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DERIVATIVES USAGE BY NON-FINANCIAL COMPANIES IN MALAYSIA

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Abstract
The purpose of this research is to examine Malaysian non-financial firms' use of derivatives. In addition, this study contributes to the increased knowledge about a firm's derivatives practices and the impact from factors such as the firm size, category of industry and nationality using these practices. This research has two objectives which are to examine the extent of the derivatives usage in non-financial companies in Malaysia and to determine the key determinant of derivatives usage in non-financial companies in Malaysia. This research involved 286 respondents from non-financial companies, through the use of e-mails. The results of this study show that firms who claimed they are not using derivatives due to their insignificant exposures. It is also found that companies are reluctant to use derivatives due to the disclosures of derivatives activities required under Securities Commission (SC) rules. The study concludes that, the lack of knowledge on derivatives is the major reason for firms not to go against the use of derivatives. This is followed by the inadequate exposure about derivatives.

Keywords: Derivatives, equity derivatives, risk management, underlying instrument and financial stability

1. Introduction of the Study

Since 1980s, derivatives have been expanding and became a controversial feature of the financial markets. Most manufacturers and investors used a wide range of derivatives to manage their risk. Along with other financial innovations which include securitization, few attempts have been made to introduce derivative products to the commercial property market (McAllister, 1998). He claimed that financial derivatives have the potential to overcome portfolio investment management and are "synthetically" able to buy or sell property in a short period of time which enables managers to engage actively in managing of their portfolio.

Derivatives which in turn have the simplest underlying concepts are now growing rapidly, so do their product complexity. Therefore, an adequate infrastructure is needed in order to support trading activities of a company and to manage the operational risk that these products involve. The rapidly growing volume of transactions as more company and other users enter the market leads to an increase in liquidity and transparency.

Derivatives derived from the value of underlying assets as a method of managing risks and uncertainties in the investment process. The price of a derivative instrument is obtained from the actual price of underlying from the physical or financial assets. Derivatives' trading was defined by Rosalan, Noryati and Ho (2009) as a simple contract to buy and sell which is set today, but will be fulfilled at a stipulated date, later. Consequently, it needs two instruments which are derivatives and physical instrument and two markets which are derivatives and physical markets. Derivatives can be traded or classified as an "over the counter" product. Derivatives facilitate the buying and selling of risks and many people believe this will have a positive impact on the economic system. While one person facing losses money, another will gain money with derivatives. Under normal situations, trading in derivatives should not adversely affect the economic system because it is not zero sums in utility. Derivatives are an integral part of market risk management policy. Market risk is the risk of loss arising from adverse changes in market rates and prices such as interest rates, currency exchange rate, commodity prices or equity prices.

This research intends to examine the use of derivatives among Malaysia's non-financial firms. This study will contribute to an increased knowledge on firms' derivatives practices and the impact on derivatives practices with regards to certain factors such as the firm size, industry belonging and nationality.

The use of derivatives financial instruments is now common within entities. Derivatives are used by companies and other entities for purposes such as managing current or anticipated risks relating to operations

and financial position. This could include reducing exposures to changes in exchange rates, interest rates and commodity prices. They may also be used for taking open or speculative positions to benefit from anticipated market movements. Some entities may be involved in derivatives not only from a corporate treasury perspective but also, or alternatively, in association with the production or use of a commodity.

1.1 Problem Statement

Financial globalization facilitates greater diversification of investment and enables risk to be transferred across national financial systems. However it also exposes firms to higher risks (Jobst, 2008). Over the last decade, the use of derivatives as a tool for corporate risk management has increased drastically, Pramborg *et al* (2006), and derivatives are seen as an integral part of firms' market risk management policy (Rashid Ameer, 2009). As a response to this, a study will be conducted to examine the effect that firms might experience by looking at the usage of derivatives instrument in non-financial companies in Malaysia. Presently, most of Malaysian firms are cautious or unsure about the use of derivative instrument. Therefore, it is crucial to impart and explain about the usefulness of the derivatives and market risk management to the managers which will contribute to a greater and probably better financial transparency of the firms.

1.2 Objectives of the Study

- To examine the extent of the derivatives usage for non-financial companies in Malaysia.
- To determine the key determinant of the derivatives usage in non-financial companies in Malaysia

1.3 Research Questions

The research is conducted in order to answer the research questions below:

- To what extent derivatives are used in non-financial company in Malaysia?
- Are derivatives used for the purpose of managing risk?

1.4 Scope of the Study

This study analyzes non-financial companies in Malaysia that used derivatives. These companies are divided into several sectors such as industrial product, consumer product, plantation, properties and construction since we expect a varying level of exposure across the industries.

1.5 Significance of the Study

This research involves Malaysian non-financial companies' responds towards derivatives usage which is very beneficial and important to local companies. By providing the information on the advantages of using derivates by other companies, it is hoped that Malaysian companies may consider using derivatives as an alternative to manage their risk in the future. Besides that, the findings will enable the companies to plan and strategize on how to exercise derivatives which will improve their business performance.

1.6 Limitations of the Study

This research attempts to study the derivatives used among local companies in Malaysian. There are a few limitations of this study.

1.6.1 Confidentiality

Confidentiality is the act to ensure that the information is only accessible to those who have been given the authority to do so. Based on this study, the level of confidentiality varies among the companies, which leads to reluctantcy in revealing private information.

1.6.2 Generalizability

Generalizability refers to the scope of applicability of the research findings in one organizational setting to the other setting. A high level of generalizability certainly makes the study to be more useful. Based on this study, it may be difficult for us to apply the knowledge on each of the organization selected due to the differences in the size, strategy and environment of the companies. Thus, the findings might have a limited generalizability.

2. Literature Review

Derivatives have been used to mitigate the risk of economic loss occurring from changes in the value of the underlying instruments and which is also known as hedging. It allows the risk of the price of the underlying assets to be transferred from one party to another. Investors often used derivatives to make profit by taking risk when the underlying moves the way they expected. This is also known as speculation. Besides, derivatives can be used to acquire risk rather than to ensure or hedge against risk. Therefore, individual and institutions will go into the derivatives contract to speculate on the value of the underlying asset, with the hope that the party seeking insurance will be wrong about the future value of the underlying asset.

According to Philips's (1995), in survey on organizations use of derivatives for managing risk, obtaining funding or investing. 78 percent of them use derivatives for financial risk management, 21.4 percent used for investment purposes and 66.7 percent use derivatives in conjunction with obtaining funding. On the contrary, Berkman *et al* (1997) found that the use of derivatives among non-financial firms in New Zealand was higher due to higher transaction costs and high-risk exposure of its firms. In addition, derivatives are rarely used to speculate on market movements and reduce volatility of firm's cash flows as stated by Marshall (2000). These lead to indicate swaps, forwards and options are commonly used to manage foreign exchange and interest rate risks.

Rashid (2009) stated that the usage of derivatives among firms in Malaysia has increased steadily over the years. Increases in firms' earning tend to vary in the same direction as the total amount of derivatives suggesting that earnings growth provide firm confidence in using derivatives instruments to shield them against unforeseen market risk. However, only a few firms in Malaysia hedge their market risks and the main users of the FCDs in Malaysia are firms in the plantation, industrial product, trading services and consumer product.
In Malaysia, firms use derivatives financial instruments in the form of forward foreign exchange contract and interest swap contracts to hedge its exposure to foreign exchange fluctuations from operating, financing and investing activities as stated by Guthrie Group (2006) in Radiah and Rashid (2009). The essential instrument of managing the risks faced by corporations is by using financial derivatives. According to the finance theory, a firm's value will be increased through hedging if any capital imperfections occur such as expected costs of financial distress, expected taxes and other agency costs. Many firms and individuals use derivatives as part of an overall strategy to manage the various financial risks they face such as the interest rate risks, foreign currency risks, commodity price risks and equity price risks. The misuse of these derivatives instruments however might lead to severe losses.

Derivatives are used primarily for hedging purposes by non-financial firms. However, firms identify their risk management objectives through the use of derivatives such as minimizing the volatility in accounting earnings, minimizing the volatility in cash flows and managing balance sheet accounts. According to Alkeback theory (2006), the primary objective of using derivatives in risk management is to minimize volatility in accounting earnings. Further increases in derivatives usage will be encouraged more by external factors such as an increased exposure and also internal factors such as an increased knowledge.

The use of derivative instruments has become a common practice in the risk management activities of non-financial firms around the world (Bartram, 2003). It is thought as a proxy for corporate risk management and to manage financial risks through the use of various. Non-financial firms use financial derivatives on a standard basis as demonstrated by the statistics on derivatives usage. Basically, the financial theory suggests derivatives instruments to be chosen based on the exposure profile of a firm if it is done for hedging purposes. Besides that, Sohnke (2006) stated that the payoff characteristics of the instruments with a linear payoff profile such as forwards, futures and swaps are appropriate for linear exposure while nonlinear payoff of options is suitable to hedge a nonlinear exposure.

The usage of derivatives has increased in Sweden from 1996 to 2003 for small and medium sized firms. Alkeback *et al* (2006) claimed that the usage of derivatives for hedging the balance sheet among Swedish firms in 2003 is higher than other countries. Large firms used derivatives the most, followed by medium and small firms. This situation means that a firm size could be a deciding factor in the use of derivatives.

Alkeback *et al* (2006) added that several firms refuse to use derivatives due to a number of reasons such as insufficient exposure, the overwhelming cost of hedging which exceed its benefits, exposure being managed by other means, the lack of knowledge, external disclosure requirements, difficulties in understanding the exposure and other factors. There are four broad classes of financial price risks which are foreign exchange exposure, interest rate exposure, commodity exposure and equity risk exposure and there are different instruments to manage the exposures. According to Alkeback *et al* (2006), the most popular instruments for managing exposure are swaps and OTC forwards rather than futures, exchange traded options and OTC options.

Ahmed (2006) revealed that centralized risk management activities are the most common and foreign exchange (FX) risk is the most frequently risk managed by firms with the use of derivatives. Using hedging with derivatives is important in managing the volatility in cash flow, the firm's market value, the volatility in accounting earnings and the balance sheet account or ratios. The most frequent way to hedge the exposure for contractual commitments is options, followed by forwards, futures and swaps.

According to Sohnke (2006), there are a variety of instruments used on foreign exchange rate and interest rate risk, and the most important basic derivatives products are forwards, futures, options and swaps. Most financial firms use financial derivatives as their choice of instruments for speculative and hedging purposes as well as to reduce financial exposures at the firm level. Basically, risk management theory suggests that the nature of the exposure will determine the choice of appropriate risk management instrument. Andreas (2008) stated that derivatives play an important role for local capital market development and local policy makers in emerging markets as they undertake market structure reforms to redress existing gaps in the infrastructure, organization and regulation of derivatives trading.

In addition, derivatives are also used to manage current or anticipated risks relating to operations and financial position. Besides, the market movement encourages derivatives to be used in open or speculating positions to gain their maximum benefits. Billing (2002) stated that to provide guidance to auditors in planning and performing auditing procedures for financial statement assertions related to derivatives financial instrument, a Practice Note is needed.

3. Research Methodology

Data will be collected through primary and secondary sources. The primary data was collected using questionnaires while secondary data from respondents' company profile, journals, annual reports and internet. The questionnaire primarily is based on a previous study conducted by Ahmed (2006). It was later modified to suit the Malaysian market. The questionnaires contain two parts on derivatives and risk management respectively and were emailed to the companies' corporate treasurers. As this study is meant to see the impact of the derivatives usage by non financial companies in Malaysia, the researchers have decided to select randomly the non financial companies listed in the main board of Bursa Malaysia in 2010 amounted to 844 companies. Those selected companies will be divided into specific sectors as the researchers believe that the categorization of those non financial companies into sectors will bring some differences and produce interesting result at the end of the study. The total number of companies which involved in this study is 286 companies.

4. Research analysis and interpretation

In this study, the selected non-financial companies were required to answer a number of questions relating to the usage of derivatives.

4.1 Derivatives Use

Part A of the questionnaires covers the use of derivatives. In this section, firms were asked to indicate whether they use derivatives or not while providing the data about a number of criteria such as the size of the companies, which is determined by looking at the turnover, sector, ownership status, and organizational form. Out of 286 questionnaires distributed only 89 respondents returned and answered (31.12 percent). Figure 1 reveals this result.

Table 1: Response rate for the questionnaire survey

	Frequency	Percent
Panel A: Response rate		
Responding firms	89	31.12
Non-responding firms	197	68.88
Total	286	100
Panel B: Analysis of responding firms		
Respondents that use derivatives	54	60.67
Respondents that do not use derivatives	35	39.33
Total	89	100

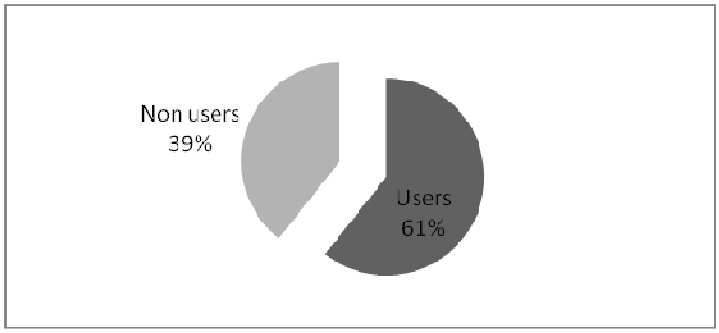

Figure1: Derivatives usage rate for the current study.

Previous study conducted on the use of derivates for example, Bodnar *et al* (1995) and Bodnar *et al* (1996) indicated that 53 percent and 41 percent of the surveyed companies used derivatives respectively. Figure 2 displays the derivatives usage rate in the current study compared to some previous studies.

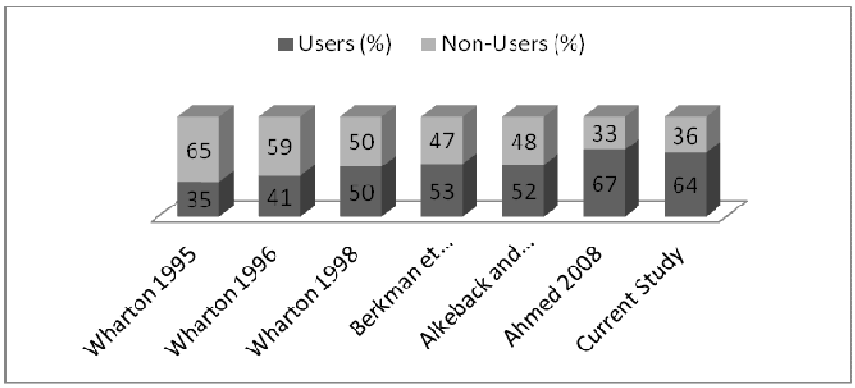

Figure 2: Derivatives usage rate compared to some previous studies
Source: Adaptation on Ahmed (2008)

4.2 Derivatives usage by size

In terms of the size of the firm, figure 3 presents the percentage of current derivatives users categorized into dimension. Large firms appear to be using derivatives the most at 48.15 percent. The derivative usage rate for medium-sized firms is 31.48 percent and 20.37 percent for small firms. T he drop in percentage of derivatives usage from large firms from the smaller ones could be contributed to the economic to scale argument for the use of derivatives. Larger firms are more capable to bear with the cost especially the fixed cost of using derivatives compared to small firms.

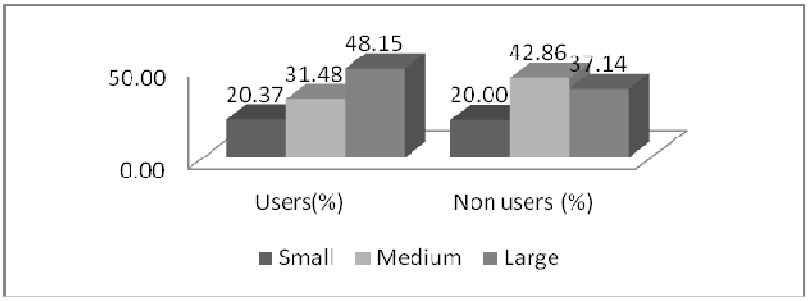

Figure 3: Derivatives usage by size dimension

4.3 Derivatives usage by industry sector

Figure 4 shows the percentage of derivatives users by sectors that exist in Malaysia excluding the financial sector. Industrial product used derivatives the most at 22.22 percent, followed by properties sector (18.52

percent) and consumer product (16.67 percent). Two sectors that share the same percentage are construction and plantation (14.81 percent). Other sectors use of derivatives stands at 12.96 percent.

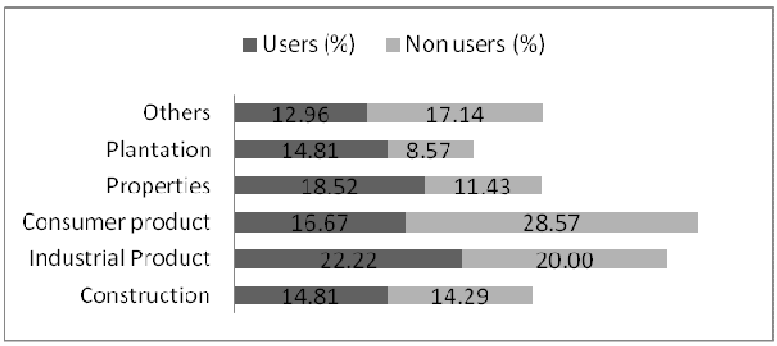

Figure 4: Derivatives usage by industry sector dimension

4.4 Derivatives usage by ownership status

Figure 5 displays the percentage of derivatives usage according to a company's ownership status. Public companies used derivatives the most at 42.59 percent at 42.59 percent and the derivatives usage of private firms stands 31.48 percent. On the other hand, the derivatives usage of the other companies is 25.93 percent.

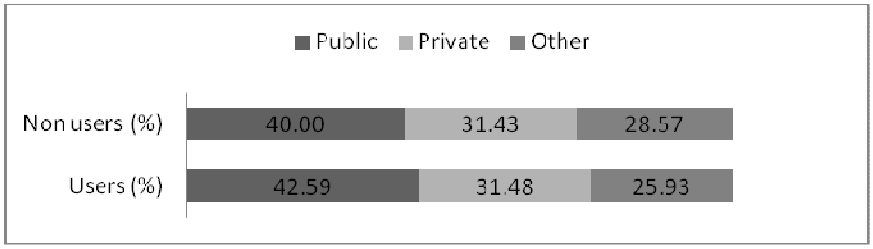

Figure 5: Derivatives usage by ownership status

4.5 Derivatives usage by organizational form

Figure 6 represents the percentage of derivatives usage according to a company's organizational form. It is found that the largest percentage of derivatives usage happened in centralized firms and international firms at 35.19 percent and 48.15 percent respectively. The divisionalized firms and multi-site firms' derivatives usage stand at 24.07 percent and 27.78 percent respectively. Single-site firms used derivatives at 12.96 percent.

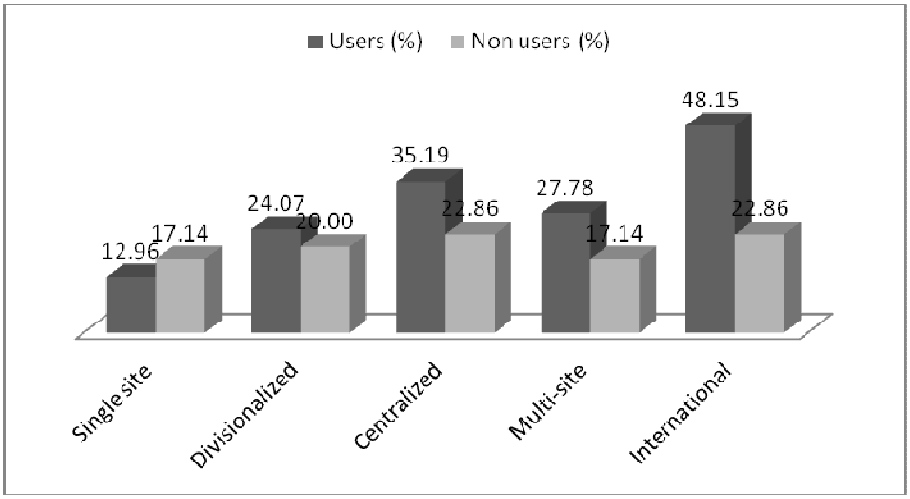

Figure 6: Derivatives usage by oganizational form

4.6 Non-use of derivatives

From 89 selected companies, there are 35 companies that do not use derivatives. They were asked to identify the degree of importance regarding the factors that help them in deciding against the use of derivatives. Figure 7 represents the percentage of firms that do not use derivatives. It is found that the main reason for this situation is the lack of knowledge about disclosure of derivatives activity required under Securities Commission's (SC) rules. In addition, the result also indicates that this situation happens because their exposures are being managed by others. They feel that exposures are more effectively managed by other means such as risk diversification or risk shifting arrangements. Other reasons for not using derivatives include insignificant exposures, the costs of establishing and maintaining derivatives programs which exceed their expected benefits and the difficulty in pricing and valuing derivatives. Finally, the least important reason for not using derivatives is the perceptions of investors, regulators, analysts and the public if they were to use it.

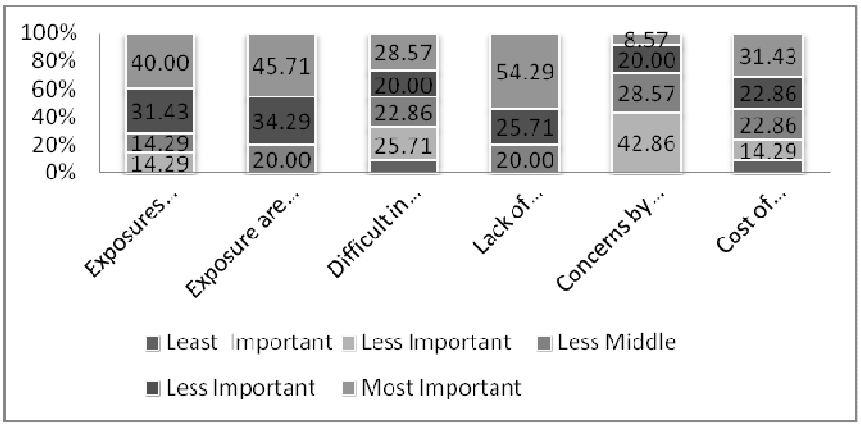

Figure 7: Factors not to use derivatives

4.7 Derivatives usage compared to last year

Based on the notional value of total contract, firms have indicated whether there is any change in the intensity of usage among the firms that use derivatives and how their derivatives usage in the current year compared to the usage in the previous year. Figure 8 shows a comparison of the use of derivatives in 2009 and 2010. The derivatives usage over the previous year claimed that their derivatives usage remained from year to year compared to just 17 percent who indicated a decrease. The remaining firms (37 percent) indicate that their usage of derivatives has been on the rise. In general, this result suggests that a significant proportion of derivatives users find that derivatives use are very helpful that they choose to increase their usage.

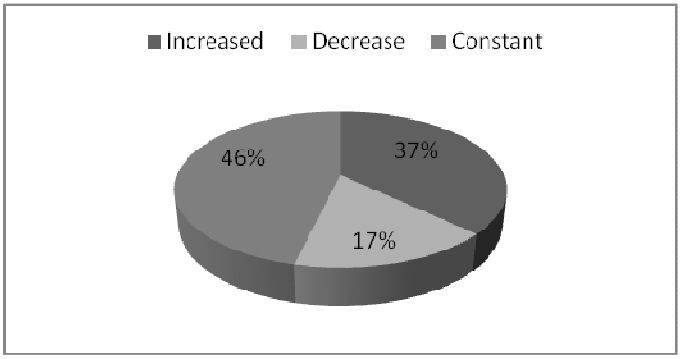

Figure 8: Derivatives use age in 2009 and 2010

4.8 Risk management on derivatives

Financial price can be classified into four main types which are; foreign currency risk, interest rate risk, commodity price risk and equity price risk. Some firms use derivatives to manage risk in each of these four types. Due to the different nature of these risk types and the fact that they are often managed separately within

firms, the firms are asked to indicate their approach in terms of decision making structure in managing each type of risk.

Figure 9 shows that it is overwhelmingly common for firms to use derivatives which are decentralized with centralized. Foreign exchange (FX) risk is the risk most commonly managed with derivatives; it is practiced by about 46.3 percent of the derivatives users. Interest rate (IR) risk is the second commonly managed risk that uses derivatives (37.04 percent). Commodity market (CM) risk is managed with derivatives by about 25.93 percent of the derivatives users, while equity (EQ) risk is the least commonly managed risk at 18.52 percent. Generally, FX risk and IR risk are likely to be faced by all firms (decentralized and centralized) as compared to EQ and CM risk due to the nature of their activities. Consequently, the usage of derivatives in these classes, which is conditional on having an exposure, will be even higher than the responses displays in the figure below.

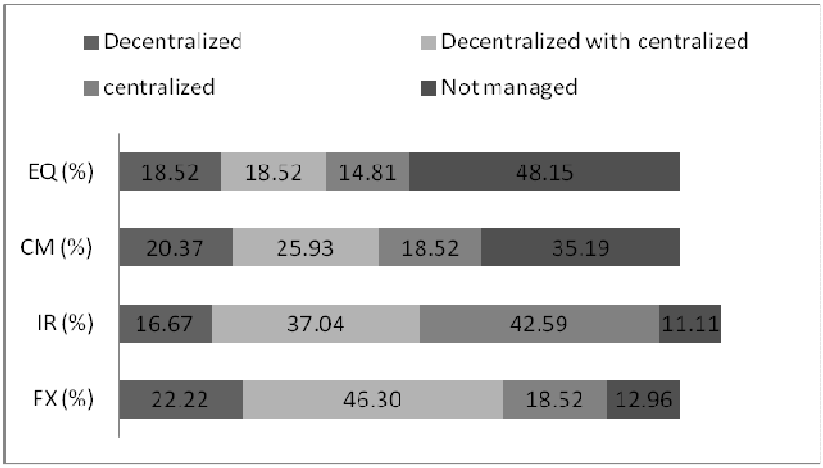

Figure 9: Approaches to managing risk by derivatives

4.9 Concerns about derivatives usage

There are many aspects that affect the usage of derivative among companies in Malaysia. Firms were asked to identify their degree of concern about a series of aspect towards the use of derivatives. Some aspects identified are; credit risk, difficulty of monitoring hedge position, tax or legal issues, disclosure requirements, transaction costs, liquidity risk, lack of knowledge about derivatives, difficulty in quantifying the firm's exposure, the price and value of derivatives, perceptions of investors, regulators and analysts about derivatives and evaluations of the risk involved derivatives transactions. Firms were asked to rate these aspects in terms of their level of concern; high, moderate, low, not concern at all.

Figure 10 shows the result of the survey. Majority of the firms indicate a low level and moderate level of concern (at 16.5 percent and 37.37 percent respectively) towards these aspects. The average for high level of concern for all aspects is 41.92 percent. From the result, we notice that a lack of knowledge about derivatives is the most alarming concern among derivatives users as 61.11 percent of the firm indicate that they have high level of concern about it, followed by moderate level of concern 22.22 percent and low level of concern is 16.67 percent. None of these firms claimed that they have no issue about this matter.

The second most alarming concern among the firms as the liquidity risk, with 53.7 percent of them indicated that they have a high level of concern about this aspect, 33.33 percent (moderate) and 9.25 percent (low). Only 3.7 percent of them said that the risk does not bother them.

The third most alarming level of concern is the credit risk, with 59.26 percent of the responds said that is the greatest concern for them, followed by 27.78 percent (moderate and 12.96 percent (low). This is followed closely by perceptions of investors, regulators, analyst and the public about the use of derivatives. 50 percent of these firms indicate that this matter concerns them the most, followed by 31.48 percent (moderate) and 12.96 percent (low). Only 5.56 percent of them treated it as a non issue.

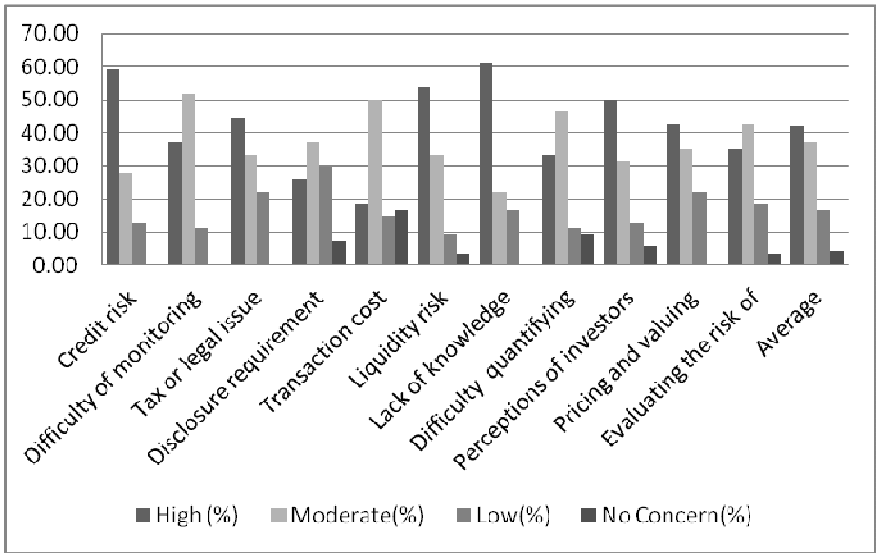

Figure 10: Degree of concern about factors that affects the use of derivatives.

5. Discussion and recommendation

This study focuses on the use of derivatives by non-financial companies in Malaysia. The result for this study is based on a questionnaire addressed to 89 non-financial companies listed on the main board of Bursa Malaysia. This paper also partially covers risk management practices in Malaysian market.

From the survey, it is found that larger firms in Malaysia are more likely to use derivatives as compared to the medium and smaller size firms. In terms of forms of organizational perspective, the multi-site firms and international firms seem to be using derivatives extensively as compared to other forms of organizational perspective, namely single-site, divisionalized and centralized.

Out of the 89 companies (respondents), 35 of them (39.33 percent) claimed that did not use derivatives due to their insignificant exposures. It is also found that companies are reluctant to use derivatives due to due to the disclosures of derivatives activities required under Securities Commission (SC) rules; the perceptions of investors, regulators, analysts or the public with the regards to the use of derivatives and the cost of establishing and maintaining derivatives mechanisms which often the exceeds the expected results.

The second part of the study on risk management reveals that main reason for using derivatives is to manage the foreign exchange (FX) risk. The second most common reason is to manage the interest rate (IR) risk. Surprisingly, around 50 percent of the respondents were reluctant to the idea of using derivatives due to a lack of knowledge on derivatives. This is on the contrary with the research conducted by Ahmed (2006), who found that and where the major reason for not using derivatives was to the lack of exposure on derivatives mechanisms.

For future research, it could be beneficial to include a more detailed data, such as the different time span. A larger sample size could also be used to get a more holistic view on the usage of derivatives among Malaysian listed firms. The means of collecting data could be further improved by using mail questionnaires or conducting personal interviews with structured questions as this could lead to a higher respond rate. For a comparison purpose (Ahmed, 2006), managed to get achieved a respond rate of 43.14 percent as opposed to a mere 31.12 percent that the study achieved 43.14 percent respond rate whilst this research is only 31.12 percent. In conclusion, despite advantages, the lack of knowledge on derivatives is the major reason for firms not to go against the use of derivatives. This is followed by the inadequate exposure about derivatives. It should be noted that derivatives are useful for companies as it can be used to minimize risks. Therefore, firms must infuse the knowledge on derivatives in order to gain their maximum benefits. On the other hand, an enough exposure should be made available to these companies in order to increase the number of transaction pertaining to derivatives. The SC should play an important role of promoting derivatives so that their usefulness can be spread to all businesses.

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