 present the results of these two regression models respectively. Table 4.33 shows that the relationship between RMC's effectiveness (i.e., labelled as REFF) and the extent of mandatory HAD information is negative but not significant (at P < 10 percent), which is different from the initial finding. This result indicates that RMC's effectiveness does not have any relationship with the extent of mandatory HAD information.

Table 4.33
Summary of the regression results-RMC effectiveness and mandatory information disclosure of hedging activities

Model	**Predicted Sign**	**Coeff.**	**SE**	***t*-stat**	***P*-value**
(Constant)		-2.417	0.670	-3.607	0.000
REFF	+	-0.085	0.075	-1.124	0.263
Control Variables					
CSIZE		0.153	0.049	3.146	0.002***
PROF		-0.094	0.072	-1.310	0.192
LEV		0.089	0.076	1.166	0.245
AUDITOR		0.317	0.156	2.033	0.044**
R^2	: 0.165	**P value**		: 0.000	
Adjusted R^2	: 0.139	**N**		: 166	
F statistic	: 6.323				

Note: ****Significant at the 0.01 level, **significant at the 0.05 level, *significant at the 0.1 level.*

It also can be observed that the results of control variables is slightly different from initial finding whereby AUDITOR is found significant (at P < 10 percent) while LEV (i.e., leverage) is not significant. On the other hand, Table 4.34 exhibit the results of the relationship between RMC effectiveness and the extent of voluntary HAD. It can be observed that the relationship is also not significant (at P < 10 percent). In this respect, there is a basis to confirm the results of initial findings in this study, whereby the effectiveness of the RMC does not influence the extent of hedging activities information disclosed by Malaysian companies in their annual reports. However, the results of control variables are similar to the initial findings.

Table 4.34
Summary of the regression results-RMC effectiveness and voluntary information of hedging activities disclosure

Model	**Predicted Sign**	**Coeff.**	**SE**	***t*-stat**	***P*-value**
(Constant)		-3.139	0.678	-4.633	0.000
REFF	+	-0.113	0.076	-1.480	0.141
Control Variables					
CSIZE		0.215	0.049	4.371	0.000***
PROF		-0.006	0.072	-0.086	0.932
LEV		0.172	0.077	2.228	0.027**
AUDITOR		0.119	0.158	0.754	0.452
R^2	: 0.218	**P value**	: 0.000		
Adjusted R^2	: 0.194	**N**	: 166		
F statistic	: 8.925				

Note: ****Significant at the 0.01 level, **significant at the 0.05 level, *significant at the 0.1 level.*

Additionally, this study also examine the relationship of each individual characteristic of the RMC and the extent of mandatory and voluntary HAD. Table 4.35 exhibits the findings of the regression analysis and it can be observed that none of the characteristics of RMC are significantly associated with the extent of mandatory HAD.

It can be observed that in Table 4.35 only two control variables which are company size (CSIZE) and leverage (LEV) significant at the 1% and 5% level respectively.

Table 4.35
Summary of the regression results-RMC characteristics and the extent of mandatory hedging activities disclosure

Model	**Predicted Sign**	**Coeff.**	**SE**	***t*-stat**	***P*-value**
(Constant)		-2.536	0.704	-3.601	0.000
RSIZE	-	-0.064	0.079	-0.807	0.421
RINDE	+	-0.092	0.092	-1.004	0.317
RDILI	+	0.087	0.077	1.127	0.262
RDIVER	+	-0.039	0.093	-0.418	0.677
RTRAIN	+	-0.026	0.084	-0.316	0.752
REXPERT	+	-0.112	0.078	-1.438	0.152
RDUTY	+	-0.027	0.078	-0.345	0.730
Control Variables					
CSIZE		0.162	.051	3.162	0.002***
PROF		-0.097	.073	-1.340	0.182
LEV		0.101	.077	1.305	0.194
AUDITOR		0.315	.161	1.962	0.052**
R^2	: 0.188	**P value**	: 0.000		
Adjusted R^2	: 0.130	**N**	: 166		
F statistic	: 3.232				

Note: ****Significant at the 0.01 level, **significant at the 0.05 level, *significant at the 0.1 level.*

However, in respect to the extent of voluntary HAD, this study finds that the results of regression are slightly different. As shown in Table 4.36, it can be observed that only RMC diligence is significantly associated with the extent of voluntary HAD while the presence of independent directors in the RMC is not significant to the extent of voluntary HAD. Moreover, the results on other variables are similar to the initial findings which is significant at the 1% level (i.e. CSIZE) and 5% significance level (i.e. LEV). Looking into these results and based on the intial finding, it is valid confirmed that certain RMC attributes do not complement each other to become an

efficient monitoring mechanism for management. In this respect, there is a basis to claim that a combination (i.e., aggregate score) of RMC characteristics cannot affect high disclosure of information on hedging activities.

Table 4.36
Summary of the regression results-RMC characteristics and the extent of voluntary hedging activities disclosure

Model	**Predicted Sign**	**Coeff.**	**SE**	***t*-stat**	***P*-value**
(Constant)		-3.182	0.703	-4.525	0.000
RSIZE	-	0.025	0.079	0.320	0.750
RINDE	+	-0.033	0.091	-0.365	0.715
RDILI	+	0.193	0.077	2.497	0.014***
RDIVER	+	-0.097	0.092	-1.044	0.298
RTRAIN	+	-0.045	0.083	-0.543	0.588
REXPERT	+	-0.075	0.078	-0.962	0.337
RDUTY	+	-0.067	0.078	-0.863	0.389
Control Variables					
CSIZE		0.217	0.051	4.250	0.000***
PROF		-0.002	0.073	-0.033	0.974
LEV		0.176	0.077	2.286	0.024**
AUDITOR		0.149	0.160	0.932	0.353
R^2	: 0.259	**P value**	: 0.000		
Adjusted R^2	: 0.206	**N**	: 166		
F statistic	: 4.885				

Note: ****Significant at the 0.01 level, **significant at the 0.05 level, *significant at the 0.1 level.*

4.5 Summary of the chapter

This chapter discusses and presents results of this study. In general, Section 4.2 highlights the descriptive results on the uses of derivatives for hedging activities and the extent of HAD (i.e., overall score, individual score and information content). This is followed by the validity of the disclosure index. In addition, section 4.3 exhibits all the regression results and discusses separately the results in two subsections. Section

4.3.2 presents and discusses the results of regression on the relationship between RMC's effectiveness and the extent of HAD; while Section 4.3.3 presents and discusses the effect of ownership structure on the relationship between RMC's effectiveness and the extent of HAD. A number of key findings are highlighted in this chapter. First, this study reveals that the extent of HAD is insufficient although Malaysian companies do not violate the accounting standards to report the derivatives used for hedging activities. It is also found that only 22% of these companies prefer to apply hedge accounting, and cash flow hedge accounting is the highest preference of non-financial Malaysian companies. Second, this study also reveals that there is an insignificant relationship between the existence of the RMC and the extent of HAD.

Third, this study also finds that there is a negative and significant relationship between the score of effectiveness of RMC (aggregately measured) and the extent of HAD, which does not support Hypothesis 2a in this study. This implies that although the RMC is effective, it is not related to the extent of HAD. Fourth, the empirical results of individual characteristics only support two RMC characteristics (i.e., independence and diligence) and do not support the characteristics of RMC size, training, gender diversity, financial expertise and supervisory duty. However, it is found that the relationship between RMC independence is negative, while RMC diligence is positive with the extent of HAD. These findings indicate that the presence of independent directors in the RMC does not influence more disclosure on hedging activities information but the number of meetings conducted would lead to high disclosure of hedging activities information by a company.

Finally, the overall results of the ownership structure show that the moderating effect on the relationship between RMC's effectiveness and the extent of HAD is not supported. However, the beta coefficient of family ownership is statistically significant at the 10% level to moderate the relationship between RMC's effectiveness and the extent of HAD. Although the variance is small, this finding provides a useful insight that the family owners are pressured to be cautious about their hedging activities as the use of derivatives could magnify losses to their company. Hence, the involvement of family members as a part of management as well as the RMC may indirectly lead to compliance with the accounting standard requirements and disclosure of more relevant information.

Furthermore, this study modifies the basic model as well as the hierarchical regression analysis by using different measurements to re-examine the influence of RMC's effectiveness, its characteristics and ownership structure on the extent of HAD. The results of this additional analysis are summarised in Table 4.37. This study also employs logistic regression to examine the effectiveness of the RMC and the choice to apply or not apply hedge accounting. It is found that the effectiveness of the RMC does not significantly influence the choice to apply hedge accounting. This result can be a basis to confirm the initial finding on the relationship between RMC's effectiveness and the extent of HAD. This is because high disclosure of hedging activities information is also affected when a company chooses to apply hedge accounting (see Ameer et al., 2011; Papa & Peter, 2013). Additionally, to gain further insight into the relationship between the existence of RMCs, RMC effectiveness, its

characteristics and the extent of HAD, this study also re-examined the regression model by separating the extent HAD into mandatory and voluntary disclosure. The result of regression confirms the initial findings whereby the existence of RMCs and its effectiveness are not associated with the extent of HAD. The next chapter provides a summary of this study in relation to the research questions. Besides that, the limitations, implications, avenues for future research and concluding remarks are presented and discussed.

Table 4.37
Summary of hypotheses testing

	Hypothesis	**Findings**	**Additional Analysis**
H2	RMC effectiveness *The extent of hedging activities information disclosure is positively associated with the effectiveness of RMC.*	Not supported	Not supported
H2a	RMC size *The extent of hedging activities information disclosure is negatively associated with the size of the RMC.*	Not Supported	Not supported
H2b	RMC independence *The extent of hedging activities information disclosure is positively associated with RMC's independence.*	Not Supported	Not supported
H2c	RMC gender diversity *The extent of hedging activities information disclosure is positively associated with the existence of female directors on the RMC.*	Not Supported	Not Supported
H2d	RMC diligence *The extent of hedging activities information disclosure is positively associated with RMC's diligence.*	Supported	Supported *(Natural Log)* Not Supported *(Dummy)*
H2f	RMC expert *RMC members' qualification is positively associated with the extent of hedging activities information disclosure.*	Not Supported	Not Supported

Table 4.37 (continued)

	Hypothesis	Findings	Additional Analysis
H2g	RMC duty *The extent of hedging activities information disclosure is positively associated with the existence of RMC's duty authorisation.*	Not Supported	Not Supported
H3a	Moderating effect of family ownership *The association between the RMC's effectiveness and the extent of information on hedging activities disclosure is weaker for companies with higher family ownership.*	Not supported	Not Supported
H3b	Moderating effect of management ownership *The association between the RMC's effectiveness and the extent of information on hedging activities disclosure is weaker for companies with higher management ownership concentration.*	Not Supported	Not Supported
H3c	Moderating effect of government ownership *The association between the RMC's effectiveness and the extent of information on hedging activities disclosure is weaker for companies with higher government ownership concentration.*	Not Supported	Not supported

CHAPTER FIVE

CONCLUSION

5.1 Introduction

In general, this chapter presents the conclusion of this study and is organised into several sections. Section 5.2 summarises the findings based on objectives of this study and Section 5.3 reflects on some of its potential implications. Section 5.4 discusses the research limitations of this study. Section 5.5 proposes several possible avenues for future research. Lastly, Section 5.6 concludes the chapter.

5.2 Summary of the study

This study examines the extent of HAD among non-financial listed companies on the Main Market of Bursa Malaysia. Besides that, this study analyses the relationship between specific monitoring mechanisms, i.e., the RMC and the extent of HAD. Different from previous financial instrument disclosure studies, this study argues that the effectiveness of the RMC should be more important in influencing the extent of financial instruments disclosure, especially on the extent of HAD. Therefore, by aggregately measuring the specific characteristics of the RMC (i.e., RMC size, RMC independence, RMC diligence, RMC gender diversity, RMC training, RMC expertise and RMC duty), this study predicts that there is a positive relationship between RMC's effectiveness and the extent of HAD. Furthermore, based on the assumption that a company's ownership structure shapes the incentives and abilities of committee members to monitor the management and protect the interests of shareholders, this study uses hierarchical regression to examine the moderating effect of the different

types of ownership concentration on the relationship between the effectiveness of the RMC and the extent of HAD. Based on the analysis of the disclosure score in companies' annual reports, it is found that the extent of HAD among non-financial Malaysian listed companies is insufficient. Although the overall disclosure on mandatory requirements of hedging activities information score has improved and is quite high compared to the reported results in some previous Malaysian studies (e.g., Abdullah & Chen, 2010; Adznan & Puat Nelson, 2014; Hassan et al., 2012), there are still some companies that provide less than complete information. Besides, it is found that companies are less likely to voluntarily disclose more information on their hedging activities and such disclosures are also found to be inconsistent across the companies. In fact, the disclosure amount of hedge activities information about the significance of company's financial position and performance is more than the information regarding the potential risks arising from the use of derivative instruments for hedging activities.

Moreover, it is found that the choice to apply hedge accounting only affects a small number of companies and the majority of companies choose to apply cash flow hedge accounting. High preferences to apply cash flow hedge accounting by Malaysian companies holds some insights that cash flow hedge accounting might be used as an earnings manipulation tool for management (see Melumad et al., 1999; Campbell et al., 2015). It might be true that the accounting requirements for the usage of derivatives for hedging activities has provided little new and relevant information to the readers of the financial statement (see Bhamornsiri & Schroeder, 2004; Glaum & Klocker, 2011; Hausin et al., 2008; Papa & Peter, 2013).

Based on the regression analysis, several important findings are drawn. First, this study finds that large and high leverage companies tend to provide more hedging activities information; this is consistent with previous financial instruments disclosure studies that support the general belief of the association between larger and high leverage companies and the amount of disclosure (e.g., see Hassan et al., 2012, Birt et al., 2013; Ismail & Abdul Rahman, 2011). However, with respect to the existence of the RMC, this study finds that its existence is not significant in influencing the extent of HAD. This finding contradicts that of Hassan et al. (2012) and Birt et al. (2011) but consistent with Abdullah and Chen (2010). This study indicates that the RMC does not actively force companies to disclose information on hedging activities. According to Abdullah and Chen (2010), this might be due to the lack of RMC's effectiveness because the establishment of the RMC among non-financial Malaysian listed companies is still voluntary.

Second, this study finds that the relationship between RMC's effectiveness and the extent of HAD is significant at the 10% level but this relationship is negative. This implies that when the level of RMC's effectiveness increases (more characteristics that enhance the RMC's monitoring), the extent of HAD would decrease. This finding shows that certain RMC attributes do not complement each other to become an efficient monitoring mechanism for management. Hence, this study finds that a combination (i.e., aggregate score) of RMC characteristics cannot affect high disclosure of information on hedging activities. This result contradicts the underlying assumption of the agency and resource dependence theories which propose that the effectiveness of internal governance mechanisms have some significant relationships

with corporate disclosures (e.g., see Abdullah & Chen, 2010; Ika & Mohd Ghazali, 2012; Zango et al., 2015a). Therefore, by drawing on the argument that corporate governance is a bundle of mechanisms that are not isolated from each other, this study suggests that the extent of HAD by non-financial Malaysian listed companies is not associated with the effectiveness of the RMC.

Third, this study also finds that when the characteristics of the RMC are individually examined with the extent of HAD, only RMC independence and RMC diligence are significant in influencing the extent of HAD. Nevertheless, the relationship between RMC independence and the extent of HAD is negative; thus, the related hypothesis is not supported. Based on several previous studies, one of the possible reasons to explain this finding is the lack of skills and knowledge, particularly on hedge activities among independent directors that affect the RMC's effective functioning (see Wan-Hussin, 2009; Al-Musalli, & Ku Ismail, 2012). Another reason may be because the good effect of RMC independence would disappear because a high number of independent directors in the RMC (super independent committee) can create internal conflicts and impact on its members to carry out their actual roles (see Eng & Mak, 2003; Al-Musalli, & Ku Ismail, 2012).

This study fails to find any significant evidence to show that RMC size, training, gender diversity, expertise and duty have relationships with the extent of HAD. Based on these results, this study believes that a RMC that has a smaller number of members, has more independent directors and financial experts, has gender diversity, members have attended risk related trainings and has clear responsibilities, cannot be defined as

an effective RMC. In other words, these RMC characteristics are not effective in helping to solve the agency problem and provide good resources to increase the amount of hedging activities information disclosure. According to Al-Abbas (2009), and Arouri, Muttakin, and Hossain (2011), possible reasons to support this notion is there is a lack of explicit and detailed guidelines for RMC's establishment as well as its monitoring duties.

Fourth, the overall results of hierarchical regression analysis show that ownership concentration does not have any significant relationship with the RMC's effectiveness in influencing the extent of HAD. However, there is little evidence to suggest that the RMC enhances the extent of HAD when there is interference from concentrated family owners. It is found that RMC's effectiveness leads to high hedging activities information disclosure when it is interacted with family ownership concentration at the 10% significance level. However, this result should be interpreted with caution since the result of additional analysis by using the alternative measurement shows that high concentrated family ownership is not significant in influencing the relationship between the RMC's effectiveness and the extent of HAD.

Although this result provides weak evidence and does not strongly support the several previous corporate governance studies (see Ameer, 2010; Bhattacharya & Graham, 2009; La Porta et al., 1999; Ferreira & Matos, 2008; Ismail & Sinnadurai, 2012), this study believes that the dominant status of family still makes it difficult for non-controlling investors to challenge the family's control and continue to play a significant role in corporate governance of Malaysian listed companies. In contrast to

the dominant status of family, this study also reveals that the dominant status of management and government ownership does not affect the interests of non-controlling investors in influencing the extent of HAD.

5.3. Implication of the study

This section presents the theoretical and practical implications of the key findings found in this study.

5.3.1 Theoretical implication

The findings in this study provide new knowledge and enhance the current literature on the financial instruments disclosure, particularly from an emerging country's perspective on hedging activities information. Compared to previous findings on financial instruments disclosure (see Adznan & Puat Nelson, 2014; Abdullah & Chen, 2010; Birt et al., 2013; Hassan et al., 2012), the findings of this study show that the degree and nature of information in relation to the use of derivative instruments for hedging activities reported by Malaysian listed companies are still insufficient, although some studies have reported an improvement in reporting practices of financial instruments information. Hence, these findings may be useful to highlight the reporting quality for financial instruments, especially on hedging activities released by managers in the Malaysian environment. In addition, this study also provides some evidence on the existence of voluntary disclosure of hedging activities information in Malaysia and widens the understanding of current derivative disclosure behaviour practices. Moreover, this study finds that the extent of HAD is not consistent with the agency and resource dependence theories to support that the existence of specific corporate governance mechanisms (i.e., the RMC) enhances management monitoring

and leads to more disclosure in the annual reports. The statistical results show that the existence of the RMC, as part of the corporate governance mechanism, in influencing hedging activities information disclosure, seems to not really play its role in enhancing financial reporting quality. On the other hand, this study finds that an effective RMC structure is not associated with the extent of HAD. The results show that not all elements of the RMC's effectiveness support the agency and resource dependence theories; only two out of the six characteristics of RMC (i.e., RMC independence and diligence) are found to be significant with the extent HAD. Indeed, this study finds a negative relationship between RMC independence and the extent of HAD, which indicates that the proportion of independent directors in the RMC is not able to provide much benefit to shareholders and reduce the agency problem. Hence, this challenges the normative argument of good governance, particularly in relation to a greater representation of independent directors on board committees.

Moreover, the results from this study provide limited support for the hypothesised moderation effect. There is weak evidence to suggest that the effective structure of RMCs could enhance the extent of HAD when there is interference from concentrated owners. The finding is inconsistent with several previous corporate governance studies and fails to support the underlying assumption of the agency and resource dependence theories. Thus, this suggests a new bearing for current literature on the association between ownership structure and the internal corporate governance mechanisms (i.e., RMC) on the financial instruments disclosure employed by companies.

5.3.2 Practical implication

The findings of this study provide several practical implications. First, the findings provide valuable insights for the Malaysian accounting standard setters and regulators in terms of future direction after the adoption of financial instruments accounting standards with IFRS, specifically on hedging activities disclosure. The insufficient amount of hedging activities disclosure and the choice to apply hedge accounting found in this study seem to indicate that there is ineffectiveness in the adoption of IFRS as prescribed by MFRS 7, 132 and 139. Indirectly, this finding also informs the MASB on how managers respond to the harmonisation project of new accounting regulations for financial instruments disclosure, which MASB deems can improve the current reporting practices and shareholder wealth. Perhaps, regulators need to use their enforcement to ensure compliance as well as encourage more relevant disclosure on hedging activities from the use of derivatives.

Secondly, the findings of this study provide new insights to regulators and policy-makers on the voluntary establishment of RMCs among non-financial Malaysian listed companies. Previous studies have claimed that the establishment and existence of the RMC increases the extent of financial instruments disclosure, whereby it can concentrate on the risk profile of the company, including disclosure of related hedging activities information. However, this study presents contradicting evidence to support the existence of the RMC in influencing the extent of HAD. In this respect, this study provides a new view and suggests that regulators and policy-makers have to reconsider the voluntary reason for the RMC's existence among non-financial listed companies in Malaysia. Perhaps, the existence of a RMC in the company to perform the risk

oversight function at board level should be looked into further by the regulators. The result of the statistical analysis in the previous chapter reveals that one of the important elements in the RMC is the frequency of meetings. The result of this study reports that a RMC with high frequency of meetings probably can increase the extent of HAD. This indicates that meetings can improve the RMC's effectiveness because the hedge activities information asymmetry is high and members are usually less knowledgeable about company operations than their executive colleagues. Through frequent meetings, they can exchange more ideas and provide better resolutions. In this respect, perhaps, the regulators and policy-makers should be concerned with the minimum number of RMC meetings to be conducted by the RMC in order to ensure its effectiveness.In addition, the regulators and policy-makers should also be aware of the proportion of independent directors in the RMC. The finding in this study shows that the number of independent directors in the RMC negatively influences the extent of HAD. A guideline for RMC members is needed since the finding of this study is that RMC members with independent status do not affect the extent of HAD. Moreover, the findings of this study also provide new insights to the regulators that the controlling owners (i.e., ownership concentration) does not have an impact on disclosure of financial instruments, particularly on HAD.

Thirdly, the results of this study have implications for the investors/shareholders. Based on the findings, there is insufficient disclosure of information on hedging activities in the annual reports that may affect investors in terms of the information gap between them and the manager on the use of derivative instruments. Hence, the transparency and quality level of disclosure of hedging activities information in the

annual reports will affect investors/shareholders' confidence in their investment decision-making. Besides, the investors/shareholders can learn from the findings of this study that the controlling owners (i.e., concentrated ownership) may have no effect on the RMC and disclosure of hedging activities information. Hence, this could be more valuable to investors/shareholders (particularly minority shareholders) as this will help them in making more wise investment decisions.

Lastly, the results of this study could be useful to other academic researchers studying the disclosure of financial instruments information. Several prior studies have looked into the association between the RMC and disclosure of financial instruments information before and at the early introduction of new accounting standards for financial instruments. This study highlights new examination of a post-period of the accounting standard for financial instruments that may offer invaluable interpretation. In addition, the results of this study also shed light on the impact of concentrated ownership on the extent of financial instruments disclosure which many previous Malaysian studies have failed to include in their discussion. In this respect, other researchers may expand current understanding of accounting and reporting practices for derivatives and contribute to the growing debate on the usefulness of derivative-related disclosures.

5.4 Limitations of study

This study has several limitations. The first limitation is related to the issue of generalisation of the results. The results of this study are drawn only from non-financial Malaysian listed companies on the Main Market of Bursa Malaysia. Thus, it cannot be generalised to financial companies. Given the size of the final sample, i.e., 166 listed non-financial companies (due to low usage of derivatives and the existence of the RMC), the results might not be applicable to other sectors, such as finance, unit trusts and small and unlisted companies. Moreover, the analysis in this study only covers information for one year whereby it does not highlight the evolution of disclosure practices as well as the extent of compliance by companies over time. Besides, the results of the regression analysis between the RMC's effectiveness, its characteristics and the extent of HAD are debatable, as they do not provide strong and dynamic results compared to the analysis over several years. Although the data used is only one year, the results are still sufficient to fulfil the objectives of this study and provide a preliminary view regarding the disclosure of hedging activities information into a number of areas which can be supported by several previous studies (see Abdullah et. al., 2015; Ameer, 2010; Rahmat & Hoffmann, 2011; Embong, 2014).

A second limitation of this study is related to the measurement issue of the dependent variable. This study measures the quantity of HAD and does not emphasise on its quality. This is because evaluating the quality of information is problematic due to the absence of reliable measurements of quality of disclosure and also the difficulty to determine the usefulness of information in a correct manner (Abdullah & Ku Ismail,

2008; Beattie et al., 2004; Yekini, 2011). According to Birt et al. (2013), although several approaches can be used to validate the reliability of disclosure quality, the construction of the disclosure index in some cases still requires a certain degree of discretion. Nevertheless, several previous studies have claimed that the quantity and quality of data are linked to each other because of the importance of manager`s reputation and the possibility of legal liability (see Abdullah & Chen, 2010; Ettredge et al., 2002; Hassan et al., 2006). Besides, this study does not use the weighting of responses to show substantial differences in disclosure of different items. Although weighted responses would have different impacts on the disclosure item score, this study does not add any advantage over unweighted responses because of the subjectivity issue (see Chow & Wong-Boren, 1987; Firth, 1980; Hassan, 2004)

The third limitation of this study relates to the determination of RMC's effectiveness. This study examines the effectiveness of RMC based on externally available information (i.e., annual reports). This study does not use other measurements of effectiveness that may require interaction with RMC members (e.g., survey or interview). Hence, there is a possibility that the RMC, as presented in the company annual reports, does not reflect the actual corporate governance practices. Moreover, this study not only covers the existence of stand-alone RMCs as a sample, but also includes RMCs that are established under audit committees (i.e., sub-committee) or combination with other committees. In this case, perhaps, the actual effectiveness of RMCs could be affected as RMCs operating on their own in an organization would have a different impact on the company's performance and disclosure of information (see Turley & Zaman, 2004; Birt et al., 2013).

The fourth limitation of this study is related to other internal corporate governance variables that may affect the extent of HAD which are not examined. For instance, the board of directors and audit committee characteristics are not examined in this study. Furthermore, the relationship between RMC members with internal auditors is also not explored. As such, the effectiveness of the board and audit committee or internal auditor on the RMC's effectiveness, and their impact on the extent of HAD can be explored in future studies and any of the possible findings may add to the extant literature. Lastly, the limitation of this study is related to the source of the data. This study collects the information only from the annual reports which are not the only source of corporate reporting. Although several previous disclosure studies have claimed that investors and creditors do consider other media, such as quarterly reports and public releases or discussions in making their investment decisions (e.g., see Healy & Palepu, 2001; Hassan et al., 2012; Ismail & Abdul Rahman, 2011), this study believes that focusing on the annual reports will not reduce quality of information disclosure. This is because the annual report is still relevant as one of the important sources of corporate information since all information regarding hedging activities, ownership and RMCs are audited and presented in accordance with the Bursa Malaysia regulations and Malaysian Companies Act, 1965.

In summary, all the limitations as highlighted above offer an avenue for improvement toward future hedging activities information disclosure studies; however, it should not detract the value of this research as this research follows a rigorous process and achieves its objectives.

5.5 Recommendations for future research

Although this study has fulfilled and achieved its research objectives, many issues related to hedging activities information on the usage of derivatives remain unanswered. Given the current changes in accounting standards, corporate governance guidelines and capital market, many new questions in this area will emerge and require further inquiry. Hence, an extension to this study is possible in the following areas:

First, there is a need to conduct further studies on the impact of the new accounting standard (i.e., MFRS 9) on hedging activities information disclosure. This study only examines disclosure of hedging activities information before the implementation of MFRS 9. Since the implementation of MFRS 9 will be effective in the year 2018, future research can be carried out to re-examine the amount of hedging activities disclosure in different settings of accounting standards adoption. It is likely that the usage of derivatives for hedging activities and the establishment of RMCs by non-financial Malaysian listed companies may increase. Moreover, it is also worthwhile to note that further studies should consider examining longitudinal data and testing some other factors that may influence disclosure of hedging activities information. The use of annual reports of a greater number of years after the post-adoption and full convergence period would be interesting, as it would highlight the evolution of disclosure practices as well as the extent of compliance by companies over time.

Second, it is suggested that future research could look into testing for the optimal level of hedging activities information disclosure. Based on previous research (e.g., see Papa & Peter, 2013; Hassan et al., 2012; Hausin et al., 2008; Rahmat & Hoffmann, 2011),

it can be noted that there should exist an optimal level of disclosure whereby beyond that, additional disclosure is value-destructing and leads to a discount for return on investment. This is because the result of revealing company sensitive information would reduce the competitive advantage and additional disclosure beyond a certain point just serves to confuse and drown the investors without actually creating value (Rahmat & Hoffmann, 2011). On top of this, it is also interesting if follow-up studies could examine whether the voluntary disclosure theories, such as signalling theory, political process theory and proprietary costs, can be applicable in the Malaysian context. Other factors that may influence the information on hedging activities that are voluntarily being disclosed should also be examined. It is also suggested that future research could investigate the possible link as well as provide insight into the development of financial information towards the other types of hedging activities that use methods other than derivatives as hedging instruments.

Third, the development of the RMC's effectiveness index in this study is based on the framework of audit committee's effectiveness as suggested by DeZoort et al. (2002) and Ika and Mohd Ghazali (2012). Perhaps, there are other aspects of the RMC's effectiveness that have not been addressed by this current study, such as the existence of risk management expert (see Bates & Leclerc, 2009). It has been argued that RMC members who have strong risk management backgrounds can increase the understanding of the business environment, thus, helping to improve the quality of financial reporting. This is because risk management experts with industry background can improve the effectiveness of the RMC by overseeing whether companies use the appropriate reporting procedures, and make risk estimations and assumptions that fit

their business environment, particularly on hedging activities. Thus, future research could consider whether the existence of a risk management expert can make the RMC more effective in influencing the extent of HAD. In addition, it is proposed for future studies to include some managerial personality traits, such as professional status, multiple directorship, ethnicity and political connections, in developing a more comprehensive index of the RMC's effectiveness (e.g., see Abdullah & Ku Ismail, 2013; Agrawal & Knoeber, 2001; Haniffa & Hudaib, 2006; Latif, Kamardin, Mohd, & Adam, 2013).

Fourth, this study fails to find any significant and positive relationship between RMC's effectiveness and the extent of HAD. Thus, it is suggested that future research should examine whether or not other internal monitoring mechanisms, such as the audit committee, board of directors or internal control may affect the extent of HAD. Exploring the link of possible measures of effectiveness, like the board and audit committee as well as internal control on the extent of HAD may enhance the current literature and may provide new evidence on how much the committees have benefited the companies.

Fifth, this study does not emphasise the usefulness of hedging activities information from an investor's perspective. Hence, it is proposed that future studies empirically consider the value relevance of hedging activities information disclosure in Malaysia's capital market setting. Based on the literature (e.g., Ameer, 2010; Hassan & Saleh, 2010), there is limited evidence of value relevance of derivatives and HAD studies in Malaysia. The existing evidence only emphasises value relevance based on notional amount and fair value information; in fact, such studies were conducted before the

introduction of the new accounting standards. These studies also do not make a distinction between the value relevance of fair values related to hedge accounting derivatives versus fair values related to non-designated derivatives. Thus, it would be interesting if future research can provide regulators with a clear picture of how investors react to the new accounting standard requirements for HAD and how these requirements help in decision-making. In addition, it is also proposed that future studies examine the effect of HAD and firm's value to overcome issues related to measurement and recognition of derivative instruments for hedging activities.

Sixth, this study highlights some insight on the choice of hedge accounting among Malaysian listed companies. It is found that the choice of hedging accounting only affects a small number of companies and a majority of companies choose to apply cash flow hedge accounting. Based on studies conducted by Melumad et al. (1999) and Campbell et al. (2015), high preference to apply cash flow hedge accounting by Malaysian companies shows that cash flow hedge accounting might be used as an earnings manipulation tool for management. Hence, to protect the interests of shareholders by enhancing the financial reporting quality, it is suggested that future studies investigate the choice of hedge accounting and opportunistic earnings. This suggestion is based on the assumption that high disclosure quality reduces earnings manipulation (Beattie, 2005; Lapointe-Antunes et al., 2006: Jo & Kim, 2007). Since there are limited studies in Malaysia and the existing evidence is from developed countries, it would be interesting to know whether findings that are based on the developed market can be applied to the emerging economy. Besides, it may also provide new evidence on earnings management and disclosure of corporate information.

Finally, the comparability of hedging activities information disclosures among countries is another potential area for future research. Future research could compare the hedging activities information disclosures provided by companies in Malaysia and other world economies in line with the development and harmonisation of International Financial Reporting Standards (IFRS).

5.6 Concluding remarks

There is a rising concern for the information on hedging activities from the use of derivatives after the collapse of several prominent companies over the past several years. In fact, supervisory bodies all over the world, especially in developed countries, have given their attention to the establishment of an effective control system, including the release of the new financial reporting standards on financial instruments for companies to disclose their hedging activities. However, the usefulness of these accounting standards is questionable and debated among academic researchers and practitioners. It is claimed that these accounting standards require management to deal with more detailed, complex and often sensitive information, whereby entities might tend to avoid such presentations and disclosures. Besides, the accounting standards also allow an option for management on whether to apply what is called 'hedge accounting' or otherwise, for the derivatives used for hedging activities. Due to these facts, this study finds that many research efforts have been undertaken to unveil some reasons for the compliance to these accounting standards, but such efforts and empirical evidences only focus on the cases of developed economies as compared to the emerging economies.

In the case of Malaysia, since the MASB adopted the new accounting standards for financial instruments in the year 2010, to date, there is no clear and adequate evidence that specifically addresses how HAD is being practiced among Malaysian listed companies. Hence, this has motivated this study to get a better understanding on the extent of HAD by examining the annual reports of non-financial Malaysian listed companies. Based on the analysis of the annual reports, it is found that the extent of HAD for the non-financial Malaysian listed companies assessed within the sample is lower than expected. Even though many companies are found to fulfil the mandatory requirements for their hedging activities information, there are still some companies that provide less than full information about their hedging activities. Indeed, it is also found that many sampled companies choose not to apply hedge accounting. Besides, this study also identifies that the disclosure level of voluntary information on hedging activities is still not enough to improve the richness and transparency of risk management information on the use of derivatives.

Looking into these facts, it seems that the application of the accounting standards for financial instruments for Malaysian companies to generate more disclosure of hedging activities is not achievable to help the stakeholders (especially investors) in order not to face any surprises when the derivative used for hedge activities is collapsing. In this sense, this study believes many investors may not be happy with the information gap between them and the managers towards the use of derivative instruments in hedge activities. Therefore, it can be concluded that the hedging activities information released by managers, based on the agency theory, does not reduce agency cost. Although several previous Malaysian studies have proposed the establishment of a

RMC to enhance the compliance and the extent of financial instruments disclosure, this study reveals that there is no significant relationship between the existence of RMC and the extent of HAD.

This study also does not provide support of a positive relationship between the RMC's effectiveness when aggregated together, with the extent of HAD. In fact, the effectiveness of the RMC is also found to not affect the choice of applying hedge accounting among non-financial Malaysian listed companies. Furthermore, it is found that not all elements of the effectiveness of the RMC are important as the study finds no evidence to support the relationship of RMC size, gender diversity, training, expertise and supervisory duty and the extent of HAD. Although this study finds that RMC diligence and RMC independence have some significant bearing in influencing the extent of HAD in Malaysia, the relationship between RMC independence and the extent of HAD is negative. As such, this finding indicates that the independent directors in the RMC are not able to provide much benefit to shareholders and reduce the agency problem, particularly in influencing the extent of HAD. Therefore, it is argued that incorporating RMCs as part of the corporate governance mechanisms should be undertaken with caution by companies, particularly on the value of amateur and part-time independent directors (see Wan-Hussin, 2009). Intrinsically, it is not just the existence of RMC, but their effectiveness that needs to be emphasised. Moreover, this study only finds weak evidence to confirm that ownership concentration has a significant impact on internal corporate governance mechanisms (i.e., the RMC) and disclosure of hedging activities information. Although there is lack of evidences to support the effect of different ownership concentrations (i.e., family, management and

government) towards the relationship between RMC's effectiveness and the extent of HAD, this study still acknowledges previous studies that the function of specific corporate governance mechanisms is different in the Malaysian business environment.

An important contribution of this study, therefore, is that the response of Malaysian companies in disclosing information on hedging activities, is weak and insufficient after the post-adoption of accounting standards for financial instruments. Although previous studies have claimed the existence of RMCs can ensure high compliance with the accounting standards for financial instruments, this study reveals that the increasing focus on the establishment of RMCs to handle risk management issues (particularly on hedging activities) has seemed not to promote the transparency of information among Malaysian companies. In fact, the RMC is still not really effective in remedying the poor disclosure of hedging activities information in Malaysia; this suggests companies (particularly Board of Directors) and regulatory bodies think more about how to strengthen the RMC's effectiveness as current regulations and practices are still voluntary. Perhaps, the RMCs are not equipped with the neccessary knowledge and experience at the time this study was conducted. Even though this study is subject to some limitations, it is believed that the evidence in this study can give some useful insights for legislators, accounting standard setters and researchers who are concerned with enhancing the quality of disclosure of financial instruments, particularly the use of derivatives for hedging activities.

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