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**THE IMPACT OF ISLAMIC DEBT
ON FIRM PERFORMANCE**

A thesis
submitted in partial fulfilment
of the requirements of the degree

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Fitriya



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ABSTRACT

This thesis uses micro-econometric analysis to examine the impact of Islamic debt on firm value and firm financial performance by observing two groups, namely Malaysian firms and Indonesian firms. The study in particular considers (i) the impact of Islamic debt on firm value and firm financial performance, (ii) the Islamic debt announcement effect on stock return, (iii) the relationship between Islamic debt characteristics and stock return.

A number of significant contributions to corporate finance arise from this research in relation to Islamic debt instruments and firm financial performance. First, it provides evidence of the Islamic debt impact on firm value and firm financial performance. Second, it provides evidence of the Islamic debt announcement effect on stock returns. Third, it provides evidence of the Islamic debt characteristics' impact on stock return. Fourth, and very importantly it provides new insights, adding substantially to the very few studies that have been conducted on these types of instruments. It is expected that the empirical results from this study will be a starting point for significant future research on similar instruments.

Islamic debt became increasingly popular for the last decade as companies sought to raise funds by offering corporate Islamic debt (sukuk). It has become significant for raising funds in the international capital markets through Islamic law (shariah). Moreover, Islamic debt has become a topic of research interest in Islamic finance since the financial crisis which affected major countries and firms around the world. The rise of Islamic debt, initially in Asia (Malaysia) is due to

the fact that (i) Malaysian firms want to tap into investors from the Middle East (oil money), who have a considerable amount of money to invest, but also have to adhere to their religious view, (ii) the government's policy regarding the Islamic Capital Market establishment along with its instruments, (iii) Islamic debt appears to offer more security and therefore has become an attractive market both for Muslim and non-Muslim investors. This is reflected by the increase in the issue size from year to year, for both sukuk issuers and sukuk holders, receiving increased support in the form of market surveillance and regulation, and from market participants.

Data employed in this study are obtained from the Islamic Finance Information Service (IFIS) database. The sampling period is 2000 to 2009, which is ten years and quarterly observations are used. These quarterly data are important since the issuance of Islamic debt for every firm is in different quarters with 227 companies from Malaysia issuing Islamic debt from 2000 to 2009. From those 227 Malaysian companies, 106 companies were public companies, and 121 companies were private companies. Of the 106 public companies, 31 are excluded from the data list due to the non-availability of their respective financial statement data. In addition, the sample of Islamic debt offering must have data availability on the size of the offering, the maturity length, the history of the issuance, and other accounting data information. There were 26 Indonesian firms that issued Islamic debt for the range of this study period, however only 14 firms had complete data.

A balanced panel of 80 Malaysian and 14 Indonesian companies are employed in this study. For panel data analysis, the availability of ten years' worth of data is

required, particularly quarterly data. For an event study and multivariate regression method analysis, the data of the daily closing stock prices for two years prior and one year after the announcement date are required in order to calculate the abnormal return using the abnormal return benchmark (mean adjusted return, market adjusted return and market model return).

The choice of model employed is specified according to its diagnostic testing results for non-normality, heteroskedasticity, multicollinearity, endogeneity and linearity in both Malaysia and Indonesia. A test is conducted to confirm that there are no outliers in the data set prior to the diagnostic testing. Poolability and co-integration testing are also included. Based on the diagnostic results, Malaysian data are analysed using the dynamic panel generalised method of moment and Indonesian data are analysed using the panel corrected standard error. These two methods are employed to investigate the impact of Islamic debt issues on firm value and/or firm financial performance. Next, the analysis examines the impact of Islamic debt announcement on abnormal return using an event study method. The abnormal return benchmarks used are mean adjusted return, market adjusted return and market model return. Finally, the relationship between the Islamic debt characteristic and stock return is analysed using the generalised least square and the ordinary least square for Malaysian and Indonesian data respectively.

The findings for the impact of Islamic debt on firm value and/or firm financial performance using Malaysian and Indonesian data reveal that when Islamic debt was first introduced to the market; it affected higher firm performance as indicated by market-based and accounting-based measures. However, the issuance

of Islamic debt for a second time lowers firm performance which suggests that Islamic debt expansion has a detrimental effect on firm value. The Islamic debt issuance for more than two issues improves a firm's financial performance, indicating that after having a few experiences in issuing Islamic debt, the issuance of Islamic debt impacts positively on firm performance. This may be attributed to the holders of Islamic debt closely monitoring the management of the firm to ensure that the firm can generate profits and distribute a periodic stream of cash flow over time. Thus, Islamic debt also reduces the agency problem within the company and hence increases firm value. From the view point of markets, this may indicate that the markets learn through several issuances of Islamic debt and therefore have greater confidence in subsequent issuances compared to the second issuance of Islamic debt.

The second observation is that when Islamic debt proportion is below the average or at the average, it has a positive significant impact on firm value and/or firm financial performance. However, the greater the proportion of Islamic debt issued, the lower the firm performance. This result is similar to the empirical result for non-Islamic debt, in that the proportion of debt at a certain level may hamper firm performance as an additional incurrence of debt gives no guarantee that firm performance will be higher. This is mainly because as the leverage increases, so does the risk of default, which provides a greater incentive for lenders to monitor the firm. Moreover, the proportion of Islamic debt at the average represents the best likelihood of affecting higher firm value and/or firm financial performance.

The third observation is that debt-types and equity-types affect firm performance, while asset-types have a positive but not significant effect. The result supports the notion that certain types of debts have a different impact on shareholders' wealth. Overall, the findings, both for Malaysia and Indonesia, indicate that Islamic debt has a positive impact of on firm value and/or firm financial performance. The positive findings are consistent with theory covered in prior research and showing that this theory can also be applied to Islamic debt. Moreover, Islamic debt makes a greater contribution to the improvement of firm financial performance than non-Islamic debt.

The findings for the event study analysis, using three benchmarks, reveal that there is a negative and significant impact for both average abnormal returns (AAR) and cumulative average abnormal returns (CAAR) for Malaysia. This negative finding supports the negative impact hypothesis. Overall, the result for one day prior to and one day after the announcement is positive and significant. In contrast to the findings for Malaysia, the impact of Islamic debt announcement, using three benchmarks, is positive and significant both for AAR and CAAR for Indonesia. This positive finding supports the positive impact hypothesis. Overall, the result for one day prior to and one day after the announcement is positive and significant. Moreover, the impact of the announcement for the event window spanning 31 days (-15 to +15) is varied for the three benchmark returns used in this study. The results for this window span reveal that the majority of AAR and CAAR are negative and significant. Furthermore, the results for AAR and CAAR for Malaysia are almost similar to the results found for Indonesia. The unit root test result for Malaysia indicates that the market is efficient in the context of weak

form efficiency, which suggests that the price movements are unpredictable. In contrast to Malaysia, the unit root test result for Indonesia indicates that the market is inefficient in the context of weak form efficiency, which suggests that the price movements are predictable.

The findings for Islamic debt characteristics' impact on stock return reveal that the Islamic debt characteristics, which are debt to equity ratio and firm size, have a positive and significant impact on shareholder wealth, while Islamic debt offering size and maturity have no significant impact on shareholders' wealth for Malaysia. For Indonesia, the result is similar to the result obtained for Malaysia except for debt equity ratio and firm size which have positive and significant impacts. With regards to the frequency and types of Islamic debt issued, only the first issuance of Islamic debt and Islamic debt-types have a positive and significant impact on shareholders' wealth for Malaysia and Indonesia, with exception that there is no debt-type for Indonesia. In terms of the firm value and/or firm financial performance; higher firm value or firm financial performance of firms issuing Islamic debt has a positive and significant impact on shareholders' wealth for Malaysia and Indonesia.

This study makes substantive contributions to the financial understanding of Islamic debt instruments. The analysis is novel in that it breaks away from the typically religious discussion of instruments and the very detailed prescriptive approach. It provides a considered and carefully crafted micro-econometric analysis of market data built upon detailed diagnostic testing and robust model

building. This study points the way for future Islamic capital market-based analysis.

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CHAPTER 1: INTRODUCTION

1.0 INTRODUCTION

This study investigates the impact of Islamic debt on firm value and/or firm financial performance. By reviewing existing literature on emerging and developed markets, this study attempts to provide evidence as to whether the nature of Islamic debt is different compared to debts incurred in other cultures. Existing literature on Islamic debt has focused on the legal aspect of Islamic law, and very few studies investigate Islamic debt in the context of corporate finance. Therefore, this study contributes to the literature by broadening the body of research on this scarcely investigated area. Furthermore, this study also provides a significant contribution in its use of large samples, its use of an econometric method that, according to data specification testing, is robust, and finally, the findings of this study itself, which proves the worthiness of this instrument.

To investigate the impact of Islamic debt on firm value and/or firm financial performance, this study adopts three lines of investigation. The first section attempts to examine whether there is a difference in company value/and financial performance attributable to the proportion of Islamic debt and non-Islamic debt. The second section attempts to examine whether the market reacts favourably in terms of securing its prices in response to a firm announcing that it has incurred debt. The third section attempts to examine whether Islamic debt characteristics, Islamic debt issuance frequency, Islamic debt type, and firm performance create a wealth effect to shareholders and/or investors. A series of specific research

questions relating to these three sections are discussed further on. Diagnostic tests indicate that the methods employed for each section are appropriate and robust.

The data used in this study are firms issuing Islamic debt in Malaysia and Indonesia. This study uses ten years' worth of financial data, spanning from 2000 to 2009. It is important to note that this data is quarterly data. The significance of quarterly data is that the issuance of Islamic debt for every firm occurs in different quarters. There are 106 firms issuing Islamic debt in Malaysia and 26 firms issuing Islamic debt in Indonesia. However, due to the fact that some firms have incomplete information, only 80 firms for Malaysia and 14 firms for Indonesia are analysed in this study.

Finally, by using an appropriate model to test the hypothesis proposed in this research which stated in chapter four, the results of this study are significant. If the results reveal that Islamic debt does not have a different impact on shareholders/investors compared to other types of debts, then no excuses should be made by issuers or investors, and after all, it's just about how does this Islamic debt make a profit. The next section outlines the story of Islamic debt in Malaysia and Indonesia, including its development and growing number of issuance.

Recently, there has been growing interest in Islamic instruments such as Islamic debt. The growing interest can be seen through an increase in the number and diversity of Islamic instruments issued. Moreover, the Islamic instruments are also available in non-Muslim countries such as the United Kingdom, and HongKong.

Furthermore, Islamic instruments are regarded as a solid instrument choice and are taken into consideration in the investment decision. Most companies now also consider having Islamic instruments in their capital structure choice and their investment choice. Not only has the growing number of Islamic instruments attracted much attention, but the acceptance of Islamic instruments in non-Muslim has also attracted much scholarly attention, particularly in the area of its regulations and structures.

In Middle East countries, Islamic financial instruments are not considered something unusual and new as Islamic financial instruments are a central part of their financial industry and are well-established. In Asia, particularly the South East Asian region, Malaysia and Indonesia are countries that have a Muslim majority. The Islamic finance industry first began with the formation of an Islamic bank, but after several years, the Islamic finance industry widened its scope by establishing other Islamic financial institutions and instruments including Islamic insurance, Islamic stocks, Islamic bonds, Islamic mutual funds, Islamic wealth management, and so on. These components working unitary and support each other, hence they grow side by side. In Malaysia, the Islamic capital market has become established and their products have been growing tremendously, particularly Islamic debt.

Furthermore, Malaysia, as one of the pioneering places of Islamic instruments, 'has paved the way for the growth of the global Islamic finance and capital market in designing its framework and regulations.. Moreover, Malaysia is known as the biggest issuer of Islamic debt and the most successful country in

developing the Islamic finance industry. The factors contributing to the success of the Malaysian Islamic finance industry lie in the integration of key structural components, namely the Islamic banking sector, the Islamic debt capital and equity market, the Islamic money market, the takaful industry and many other peripheral Islamic institutions, and its regulatory infrastructure, including its liberalization and provision of incentives to promote the Islamic fund management industry. In addition, Malaysia is the first country to issue bonds on an Islamic basis.

Unlike Malaysia, Indonesia has just begun implementing Islamic financial instruments, starting in the early 1990s. The first Islamic finance entity established is Islamic banking, Muamalat Bank. This bank was initially established as a pure Islamic bank. Later on, the development of Islamic banking in Indonesia was implemented under a dual banking system in compliance with the Indonesian Banking Architecture (API). Islamic banking and conventional banking systems jointly and synergically support a wider public fund mobilization in the framework of fostering financing capability of national economic sectors. As time passes, the needs of the Islamic financial supports arise, for example; Islamic stocks, Islamic debt and Islamic insurance. In the context of macroeconomic management, an extensive use of various Islamic financial products and instrument will help to connect the financial sector and real sector, creating harmonisation between the two sectors. In addition to supporting financial markets and businesses, the wide use of Islamic products and instruments will also reduce speculative transactions in the economy, assisting in the stability of the overall financial system.

This study focuses on Islamic debt in Malaysia and Indonesia, with a particular focus on how this instrument adds value to the firm and increases the wealth of the firm's owner. The next section discusses the significance, objective, and research questions of this study.

1.1 SIGNIFICANCE OF THE STUDY

Islamic debt, known as sukuk, has evolved to become a significant part of corporate capital trading in the secondary market. The development of sukuk is supported by many factors, including the development of Islamic banking (takaful) and an increasing demand for Islamic products in the debt market. The development of sukuk with its associated types of structure has given rise to much discussion and debate among scholars of Islamic law.

Recent innovations in Islamic finance have changed the dynamics of the Islamic finance industry, especially in the debt markets. Sukuk became increasingly popular as companies sought to raise funds by offering corporate sukuk. It has become significant for raising funds in the international capital markets through Islamic shariah. Increases in this market have been strong all over the world, especially in Malaysia, UAE and Saudi Arabia. In 1996 total sukuk issued was USD 0.05b rising to USD 15.5b by the end of 2008. The most significant increase occurred in 2007 with more than 130 issues valued at USD 34.3b. The trend is apparent in Table 1.1 which shows a rapid expansion by value through to the financial crisis in 2008.

Table 1.1: Global Sukuk Issuance by Year

Year	Value USD billon	Number
1996	0.05	1
1997	0.9	1
1998	-	-
1999	0.2	4
2001	1.6	16
2002	2.9	23
2003	4.2	32
2004	3.5	50
2005	7.8	96
2006	19.5	99
2007	34.3	130
2008	15.5	174

Source: Zawya Sukuk Monitor, 2009

Malaysia accounts for 43.7% of sukuk issues followed by UAE with 30.1% and Saudi Arabia representing 10.4%. The size of offering by country for 2009 is shown in Table 1.2.

Table 1.2: Global Sukuk Issuance by Country in 2009

Country	Value USD Billion	Value in %
Malaysia	31.5	43.67
Bahrain	5.2	7.21
Indonesia	0.3	0.42
UAE	21.7	30.08
Pakistan	1.5	2.08
Brunei		
Darussalam	0.7	0.97
Kuwait	1.8	2.50
Saudi Arabia	7.5	10.40
Qatar	1.3	1.80
UK	0.2	0.28
Sudan	0.13	0.18
USA	0.16	0.22
Germany	0.14	0.19
Total	72.13	100

Source: Zawya Sukuk Monitor, 2009

In the early years of sukuk's emergence as a financial instrument, murabahah and istisna were the most significant forms of issuance, accounting for 62.5% and 19.5% respectively. This changed between 2002 and 2007 when musyarakah and ijarah become the largest type of issue, accounting for 36.3% and 28.3% of the total market. In 2008 to 2009 the ranking reversed with ijarah and musyarakah accounting for 43.4% and 20.8% respectively as reflected in Table 1.3.

Table 1.3: Global Sukuk Issuance by Structure Type

Year	Type of Structures	Value USD Billion	Value in %
Phase I (1996-2001)	Murabahah	1.6	62.5
	Al Salaam	0.16	6.3
	Istisna	0.5	19.5
	Ijarah	0.25	9.8
	Mudarabah	0.05	2.0
	Musyarakah	-	-
	Al Istithmar	-	-
	Hybrid	-	-
	Other	-	-
	Total		2.56
Phase II (2002-2007)	Murabahah	4.9	6.8
	Al Salaam	1.9	2.6
	Istisnaa	4.1	5.7
	Ijarah	20.5	28.3
	Mudarabah	8	11.0
	Musyarakah	26.3	36.3
	Al Istithmar	2.9	4.0
	Hybrid	2.8	3.9
	Other	1	1.4
	Total		72.4
Phase III (2008-2009)	Murabahah	4	12.8
	Al Salaam	0.05	0.2
	Istisnaa	0.08	0.3
	Ijarah	13.6	43.4
	Mudarabah	2.5	8.0
	Musyarakah	6.5	20.8
	Al Istithmar	3.5	11.2
	Hybrid	0.075	0.2
	Al Wakalah	1	3.2
	Total		31.305

Source: Zawya Sukuk Monitor, 2009

The three principles of sukuk— debt based, assets based and equity based —are reflected in the instruments listed in Figure 3.17 in Chapter three. Murabahah is deferred payment sale or instalment credit sale. Istisna is sale with deferred delivery where payment can be a lump sum in advance or progressive instalments in accordance with progress made. Musyarakah is a partnership contract in which all parties provide working capital, assets, technical or management expertise. Ijarah is a bilateral contract allowing the sale of usufruct (beneficial outcome) for a specified rent and a specified period, which is in essence a lease.

Murabahah and istisna were more prominent in the early history of sukuk issues and are debt based. They may be considered as the first mode of financing used by this market. Later, equity based financing (partnership financing) and asset based financing have become more favourably received as the preferred form of sukuk. The shift of sukuk structures suggests that the market evolved with partnership and asset based financing finding more favour.

The increase in the issue size from year to year indicates that this market was gradually developing. It became lucrative markets for both the sukuk issuer and the sukuk holder, receiving increased support in the form of market surveillance and regulation, and from market participants.

1.2 OBJECTIVE OF THE STUDY AND RESEARCH QUESTIONS

1.2.1 OBJECTIVE OF THE STUDY

The study investigates the impact of Islamic debt compared to non-Islamic debt on company value and company performance. Consideration is also given to the short term announcement effects and the longer term impact on company value and financial performance of the debt instrument choice.

An unleveraged firm can be seen as an all equity firm, whereas a leveraged firm is made up of ownership equity and debt. A firm's debt to equity ratio provides a measure of the leverage or gearing. The influence of debt to equity on the value of a firm is the subject of multiple articles, including the seminal work of Modigliani and Miller. Capital structure is also associated with the cost of capital, which in turn will impact the value of the company. Accordingly, minimising the cost of capital should result in an increase in the value of the company.

The relationship between company financial structure and value is important and continues to be debated in the literature. Modigliani and Miller (M&M) achieved notoriety with their proof that capital structure made no difference to company value. Subsequent relaxation of the M&M assumptions suggested that debt to equity choice does impact on company value. More recent research considering bankruptcy costs has contributed to empirical estimates of optimal leverage. The M&M argument is that in a perfect market, how a firm is financed is irrelevant to its value. However, even though it is widely accepted that the world is not made

up of perfect markets, the issue of optimal D/E ratio remains contentious and unresolved.

The extent to which the prior research is applicable to Islamic debt, especially in an emerging market, requires analysis. Islamic debt known as sukuk, refers to business transactions using underlying tangible assets and having no interest payments. This form of financial instrument is becoming increasingly popular in Islamic countries, which are predominantly emerging markets. It is seen as a means of fulfilling the Muslim obligations for adherence to Islamic law while still obtaining personal gratification as a reward.

Islamic debt includes no periodic interest payments, and provides a different cash flow profile when compared with non-Islamic debt instruments for borrowing companies and lenders. There is a socio-religious dimension relating to major principles that underlie all business transactions under Islamic law. All business transactions must be in line with the teachings of the Qur'an and the Sunnah, which have four major prohibitions. The first is the prohibition of riba, known as adding any interest payments to a loan or other financing contract. Second is the prohibition from gharar and maisir, known as uncertainty and gambling; so transactions embodying these attributes will be considered invalid. Third is the prohibition of non halal business transactions, such as alcohol and any other prohibited and non halal items. The fourth prohibition concerns the general ban of contracts that fail to meet the highest Shariah standards (Ayub, 2007).

Even though Islamic financial instruments are designed for Muslim needs, especially in Muslim countries, the possibility of using these instruments to raise funds in non-Muslim countries is open in Germany and the United Kingdom. The extent to which strict compliance with Islamic law is achieved by instruments may vary to promote market attractiveness. In addition, there is a range of non-Islamic debt instruments that involve no explicit interest payments such as discount securities and instruments with capitalised interest components. This current research explores how the market prices these securities in terms of the yield curve and how risk pricing is embedded in the value and performance of companies. An initial position assumes that the market efficiently estimates and integrates the risk of Islamic and non-Islamic debt into the risk pricing calculus and that no bias exists. Consistent with Modigliani and Miller (1958), the proposition that the choice of Islamic or non-Islamic debt makes no difference is the starting point for the study.

The purpose of this study is to investigate the impact of Islamic debt on company value and company performance. The following specific objectives are presented:

1. To determine whether there is a difference in company value/and financial performance attributable to the proportion of Islamic debt and non-Islamic debt?
2. To examine whether the market reacts favourably to a firm announcing an issue of Islamic debt in terms of its securities' price reaction?
3. To examine whether the Islamic debt characteristics, Islamic debt issuance frequency and Islamic debt type, firm performance affect the wealth of shareholders?

To examine three of the purposes outlined above, this study proposes:

1. Panel data analysis is employed to examine the first purpose. Furthermore, to determine the appropriate panel model for regression analysis, a specification testing is conducted.
2. Event study analysis and unit root tests are employed to examine the second purpose.
3. Multivariate regression analysis for event study is employed to examine the third purpose. To determine the appropriate multivariate regression model, a specification testing is conducted.

1.2.2 RESEARCH QUESTIONS

The aim of this study is to investigate the impact of Islamic debt on company value and company performance. To address this issue series of research questions are posed. There are three chapters of analysis for this study; chapter five, chapter six and chapter seven. Each chapter has research questions according to its objective provided previously.

Research questions for chapter five are as follows:

1. Is there a difference in company value/and financial performance attributable to the proportion of debt which is Islamic debt and non-Islamic debt?
2. Does the frequency of Islamic debt issues (first, second and more than twice) make a difference in company value and/or firm value/and financial performance?
3. Does the proportion of Islamic debt issues (below the average, average and above the average) make a difference in company value and/or firm value/and financial performance?

4. Does the form of sukuk (debt based, asset based and equity based) make a difference in company value and/or financial performance?

Research question for chapter six is as follows:

1. Does the market react favourably to a firm announcing an issue of Islamic debt in terms of its securities' price reaction?
2. Are the price movements predictable?

Research questions for chapter seven are as follows:

1. Does the market react positively to the Islamic debt characteristics?
2. Does the market react positively to the first issuance of Islamic debt and/or to a firm issuing Islamic debt more than once, and does the market react positively to Islamic debt's types?
3. Does the firm value or firm financial performance affect shareholders' wealth?

1.3 LIMITATIONS

Notwithstanding the findings, the current study does have limitations, which point potentially fruitful research opportunities. This thesis focuses on the impact of Islamic debt on firm value and/or firm financial performance. Extrapolating the findings of this thesis and applying them to other countries with different market characteristics need to be done with caution. Further studies could consider the impact of Islamic debt on corporate governance, agency costs and any other impacts. This study used only Malaysia and Indonesia as the sample, and in the future further studies could consider the Middle East or any other countries issuing Islamic debt.

1.4 ORGANISATION OF THE THESIS

The thesis is comprised of eight chapters. The current chapter (one) presents an introduction and outlines the objectives and the significance of the thesis. Chapter two reviews the capital structure literature relevant to this study to establish the theoretical context. This review is primarily based on previous studies that focused on capital structure and firm financial performance. Due to the lack of empirical investigation of Islamic debt in the context of finance theory, this study applied existing theories and existing empirical investigations to support the results of this study.

Chapter three provides a description of the Malaysian and Indonesian Islamic debt market. It includes a brief description on the definition of Islamic debt, the structure of Islamic debt and its evolutions, the approved shariah concept and principles, the issuance of Islamic debt, and the recent development of Islamic debt.

Chapter four describes the research framework, the hypothesis proposed, the data used in this study, the measurement of variables and the model specification employed for the empirical analysis. Chapter five provides a discussion on empirical results of Islamic debt choice on firm value/firm financial performance. Chapter six presents the result of event study analysis. Chapter seven provides a discussion on empirical results of the multivariate regression for event study. Finally, chapter eight summarises the contributions and implications of this thesis and it looks at future research directions to which this thesis points.

1.5 CONCLUSION

This study investigates the impact of Islamic debt on firm value and firm financial performance, in particular it examines (i) the impact of Islamic debt on firm value and firm financial performance, (ii) the Islamic debt announcement effect on stock return, (iii) the relationship between Islamic debt characteristics and stock return.

The first and the third objectives of this study are new to Islamic debt research. The impact of Islamic debt on firm value and impact of Islamic debt characteristics on stock return has not previously been analysed. Prior studies of capital structure have focused primarily on conventional debt. The majority of studies solely investigated Islamic debt in the context of legal aspects. Therefore, there is a gap in prior research in security pricing relating to shariah financing products. Although this study conducts a literature review on corporate finance, this is used to justify the findings of this thesis as opposed to affecting the results of this study.

The second objective of this study is to which investigate the announcement effect of Islamic debt on stock return. A few studies have investigated the impact of Islamic debt announcement in the context of event study and their results are inconclusive. The inconclusive results may be due to several factors, including the different timeframes deployed, the different methods utilised, resulting in a number of different observations. This study provides new evidence of the Islamic debt announcement effect on stock return using a larger data set than prior studies and more robust econometric analysis.

In conclusion, this research is considered as being anew due to the lack of studies conducted in this type of instrument, therefore, it is expected that the empirical results from this study will be a starting point for future research in similar instrument.

CHAPTER 2: LITERATURE REVIEW

2.0 INTRODUCTION

This study covers two scopes of finance theory; first, corporate finance, which in particular relates to capital structure, and second, financial market which relates to information, market efficiency, and event studies. This chapter, beginning with an overview, provides a review of the capital structure literature and the literature of the debt (Islamic debt) announcement impact on shareholders' wealth that is relevant to the focus of this study. The theories are fundamental to establishing the importance of investigating the impact of Islamic debt on firm value and/or firm financial performance and the impact of Islamic debt announcement on shareholders' wealth. A review of capital structure literature emphasising different theories and different countries is provided. Furthermore, the literature review focuses on the impact of debt in particular Islamic debt announcement on shareholders' wealth. In particular, the focus turns to capital structure in the Malaysian and Indonesian context, followed by a chapter conclusion.

The literature relating to Islamic debts has predominantly focused on the legal aspects of Islamic law, concept, basic requirements and the validity of how the debts are conducted in Islamic financing as general Islamic debt. There is little or no prior research relating to risk, impact upon financial performance or corporate value. Haneef (2009) discusses the history of sukuk, explaining how it has evolved from an asset backed structure, where sukuk holders have ownership rights over the underlying asset, to an asset based structure, where sukuk holders rank pari passu with unsecured creditors. Other scholars (Abd. Sukor, 2008; Al-

Amine, 2001; Juan, 2008; Kamali, 2007; Mohd Yatim, 2009; Mokhtar, 2009; Al-Amine, n.d.; Al Amine, 2008; Usmani, 1999, n.d.; Vishwanath, 2009; Wilson, 2008, n.d.; Yean, n.d.) also discuss the structure and the regulation of the sukuk market in relation to shariah perspective and shariah compliancy.

Most studies were only explanation studies (the presentation of information with the orientation on means) about how the concept of Islamic debt (sukuk), especially the types of the sukuk structure, namely, musyarakah, murabahah, ijarah, mudarabah, istisna, and wakalah were conducted to finance business under Islamic law (shariah). No previous research supports or contradicts these studies, or, in other words, most of the studies only establish a research territory by showing that this research area is important, central and interesting, problematic or relevant in some way and only focus on the organisation of data in relation to possible outcomes, conclusions or choices (discussion) rather than presenting data that is essentially sequential or chronological (recount). The majority of earlier studies employ a descriptive and qualitative method of research.

The lack of prior research into the financial aspect of Islamic debt does not reflect a lack of concern for such matters, but rather, is a reflection of the newness of the topic. There are several studies that discuss Islamic debts, mostly aspects of shariah using both qualitative and sequential or chronological (Cakir, 2007; Mirakhor, 1996; Mohd Ashhari, 2009; Somolo, 2009; Tariq, 2007; Wilson, 2008). So far I have been unable to find research that looks at the effects of Islamic debts on the value of the company in international contexts. Thus this study is useful to supplement existing studies in this field and serves as a reference for studies in the

future. This study will consider how Islamic debt or non-Islamic debt in the capital structure impact financial performance and company valuation.

The Islamic financial and economic system has existed since the time of the prophet Muhammad SAW. During that time, buying and selling, and savings and loans activities were not as extensive as they are now. However, the principle remains the same: no interest charged and no non halal products and activities permitted. The interest system is not used at all because it is forbidden by Allah SWT. The banning was declared in the Qur'an and the Hadith.

According to Ayub (2007), the prohibition of interest has been mentioned in several verses in the Qur'an, such as Verse Al Rum ayat 39, Verse An Nisa ayat 161, Verse Al Imran ayat 130, Verse Al Baqarah ayat 275, 276, 278, 279, 280 and 281. In order to perform better as human beings by committing the commands of Allah completely, every social and economic must adhere to the shariah. By doing so, it is believed that Muslims will be rewarded with personal gratification and humankind will benefit at large.

Furthermore, Ayub (2007) describes how business is conducted in Islamic law. He mentions that the principle of partnership and other contracts based on genuine and valid trading, and leasing activities should be encouraged to replace interest based business activities. Profit and loss is shared proportionately based on trading, leasing or the Shirkah (partnership) principles.

Hossain (2009) discusses three reasons behind the banning of interest in Islam: economic harm, social harm and moral harm. First, if people earn money without any effort, it will lead to reluctance to work and the decline of motivation. Eventually people reduce their interest in productive work which influences and hampers the total welfare of society. There is also the probability that the exploitation of a loan by some people who borrow money in the name of doing business, when it is not used for business at all, will damage the entire economy.

Secondly, the consequences of the poor and needy borrowing from the rich will increase class distinction and cause conflict as the rich become richer and the poor become poorer. Thirdly, when the interest system exists, greed is encouraged, and individuals become motivated to indulge in immoral acts such as theft or extortion in order to repay debts or secure their recovery. As a consequence, the kindness, fellow feeling, sense of brotherhood and the mentality of helping others gradually disappears from society. Muslims believe that if interest is charged, then a man's good deeds will not be accepted and rewarded and that he will be deprived from barakah and the blessing of Allah.

2.1 CAPITAL STRUCTURE THEORY

2.1.1 MODIGLIANI MILLER THEORY

Capital structure is widely discussed in the finance literature. The mixture of debt to equity in the financial structure of companies and whether it will impact upon financial performance risk and valuation is the subject of theoretical and empirical studies. Modigliani and Miller (1958) argue that capital structure is irrelevant, thus the total cash flows a company makes for all investors (debt holders and

shareholders) are the same regardless of capital structure. On the other hand Jensen and Meckling (1976) states that the amount of leverage in a firm's capital structure is associated with its performance. Furthermore, several researchers have conducted numerous studies which aim to examine the relationship between capital structure and firm performance. However, until now the evidence regarding this study is contradictory and mixed. Some researchers (Ebaid, 2009; Ni & Yu, 2008; Phillips & Sipahiouglub, 2004) find consistent results with the Modigliani and Miller (M&M) theorem. On the other hand, others (Abor, 2007; Bhabra *et al.*, 2008) find inconsistent results with the M&M theorem. The focus on country effect, for example, in developed and emerging markets has been done in some of the studies (Bhabra *et al.*, 2008; Ebaid, 2009). Other studies document a focus on firm size, such as large, medium or small companies (Abor, 2007).

The Modigliani and Miller theory (1958) assumes that a capital market is perfect (no transaction or bankruptcy costs, perfect information), individuals and corporations can borrow at the same rate, and no taxes. It does not matter if the firm's capital is raised by issuing stock or debt, or what the firm's dividend policy is. Therefore, the M&M theory concludes that capital structure is irrelevant.

Modigliani and Miller made two propositions under these conditions. Their first proposition was that the value of a leveraged firm is the same as the value of an unleveraged firm. Their second proposition was that the expected return on equity is positively related to leverage because the risk to equity holders increases with leverage. These two propositions stand on the assumption that taxes are ignored, and bankruptcy cost and other agency costs are not considered either.

When taxes were taken into account, they had two propositions as well. First, they state that the value of the firm is positively related to leverage. It means that corporate leverage lowers tax payments because corporations can deduct interest payments but not dividend payments. Secondly, they state that the cost of equity rises with leverage because the risk to equity rises with leverage. These propositions assume that firms have a capital structure almost entirely composed of debt. But in the real world, firms cannot stand only with debt or a hundred percent leverage because an increase in debt will increase bankruptcy cost and agency cost. Consequently, it means that no optimal capital structure exists.

Furthermore, the number of MM-theory studies has increased significantly since its inception both in developed and developing countries. While some studies have generated findings that support the MM-theory (Dhankar & Boora, 1996; Phillips & Sipahioglu, 2004; Carpentier, 2006; Ebaid, 2009), others do not (Majumdar & Chhibber, 1999), while others still derive inconclusive results.

The existing literature focuses on the impact of capital structure choices, considering country effects such as developed market versus emerging market, and firm size effect, such as large companies versus medium or small companies. Little attention is drawn to the impact attributable to the proportion of debt that is Islamic debt. This study investigates the impact of Islamic debt as a part of capital structure upon financial performance and corporate value.

2.1.2 TRADE-OFF THEORY

After the seminal work of M&M, little research has been done to explore capital structure in which some assumptions were proposed: trade-off theory and pecking order theory. The trade-off theory derived from the models based on taxes and agency cost. Modigliani and Miller (1963), DeAngelo and Masulis (1980) and Jensen and Meckling (1976) suggest the firm has an optimal capital structure by offsetting the advantages of debt and the cost of debt. Therefore, trade-off theory refers to the idea that a company chooses how much debt finance and how much equity finance to use by balancing the costs and benefits. It states that there is an advantage to financing with debt, the tax benefits of debt, and tax benefits to be had, but there is also a cost to financing with debt, the costs of financial distress including bankruptcy costs, and agency costs. This theory suggests that there is a positive relationship between debt level and firm performance. Moreover, the implication of this trade-off theory is that firms have target leverage and they adjust their leverage toward the target over time. In addition, Harris and Raviv (1990) imply that higher leverage can be expected to be associated with larger firm value, higher debt level relative to expected income, and lower probability of reorganization following default.

The empirical relevance of the trade-off theory has often been questioned. Some research has been conducted to investigate this theory and the results from various contexts are mixed and inconclusive. The evidence does indicate there are likely to be differences attributable to firm size, country and the maturity of the respective capital market.

Furthermore, the number of trade-off theory studies has increased significantly since its inception both in developed and developing countries. Some may find some support (Graham & Harvey, 2001; Dang, 2005; Margaritis & Psillaki, 2007; Krishnan & Moyer, 1997; Mayer & Sussman, 2004; Abor, 2007; Coleman, 2007; Buferna, Bangassa & Hodgkinson, 2008; Achy 2009), and some may find no support to the trade-off theory tested (Fama & French, 2002; Mayer & Sussman, 2004; Rao, Al Yahyae & Syed, 2007), and some may find inconclusive results.

STUDIES FOCUSING ON DEVELOPED MARKETS

Trade-off theory has been tested by researchers in developed markets; most of them focus on how the determinant factors affect capital structure choice (Graham & Harvey, 2001; Brounen et al., 2006; Vilasuso & Minkler, 2001; Fama & French, 2002; Dang, 2005; Margaritis & Psillaki, 2007). In developed countries, signalling, transactions costs, underinvestment costs, asset substitution, bargaining with employees, free cash flow considerations, product market concerns (Graham & Harvey, 2001), and institutional differences (Brounen, De Jong & Koedijk, 2006) play a significant role in affecting capital structure choice and capital structure policies in each country.

Agency costs and asset specificity are significant determinants of the firm's capital structure, and the cost of external funds depends on the characteristics of the assets involved in the project, including asset specificity, the changing incentive structure faced by debt, and shareholders' agency costs (Vilasuso & Minkler, 2001). Moreover, to minimise the risk of agency cost and asset specificity considerations, equity finance might be best to be used along with the

debt as equity finance reduces transaction costs when assets are highly specific. Equity finance also offers bondholders greater protection from excessive risk taking, which reduces the agency costs of debt (Vilasuso & Minkler, 2001). In addition, though, higher leverage is associated with improved efficiency (Margaritis & Psillaki, 2007), however, leverage increases agency costs which arise from conflicts between debt holders and equity holders or from different principal agent objectives. Therefore, firms with more investments have less leverage (Fama & French, 2002).

The majority of studies have been conducted in mature markets, including the United States, European and Asia Pacific regions, and these exhibit conflicting results, however, there are strong resemblances among the four European countries and also with the United States when comparing capital structure policies (Brounen et al., 2006). These conflicting results may be due to the country effect, firm size effect, and time horizon effects. Generalisation of results is not currently possible and this emphasises the importance of further empirical research. In addition, there is no evidence concerning how Islamic debt impacts upon financial performance and corporate value in markets and this last point is explored in this study.

STUDIES FOCUSING ON DEVELOPING MARKETS

There are several studies examining trade-off theory in developing markets. One of the empirical findings indicates that profitability performance and capital structure are influenced by the country of origin (Krishnan & Moyer, 1997). In developing countries, small firms tend to increase their debt instead of opening

their capital to outside investors while larger firms seem to rely much more on their retained earnings for their long term financial needs (Achy, 2009).

Capital structure influences financial performance (Abor, 2007), therefore highly leveraged firms perform better by reaching out to more clientele and by reducing default rates. Furthermore, highly leveraged firms enjoy scale economies and therefore are better able to deal with moral hazard and adverse selection, and also to accommodate risk (Coleman, 2007).

However, the high cost of borrowing and the underdeveloped nature of the debt market in developing countries affect the firm performance. Moreover, the tax savings a firm receives by using debt do not seem to be sufficient to outweigh the costs of using debt, including the high interest cost (Rao et al, 2007). In addition, the lack of a secondary market may have an impact on agency costs, as shareholders who are unable to offload their shares might exert pressure on management to act in their best interests (Buferna et al., 2008).

The majority of prior studies were conducted in mature markets with some based in developing markets, including North America, Asia, North Africa, South Africa and the Middle East. Previous studies also consider firm size when investigating whether large corporations and small and medium size corporations behave differently. The results are mixed and inconclusive and emphasise the importance of further empirical research. This study addresses the particular gap where there is no evidence about how Islamic debt impacts upon financial performance and corporate value in markets.

2.1.3 PECKING ORDER THEORY

Pecking order theory was developed by Myers and Majluf (1984). Myers and Majluf (1984) assert that firms must issue common stock to raise cash to undertake a valuable investment opportunity. Management is assumed to know more about the firm's value than potential investors. Investors interpret the firm's actions rationally. An equilibrium model of the issue-investment decision is developed under these assumptions. The model shows that firms may refuse to issue stock, and therefore may pass up valuable investment opportunities. The model suggests explanations for several aspects of corporate financing behaviour, including the tendency to rely on internal sources of funds, and to prefer debt to equity if external financing is required.

In addition, Frank and Goyal (2003) state that capital structure is acquired in accordance with the priority of the firm in which internal funding is preferable and external funding is less preferable. If it is needed, firms could use external funding from the lowest risk debt. Therefore, pecking order theory refers to the idea that companies prefer to use their sources of financing from internal financing to equity. If external financing is required, firms issue the safest security first. That is, they start with secure debt, then perhaps equity as a last choice. In addition, issue costs are least for internal funds, low for debt and highest for equity. There is also the negative signalling to the stock market associated with issuing equity, positive signalling associated with debt, and asymmetric information between managers and investors. This theory suggests that there is a negative relationship between debt level and firm performance. Therefore, the implication of this pecking order theory is that firms depend on internal sources of

funds and prefer debt to equity if external financing is required. Thus, a firm's leverage is not driven by the trade-off theory, but rather by results of the firm's attempts to mitigate signalling effect and information asymmetry.

Furthermore, the number of pecking order theory studies has increased significantly since its inception both in developed and developing countries. While some find a support to the pecking order theory tested (Titman & Wessels, 1988; Rajan & Zingales, 1995; Boyle & Eckhold, 1997; Arvin & Francis, 1999; Frank & Goyal, 2003; Deesomsak, Paudyal & Pescetto, 2004; Mira & Gracia, 2008; Wiwattanakantang, 1999; Booth, Aivazian, Demircug-kunt & Maksimovic, 2001; Prasad, Green & Murinde, 2001; Tong & Green, 2005; Eriotis, Frangouli & Neokosmides, 2002; Zeitun & Tian, 2007; Kim & Berger, 2008; Mitton, 2008; Ni & Yu, 2008; Sen & Oruc, 2008; Abor & Biekpe, 2009; Ali Ahmed & Hisham, 2009; Mihalca & Antal, 2009), others do not (Seifert & Gonenc, 2008), while others still find inconclusive results (Karadeniz, Kandir, Balcilar & Onay, 2009).

STUDIES FOCUSING ON DEVELOPED MARKETS

The pecking order theory for developed markets originated with Myers and Majluf (1984). There are many subsequent studies that re-examine it. Sunder and Myers (1994) re-examine some aspects of the empirical literature on capital structure. Others, such as Titman and Wessels (1988), have also attempted to test various models by including all hypotheses jointly in the empirical tests. They view the theories as contending hypotheses and examine their relative explanatory power.

Capital structure decisions are not only the product of a firm's own characteristics but also the result of the corporate governance, legal framework and institutional environment of the countries in which the firm operates. Moreover, the capital structure decision of firms is influenced by the environment in which they operate, as well as firm specific factors identified in the extant literature (Deesomsak et al., 2004). Firm specific determinants of leverage differ across countries, while prior studies implicitly assume equal impact of these determinants (De Jong, Kabir & Nguyen, 2008).

At an aggregate level, firm leverage is more similar across the G-7 countries, and the differences that exist are not easily explained by institutional differences (Rajan & Zingales, 1995). Negative influence of profitability on leverage should become stronger as firm size increases (Rajan & Zingales, 1995).

Furthermore, in some developed countries, relative transactions costs for debt and equity may be an important influence on the financing decisions of firms (Seifert & Gonenc, 2008), as transaction costs may be one of the important determinants of capital structure choice (Titman & Wessels, 1988).

In addition, firms had converged their capital structure ratios toward the industry's mean (industry' capital structure ratios), thus confirming the optimal capital structure anew (Arvin & Francis, 1999). Firms prefer to use internal sources of funding when profits are high (Deesomsak, Paudyal & Pescetto, 2004), therefore, the current portion of long term debt is not treated as part of the financing deficit

(Frank & Goyal, 2003), and long term debt choices can be attributed to differences in firm earning power (Boyle & Eckhold, 1997).

In developed countries, ownership is dispersed and managers and insiders have superior information compared to outside shareholders, and hence these asymmetric information issues are due more to the quality of information provided to investors and the legal rights afforded to these outside investors (Seifert & Gonenc, 2008). Asymmetric information theory suggests that firm first use retained earnings for new investments and then move to debt and equity if necessary.

The majority of studies were conducted in mature markets including the United States, Europe, Japan and Asia Pacific regions and they have conflicting results. These conflicting results concerning the pecking order theory may be due to the country effect, firm size effect and time horizon effect which lead the results to behave differently. In addition, previous studies examine that direct effect of country factors on corporate leverage and the indirect effect of firm specific factors (De Jong et al., 2008); different legal, financial and institutional environments (Deesomsak et al., 2004); different corporate governance policy and mechanisms; and different macroeconomic environments may contribute to the inconclusive results. This emphasises the importance of further empirical research. There is no evidence about how Islamic debt impacts upon financial performance and corporate value in markets, and this issue will be explored in this study.

STUDIES FOCUSING ON DEVELOPING COUNTRIES

Several papers report testing the pecking order theory in developing markets. Apparently, variables that are relevant for explaining capital structures in the United States and European countries are also relevant in developing countries, despite the profound differences in institutional factors across these developing countries (Booth et al., 2001). Similar factors, which affect the usage of debt in developed countries, may also be used in developing explanations for developing countries. Furthermore, the effects of macroeconomic and regional factors have a positive impact on firm performance (Zeitun & Tian, 2007).

In developing countries, there are some factors that might affect the usage of debt. Internal fund deficiency is one of the most important determinants to explain the issuance of new debt (Ali Ahmed & Hisham, 2009). Furthermore, firm specific factors and other factors that are related to governance mechanisms of firms in developing countries have influence on debt policy choices (Wiwattanakantang, 1999). The increase in debt ratios can largely be attributed to changes in the characteristics of emerging market firms (Mitton, 2008). Firms that prefer to finance their investment activities through self-finance are more profitable than those that finance their activities through borrowed capital; firms prefer competing with each other than cooperating; firms use their investment in fixed assets as a strategic variable to affect profitability (Eriotis et al., 2002). Moreover, companies with high profitability and good performance have less debt because these firms first use internally generated funds and only use debt as a last resort (Mihalca & Antal, 2009; Salehi & Biglar, 2009). However, smaller firms would

have a preference for inside financing over outside debt financing, as the cost of outside financing is greater for the firm (Abor & Biekpe, 2009).

Furthermore, pecking order hypothesis is well explained in Malaysian capital market. The static trade-off model is not fit to explain the issuance of new debt issue in Malaysian capital market (Ali Ahmed & Hisham, 2009). Malaysian firms do not much care about tax shield benefits derived from employing both debt and non-debt tax shields (Ali Ahmed & Hisham, 2009).

Firms with different types of controlling shareholders seem to have different capital structures. Single family-owned firms where shareholders are involved in managing the firm have higher debt levels. Owner managers of this type of firm use debt to protect their voting power in the firm, or as a commitment to limit agency costs (Wiwattanakantang, 1999).

The majority of studies on pecking order theory have been conducted in mature markets with some based on developing markets including Asia, Africa and the Middle East. Previous studies also consider firm size, investigating whether large corporations and small and medium sized corporations behave differently. The results are mixed and inconclusive. In addition, previous studies examined different institutional structures (Booth et al., 2001); different governance mechanisms (Wiwattanakantang, 1999); different market power and firms investment (Eriotis et al., 2002); different regional risk (Zeitun and Tian, 2007); different firm characteristics, ownership structure and industry membership (Bhabra et al., 2008). In comparison with the abundance of studies on the

relationship between capital structure and firm performance and the determinant factors of capital structure in conventional debt, only a few studies focus on Islamic debt. This study provides evidence about how Islamic debt impacts upon financial performance and corporate value in markets.

In conclusion, a major contribution to the related literature will be to measure the impact of Islamic debt on company value and financial performance using a model that is appropriate and based on the characteristics of the data. Moreover, dividing the sample into sub-groups based on the extent of specific country or region enables further investigation of the determinant factors on the capital structure decision.

2.2 MARKET REACTION ON ISLAMIC DEBT ANNOUNCEMENT

2.2.1 ISLAMIC DEBT ANNOUNCEMENT IMPACT ON STOCK RETURN

Asian debt markets are considered as less developed due to regulations which are effectively impediments to cross-border investment in Asian debt markets (Rhee, Lejot, & Arner, 2006). In addition, factors such as a lack of liquid benchmark yield curves, irregular frequency of issuance of benchmark government securities, inadequate regulatory frameworks and market micro-structure affect the activeness of the debt market; in the end, this might affect the issuance process including the debt announcement effect.

The impact of debt announcement on stock return has been extensively studied in recent years with mixed empirical evidence; however, few studies have attempted

to investigate the impact of Islamic debt announcement on stock return. This study contributes to existing studies related to the impact of Islamic debt announcement on stock return.

Smith (1986), and Magennis, Watts, and Wright (1998) suggest that the announcement of debt and equity securities have different impacts on stock return. The impact of debt issues announcement can be classified into three groups; first, the zero impact hypotheses, second, the positive impact hypotheses, and third the negative impact hypotheses. The zero impact hypotheses were proposed among others by Modigliani and Miller (1958) and Miller (1977), who assert that the leverage has no effect on the firm's market value. This notion may imply that the debt and/or equity issues announcement generates no abnormal returns.

The positive impact hypotheses were proposed among others by Modigliani and Miller (1963), Kraus Litzenberger (1973), Brennan and Schwartz (1978), DeAngelo and Masuli (1980), Leland and Pyle (1977). They affirm that debt has a positive impact on the firm's market value. According to the asymmetric information model, the debt issues announcement increases shareholders' wealth (Myers and Majluf, 1984). Debt, in particular the conversion ratio of convertible debt, may serve as a signal of a firm's future earnings, thus a large conversion ratio implies lower expected earnings because it signals the desire of insiders to share risk (Kim, 1990)

The negative impact hypotheses were proposed among others by Myers and Majluf (1984), and Miller and Rock (1985). Free cash flow theory suggests that

prices decline on the issuance of debt (Jensen, 1986). Increase in debt is seen as a diversion of the future cash flows to the bondholders and therefore, shareholders might perceive it negatively (Gosh, Varma, & Woolridge, 1990). Furthermore, eventual reduction in the ownership concentration may contribute a negative price reaction to debt issues (Gosh et al., 1990). The announcement of pure equity issuance has been associated with a significantly negative impact, whereas the announcement of debt issuance has not been associated with significant price reaction (De Roon & Veld, 1998).

Apart from zero impact hypotheses, there are other factors that may affect the value of a firm, including the reputations of promoters, the management of the company, economic and political conditions, the role of bulls and bears, government policies, etc. (Dhankar & Boora, 1996). However, the different types of debt also affect the firm's credit rating, which in turn, has an impact on stock returns (Shyam-Sunder, 1991; 1985, Eckbo, 1986; Mikkelson & Partch, 1986).

The stock market reaction to the debt issues announcement has been investigated by many researchers. However, there are only a few attempts to examine the stock market reaction to the Islamic debt issues announcement, and most of the results are inconclusive (Ashhari et al., 2009; Ibrahim & Minai, 2009; Godlewski, Turk-Ariss & Weill, 2010; Modirzadehbami & Mansourfar, 2011; Modirzadehbami & Mansourfar, 2012). Ashhari et al. (2009), and Ibrahim and Minai (2009), however, find a positive wealth effect by the announcement of Islamic debt. In contrast to Ashhari et al. and Ibrahim and Minai, Godlewski et al. (2010) find a significant negative stock market reaction to the announcement of Islamic debt. Like

Godlweski, Modirzadehbami and Mansourfar (2011 and 2012) also find a negative stock market reaction to the announcement of Islamic debt, but this is not to a significant degree. The inconclusive results might be caused by the different methods used, the different number of samples used and the different lengths of observation periods. This study fills the gap by employing a robust method, a larger sample, and a longer period of observation.

2.2.2 MARKET EFFICIENCY

Fama (1970) was the first scholar to define three types of efficient markets. The first of these, weak form efficiency, asserts that stock prices already reflect information contained in the past. The second, semi-strong efficiency asserts that stock prices already reflect all publicly available information. The third, strong form efficiency, asserts that stock prices reflect all relevant information, including inside information. This study focuses on the weak form market efficiency hypothesis by examining whether the price movements surrounding the Islamic debt announcement is predictable or not. This study also seeks to confirm whether the generation of abnormal returns are solely driven by the announcement or driven by the price trends.

According to Fama (1970), there are a few assumptions embedded in the idea of efficient markets: there are no transaction costs, all relevant information is available to all market participants without cost, and all agree on the implications of current information for the current price and the distributions of future prices. In fact, as Fama argues, transaction costs and information are not freely available

to all investors. Measuring these effects on the process of price formation is the major goal of empirical studies on market efficiency (Fama, 1970).

Many previous studies on weak form efficiency focus only on the level of price movement. As Roberts (1959) once noted, financial theories maintain that only the patterns of past stock prices need to be studied although successive levels of stock prices can reveal an appearance of pattern or trend. Few studies try to relate runs of price changes (Roberts, 1959) and the magnitude of the adjustment (Keane, 1983) into empirical hypotheses settings. Hence, Roberts (1959) invited scholars to analyse price changes as well as price levels.

To date, many recent studies have only focused on the conventional securities issues, and there is no study that investigates Islamic debt issues in relation to its market efficiency. As such, this study addresses this gap by examining the Islamic debt issues, and how price movements relate to Islamic debt issues by testing the weak form efficiency of the market. Since previous research in this field has been limited to the impact of announcements, therefore there is no discussion of the previous literature review on Islamic debt.

2.3 THE IMPACT OF ISLAMIC DEBT CHARACTERISTICS, ISLAMIC DEBT ISSUANCE FREQUENCY, AND ISLAMIC DEBT TYPES, AND FIRM PERFORMANCE ON SHAREHOLDERS' WEALTH

The relationship between debt issues and shareholders' wealth has been investigated by many researchers, but there are few studies which examine this issue in relation to Islamic financial instruments, as the focus has been solely on the legal aspect of Islamic debt. However, there are some studies that might be of interest to issuers and investors as these studies examine risk, and also propose a model to construct Islamic financial benchmarks. Cakir and Raei (2007) assess the impact of sukuk issuance based on the cost and risk structure using Value at-Risk (VaR) compared to Eurobond. The application of Cakir and Raei's comparative study is limited to international issues of sukuk and conventional debts by the governments of Malaysia, Pakistan, Qatar, and Bahrain. Cakir and Raei suggested that the correlations of sukuk returns with conventional debts returns are smaller than the correlation of conventional debts returns only.

Furthermore, Mirakhor (1996) proposes a benchmarking of Islamic instruments to measure the cost of capital of Islamic investments and to evaluate the efficiency of Islamic investments. The uniqueness of his model is his omission of the fixed and predetermined interest rate. That is, he bases his model on Tobin's q formula, but omits the debt instrument. Mirakhor did not mention previous research discussing this subject matter except that of Khan and Mirakhor (1989) who examine the rate of return of Islamic investments' benchmarking based on the economics' real sector for investment decisions. However, Mirakhor mentions that a fixed and

predetermined rate of interest should be omitted in order to measure the cost of capital. In addition, Somolo (2009) proposes a method to determine the cost of capital of Islamic investments without using the London Interbank Offered Rate (LIBOR) as a benchmark based on Capital Asset Pricing Model Theory.

These studies notwithstanding, research focusing on the relationship between Islamic debt and shareholders' wealth is still few (Ashhari et al., 2009; Ibrahim & Minai, 2009). The study of Islamic debt has become an important aspect of Islamic finance as there has been growing interest in Islamic finance.

Ashhari et al. (2009) investigate the impact of Islamic debt characteristics on shareholders' wealth. They use four explanatory variables such as Islamic debt offering size, Islamic debt maturity, debt ratio and firm size. The result reveals that only Islamic debt offering size is significant but negative. Furthermore, Ibrahim and Minai (2009) also investigate the impact of Islamic debt characteristic on shareholders' wealth; however, they add more explanatory variables in their regression model. They used seven explanatory variables such as firm size, free cash flows, Islamic debt offering size, Tobin's Q, leverage, the compliancy to Islamic law, and securities commission approval. The result reveals that only Islamic debt offering size, Tobin's Q and securities commission approval yield a significant negative on shareholders' wealth. This result is somewhat similar to the study by Ashhari et al. (2009), in which the Islamic debt offering size is significant negative on shareholders' wealth.

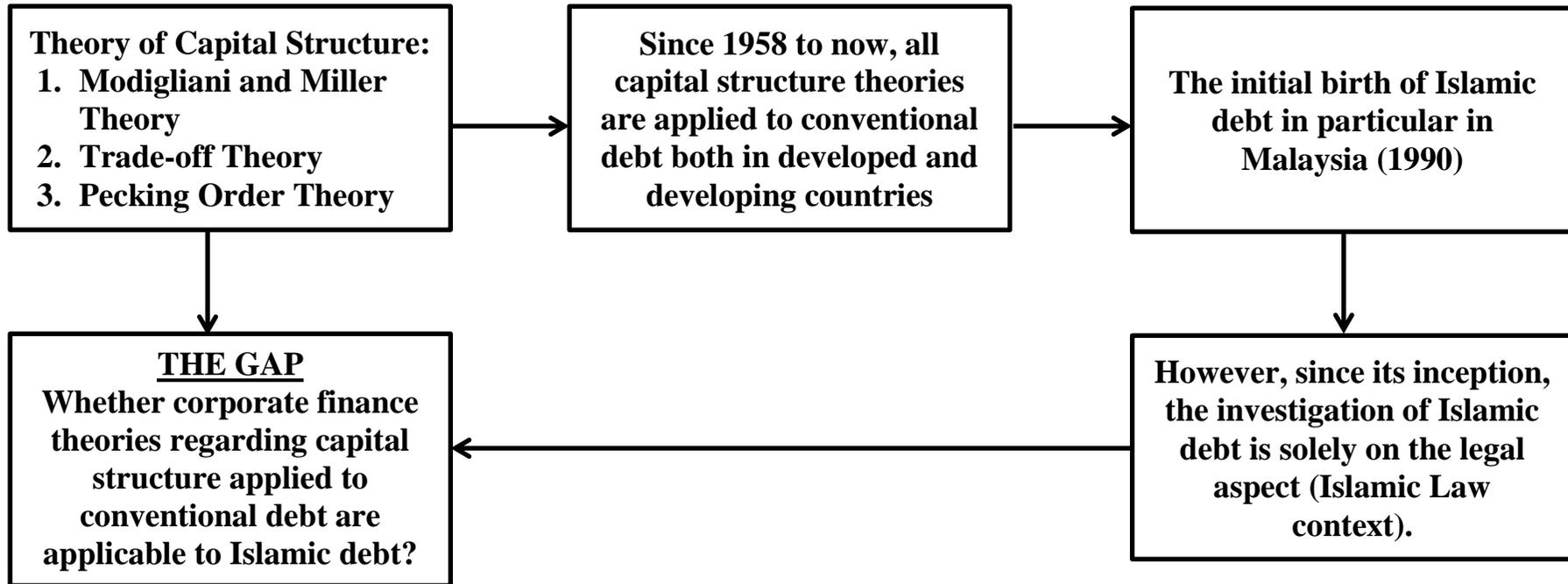
This study attempts to provide new evidence on how Islamic debt issues impact on shareholders' wealth by extending the explanatory variables, the number of samples used, and the period of observations. Furthermore, previous studies have failed to consider econometric models which are robust, an omission that this study attempts to address.

2.4 CONCLUSION

This chapter, in examining the following areas, adds to the existing literature. Figure 2.1 provides a schematic of the contribution. The impact of capital structure choice on firm value and/or firm financial performance, in particular, the impact of Islamic debt on firm value; market reaction on the Islamic debt issuance announcement and its market efficiency; the impact of Islamic debt characteristics, Islamic debt issuance frequency and Islamic debt types, firm performance on shareholders' wealth are unified in the context of empirical linkage/

These contributions extend the domain of Islamic debt studies beyond the primary focuses on the legal aspect of Islamic law. Very few studies investigate Islamic debt in the context of corporate finance and none in this comprehensive manner. The next chapter provides an overview of Islamic debt, including Islamic debt definition, Islamic debt structure, Islamic debt evolution and further development.

Figure 2.1: The Literature reviews' gap



CHAPTER 3: THE ISLAMIC DEBT

3.0 INTRODUCTION

This chapter discusses the definition of Islamic debt, and outlines its structures and evolutions. While Malaysia represents a mature stage of the Islamic finance industry, Indonesia still has a long way to go as it is still in its initial stage. Thus, the development and regulation of Islamic debt in Malaysia and Indonesia are quite different. Islamic debt is also referred as sukuk, and hereafter this term will be frequently used.

3.1 THE MALAYSIAN ISLAMIC DEBT

Malaysian Islamic debt has developed since the first Islamic debt issue in 1990. Malaysia achieved a further significant milestone when a Malaysian corporation issued the first global corporate Islamic debt (sukuk), namely The Guthrie Sukuk in 2001. A year later Malaysian Global Sukuk Inc. issued the first global sovereign sukuk, raising USD600 million (Maimunah, 2010). With this issuance, Malaysian Islamic debt became an international benchmark for the issuance of global sukuk.

The Malaysian sukuk market attracted a wide range of investors and also became more developed in terms of listing. Sukuk were listed on the Luxembourg Stock Exchange, Labuan International Financial Stock Exchange and Bahrain Stock Exchange. The rising demand of Islamic debt, the growing number of issuers, and the broadening types of investors led to the development of the sukuk market.

Malaysia now has one of the largest Islamic securities of the sukuk market in the world, with USD31.5 billion or 43 % of all outstanding sukuk worldwide originating from Malaysia at the end of 2009 (RAM Ratings, 2010)

There are two major components to the Islamic corporate securities market: the Islamic debt securities market and the Islamic equity market. Islamic debt securities (IDS) have become increasingly accepted, along with various types of Islamic debt instruments. These Islamic debt securities comprise the medium-term Islamic bonds and short-term Islamic commercial papers. The market share of Islamic debt securities (IDS) from 2006 to 2009 accounted for 15.1%, 18.7%, 14% and 6.5% respectively, as shown in Table 3.0.2.

Table 3.1 presents the government and corporate debt issue in Malaysian currency. As can be seen below, the Islamic debt issue fluctuated from 2006 to 2009, similar to the corporate debt issue.

Table 3.1: Government and corporate debt issue (in Malaysian currency)
Government and Corporate Debt Issue (RM)

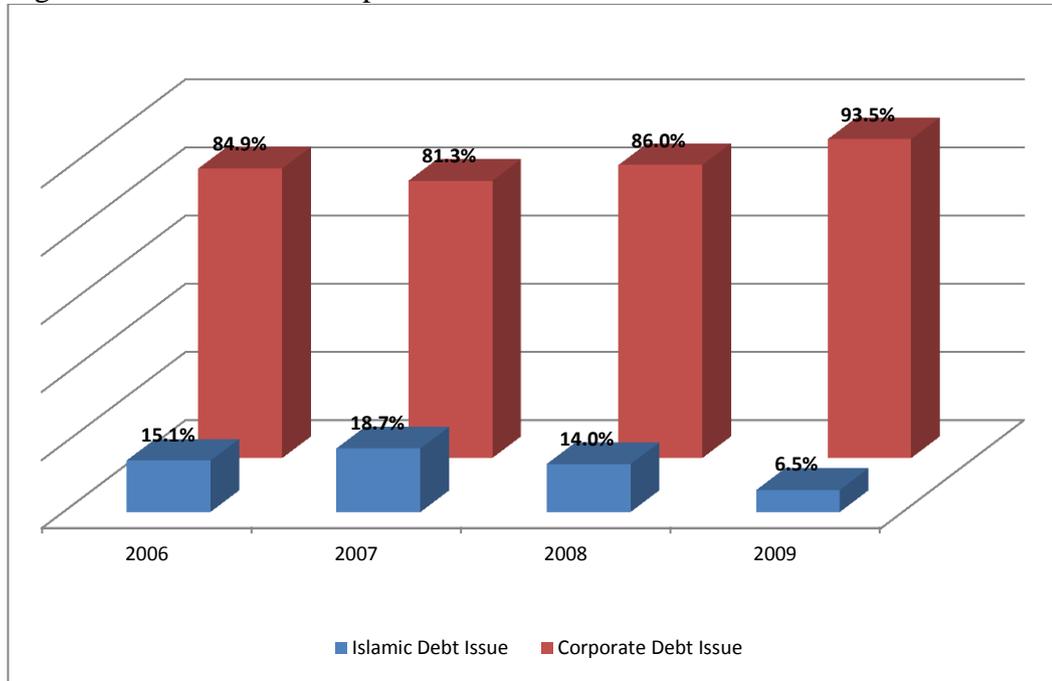
Year	Islamic Debt Issue	Corporate Debt Issue	Total Private Debt Issue	Government Debt Issue	Total Debt Issue
2006	4,780.6	26,956.30	31,736.90	45,280.00	77,016.9
2007	12,127.0	52,810.20	64,937.20	55,461.80	120,399.0
2008	7,467.5	45,692.40	53,159.90	63,142.60	116,302.5
2009	3,785.0	54,790.00	58,575.00	96,795.00	155,370.0

Source: RAM Ratings, 2010

Figure 3.1 depicts a comparison growth between the Islamic debt issue and the corporate debt issue as a percentage. Islamic debt fluctuated slightly in a similar pattern to the corporate debt issue but there is a converse relationship in this fluctuation. As the Islamic debt rose, the corporate debt declined, that is, from

2006 to 2007 Islamic debt rose from 15.1% to 18.7%, and corporate debt declined from 84.9% to 81.3%, and did so during 2008 and 2009. Overall, Islamic debt accounted for less than 20% of the total private debt issue from 2006 to 2009.

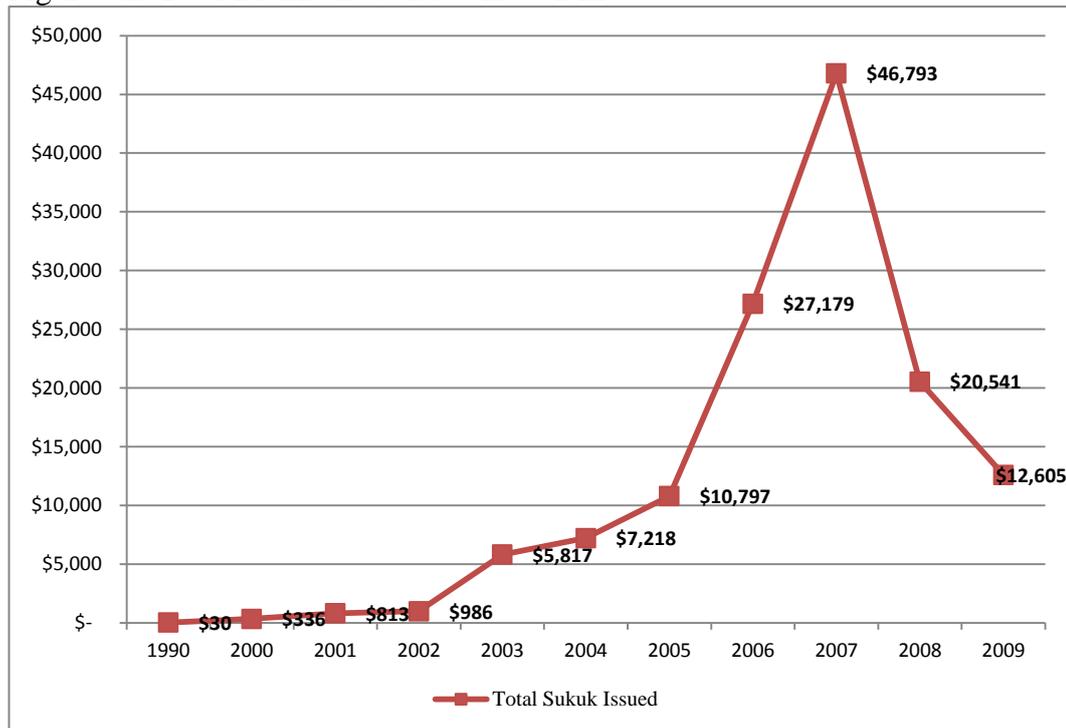
Figure 3.1: Islamic and Corporate Debt Issue



Source: RAM Ratings, 2010

Figure 3.2 depicts the growth of Malaysian sukuk issuance in USD. There was a gradual rise in sukuk issue from 1990 to 2005, a steep rise from 2005 to 2007 before a sharp fall in 2008 and 2009.

Figure 3.2: Total Islamic Debt Issue in USDm



Source: IFIS Database, 2010

Possible causes of this large drop in Malaysian sukuk in 2008 are the subprime crisis and the effects of the global financial crisis which slowed down the economy. Moreover, at the end of 2007 the AAOIFI announced some changes in the rules and regulations of the sukuk structure as a requirement for shariah-compliance, in which this announcement slowed down the growth of the instrument (Lahsasna & Idris, 2008). In addition, the report from the AAOIFI that 85% of Islamic bonds were not shariah-compliant as they included repurchases undertakings sent shockwaves through the market in 2007. This report was seen as a major reason for the big drop in sukuk issuance in 2008 (Islamic Finance News, 2009).

Table 3.2 presents the growth of the types of sukuk issue in USD. There was a gradual rise in sale-based sukuk and lease-based sukuk from 1990 to 2009, while equity-based sukuk fluctuated.

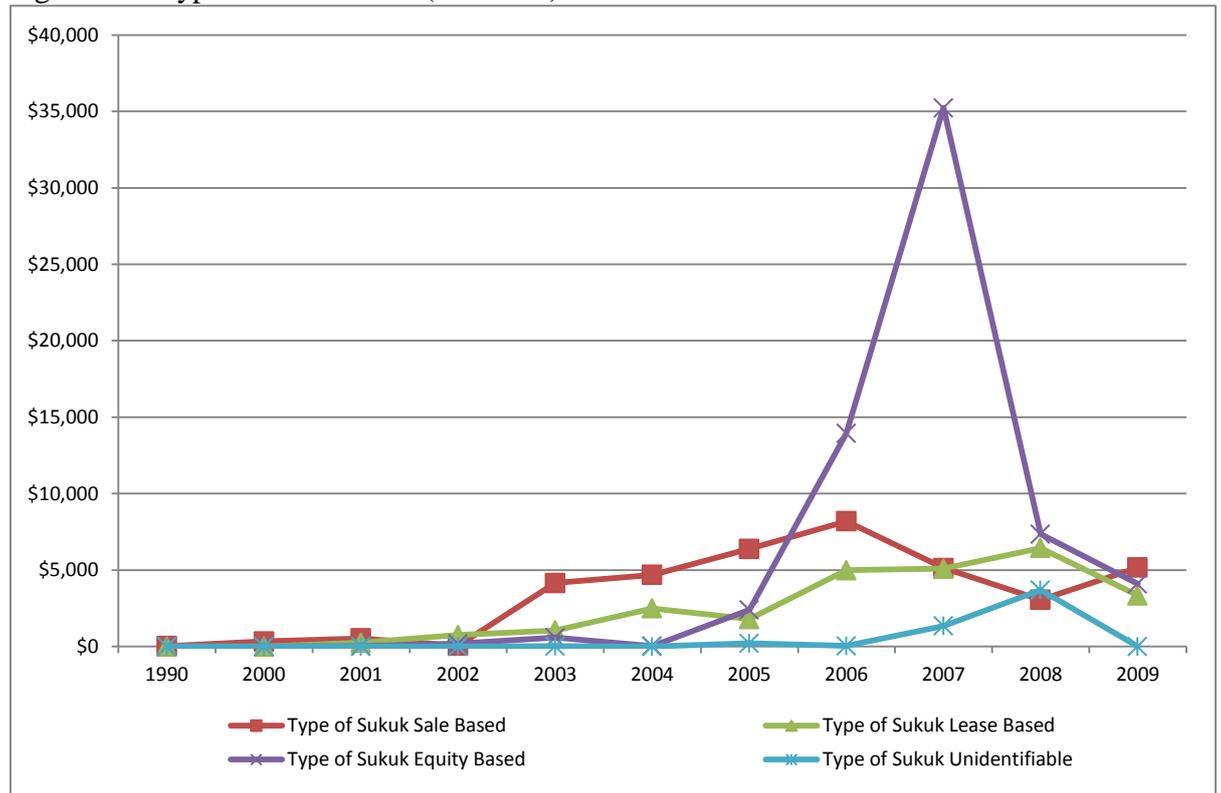
Table 3.2: Type of sukuk issue (in US\$m)

Year	Type of Sukuk			
	Sale Based	Lease Based	Equity-based	Unidentifiable
1990	\$30	\$0	\$0	\$0
2000	\$336	\$0	\$0	\$0
2001	\$530	\$250	\$33	\$0
2002	\$50	\$750	\$186	\$0
2003	\$4,157	\$1,050	\$587	\$23
2004	\$4,689	\$2,495	\$34	\$0
2005	\$6,391	\$1,793	\$2,400	\$213
2006	\$8,195	\$4,991	\$13,946	\$47
2007	\$5,134	\$5,091	\$35,225	\$1,343
2008	\$3,055	\$6,440	\$7,346	\$3,700
2009	\$5,172	\$3,340	\$4,093	\$0

Source: IFIS Database, 2010

As an adjacent to Table 3.2, Figure 3.3 depicts the growth of the sukuk issue types in a line chart. As can be seen, sale based sukuk and lease based sukuk moved in the same direction, with both types gradually rising, while equity-based sukuk moved upward dramatically between 2005 to 2007. In 2007, equity-based sukuk was the most popular type of sukuk issued as it was similar to the growth of global sukuk issuance in which musyarakah and ijarah became the largest type of issue, accounting for 36.3% and 28.3% of the total market (refer to Table 1.3 in chapter one) . Equity-based sukuk represents 75% of sukuk issuance in 2007, but in 2008 there was a huge drop in equity-based sukuk for reasons previously mentioned.

Figure 3.3: Type of sukuk issue (in US\$m)



As noted above, Malaysian Islamic debt has developed since the first Islamic debt issue in 1990, and the development of sukuk involves the issuance numbers, the type of structure, and the market. Sukuk listing was introduced in December 2008 and Bursa Suq Al Sila' was launched in August 2009. In 24 June 2010, the Malaysian Stock Exchange facilitated the issuance of the Malaysian Government's Sukuk 1 Malaysia through Bursa Suq Al-Sila', the world's first shariah complaint commodity trading platform (Bursa Malaysia Annual Report, 2010).

Moreover, the method of raising investor funds through Islamic sukuk structures has become an integral part of Islamic finance and a pillar of its continuous growth. As shown earlier in Graph 3.0.2, Malaysian sukuk issues gradually rose

from 1990 to 2005 and then dramatically rose from 2005 to 2007 before sharply falling in both 2008 and 2009. The huge drop in Malaysian sukuk issues might have been the result of the subprime crisis and the effects of the global financial crisis. Moreover, by the end of 2007 the AAOIFI had announced some changes in the rules and regulations of the sukuk structure. The new sukuk structure had to observe some points as requirements for the shariah-compliance of sukuk. Indeed, the announcement slowed down the growth of the instrument (Lahsasna & Idris, 2008).

3.2 THE INDONESIAN ISLAMIC DEBT

Indonesia as one of the biggest Muslim countries in the world holds an enormous market for the development of sharia finance industry. The shariah capital market, which is part of the shariah finance industry, has an important role in increasing the market share of shariah finance industry. Although its development is considered new compared to shariah banking, Indonesia's shariah capital market is expected to experience rapid growth along with the significant growth in Indonesian capital market. The instruments traded in the shariah capital market are shariah securities, for example shariah stocks, shariah mutual funds and shariah bonds.

Apart from legal foundations, shariah securities require Islamic law (fatwa) foundations that can be used as a reference to the enactment of shariah securities. Islamic law is necessary as a basis to establish shariah principles that could be applied in the capital market. The milestone of the development of shariah capital market in Indonesia was started on July 3rd, 2000 by the issuance of the Islamic

stock index (Jakarta Islamic Index). However, the shariah capital market is not a separate system from the capital market as a whole, and in general, the shariah capital market activity is no different with the conventional capital market.

In 2002, the milestone for Islamic debt was started by the issuance of the Fatwa No.32/DSN-MUI/IX/2002 concerning shariah bonds. Along with that, the first corporate Islamic debt was offered in the Indonesian capital market, and fortunately this was over-subscribed with a value double than the offered value. Since the first offering, the number of Islamic debt public offerings has increased steadily. Until the end of 2010, 47 Islamic debts have been offered to the public (Indonesian Stock Exchange, 2011). After 2002, consecutive Islamic laws were issued to regulate the Islamic securities instruments in the capital market. Islamic debt has become a topic of discussion among Indonesian economists in recent years since Islamic debt has attracted considerable attention from both corporate issuers and investors.

Figure 3.4 depicts the growth of Indonesian sukuk issuance in USDm. In its initial stage in 2003, Islamic debt slightly increased but then declined for two consecutive years, however there was a gradual rise in sukuk issuance from 2007 to 2010, and a decline from 2010 to 2011.

Figure 3.4: Total Islamic Debt Issue in USDm

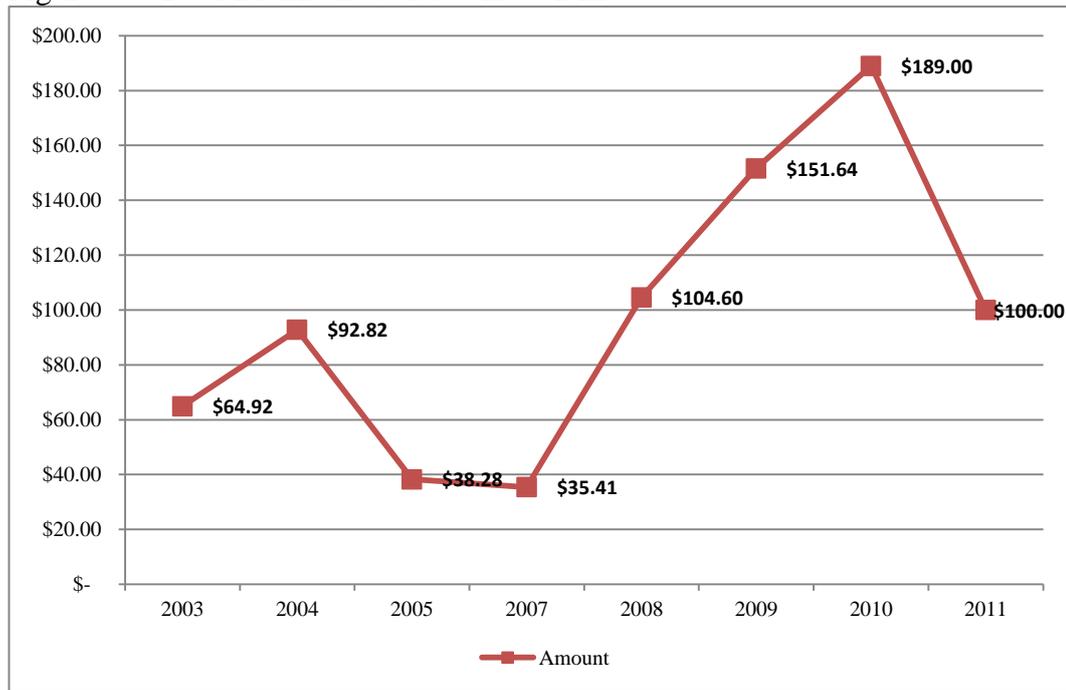


Table 3.3 presents the growth of the types of sukuk issue in USDm. There was a gradual rise in asset-based sukuk from 2007 to 2010, while debt-based sukuk had slight fluctuations from 2003 to 2008. Because Islamic debt was considered a new instrument in the Indonesian capital market, investors favoured asset-based type compared to debt-based. This initial stage behaviour is similar to the Malaysian Islamic debt development when they were also in their initial stages. This may indicate that investors preferred to have tangible assets as securitisation.

Whilst the global sukuk issuance experienced a downturn in 2008, Indonesia sukuk issuance experienced a gradual rise until 2010.

Table 3.3: Type of sukuk issue (in USDm)

Year	Type of Sukuk			Total
	Debt-based	Asset-based	Equity-based	
2003	\$ 41.95	\$ 22.97	\$ -	\$ 64.92
2004	\$ 26.08	\$ 66.74	\$ -	\$ 92.82
2005	\$ -	\$ 38.28	\$ -	\$ 38.28
2007	\$ 13.71	\$ 21.70	\$ -	\$ 35.41
2008	\$ 55.90	\$ 48.70	\$ -	\$ 104.60
2009	\$ -	\$ 151.64	\$ -	\$ 151.64
2010	\$ -	\$ 189.00	\$ -	\$ 189.00
2011	\$ -	\$ 100.00	\$ -	\$ 100.00

Source: IFIS database, 2011

As an adjacent to Table 3.3, Figure 3.5 depicts the growth of the Islamic debt type's issuance in a line chart. As can be seen, debt-based sukuk and asset-based sukuk moved in the same direction from 2004 to 2008, with both types gradually rising. However, after 2008, there was no issuance of the debt-based type, while asset-based sukuk gradually rose until 2010.

Figure 3.5: Type of sukuk issue (in USDm)

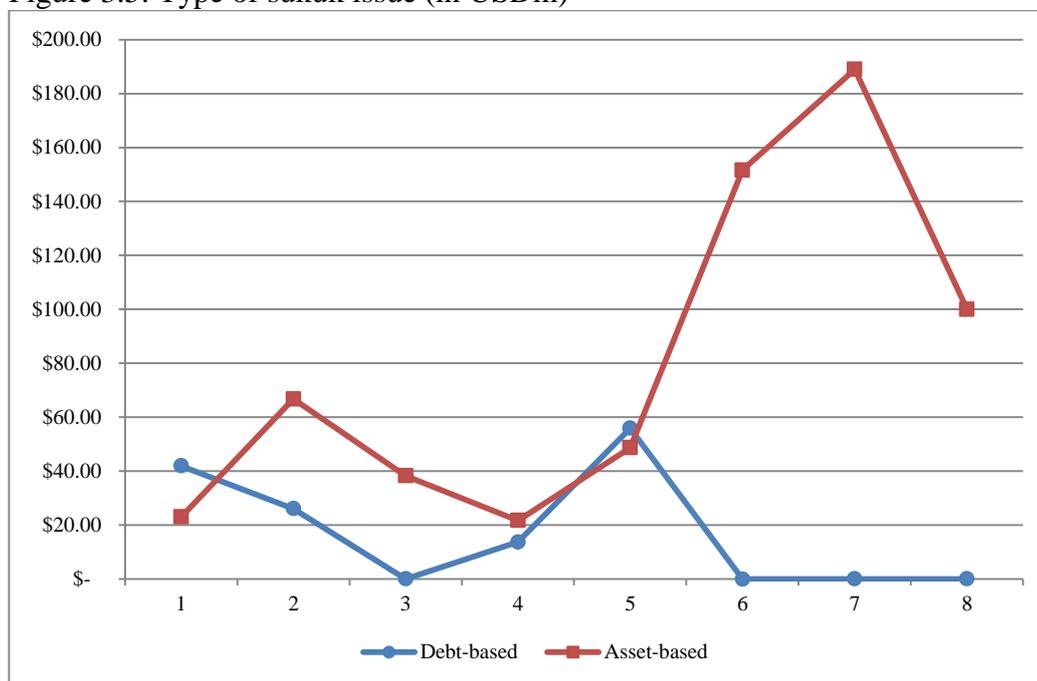
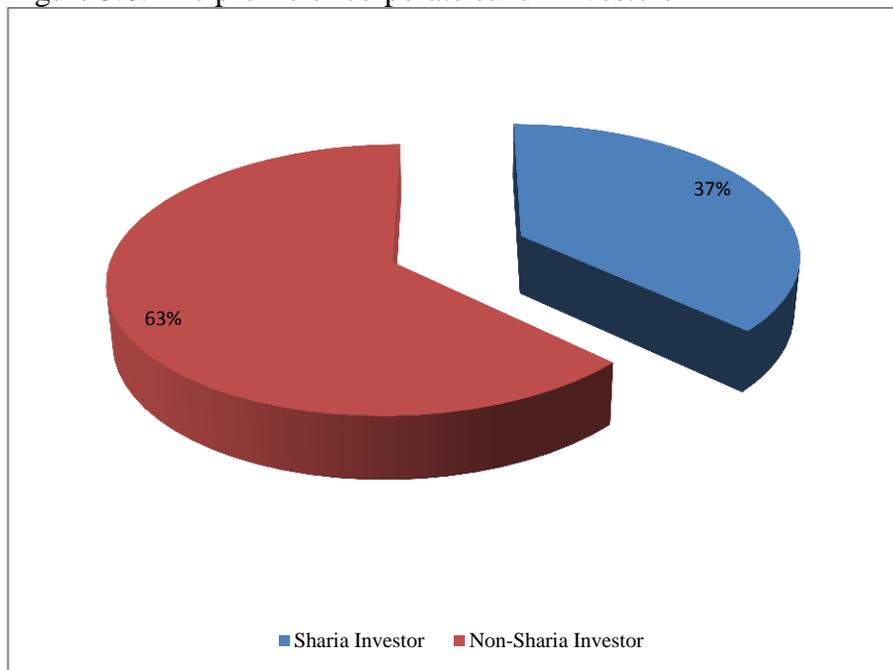


Figure 3.6 exhibits the type of investors in Islamic debt. The figure shows that 37% are shariah investors while 63% are non-shariah investors. There might be reasons

why Islamic debt could attract more non-shariah investors than shariah investors. It also indicates that Islamic debt is not only seen as an Islamic product, but also a profitable product.

Figure 3.6: The profile of corporate sukuk investors



Source: Bapepam-LK Statistics Department, 2011

3.3 UNDERSTANDING OF ISLAMIC DEBT

3.3.1 ISLAMIC DEBT DEFINITION

According to the Securities Commission Malaysia, Islamic debt is defined as “certificates of equal value which evidence undivided ownership or investment in the assets using Shariah principles and concepts approved by the Shariah Advisory Council (SAC)” (Sukuk Guidelines 2011, Securities Commission Malaysia, 2011). Similarly, the Accounting and Auditing Organization of Islamic Financial Institutions (AAOIFI) has also defined Islamic debt as:

Certificates of equal value representing undivided shares in the ownership of tangible assets, usufruct and services or (in the ownership of) assets of the particular projects or any specified

investment activity. Investment of sukuk should be distinguished from common shares and bonds. While shares represent the ownership of a company as a whole and are for an indefinite period, sukuk represent specified assets and are for a given period of time. Sukuk, unlike bonds, carry returns based on cash flow originating from the assets on the basis of which they are issued (Ayub, 2007; p.392).

Similarly, Indonesian Capital Market Regulatory, BAPEPAM-LK Rule No. IX.A.13, defined Islamic debt as “*sharia securities in a form of certificate or proof of ownership which have the same value and represent participation unit which is not separated from or consists of*”.

In its simplest form, the owner of sukuk certificates is involved in the real business/real asset/real projects from which profit is generated based on equal value of the money they have invested in the business/assets/project. Through the sukuk structure, investors/sukuk holders enjoy the benefit of being backed by assets, which afford investors with a level of protection which may not be available from conventional debt securities. Additionally, unlike conventional debt securities that mirror debts or loans on which interest is paid, the sukuk can be structured based on innovative applications of Islamic principles and concepts. However, the sukuk does share some similarities with conventional debt securities, in that it is structured based on assets that generate revenue. The underlying revenue from these assets represents the source of income for the payment of profit on the sukuk (Ibrahim & Wong, 2006; Jalil, 2005; Mohd Zin, Sakat, Ahmad, Mohd. Nor, Bhari, Ishak & Jamain, 2011). Furthermore, Usmani (2009) and Mohd Zin et al (2011) explain that the sukuk is an exchange of assets that enable investors to receive profits from the assets purchased. If the sukuk issuer defaults

or some other default eventually occurs, then investors can claim some of their investment assets which have been secured as collateral in the sukuk contract.

Table 3.4: The differences between Islamic debt and non-Islamic debt

Islamic Debt	Conventional Debt
Islamic debt represents ownership of the real assets.	Conventional debt represents debt obligations on the money borrowed.
Islamic debt issued only to finance assets/projects which adhere to the Islamic law.	Conventional debt may be issued to finance any purpose.
The relationship between sukuk issuer and sukuk holder is cooperative.	The relationship between debt issuer and debt holder is lender/borrower.
Islamic debt offers a profit generated from assets/projects' revenue.	Conventional debt offers fixed or variable interest on the money borrowed.
The sale of Islamic debt represents a sale of a share on an asset.	Conventional debt is basically the sale of debt.
Islamic debt price depends on the supply and demand (market driven) to value the underlying asset in trading.	Conventional debt price depends solely on the creditworthiness of the debt issuer.

Source: Vishwanath and Azmi, 2009

Table 3.4 above shows the differences between Islamic debt and non-Islamic debt. Islamic debt represents ownership, pays a profit payment to the debt holders instead of an interest payment, and does not guarantee the return of principal when redeemed at maturity if the enterprise suffers losses. It can be concluded that an Islamic debt is secure compared to non-Islamic debt due to the underlying assets involved in an Islamic debt transaction. In addition to the differences stated above between Islamic debt and conventional debt, some further parameters can be used to thoroughly differentiate the instruments. Five parameters are shown in Table 3.5.

Table 3.5: Parameters to distinguish the differences between Islamic debt and non-Islamic debt

Parameter	Islamic Debt	Conventional Debt
Issuer	Sukuk issuers engage in the business activity that is permitted under Islamic law.	An issuer of conventional debt is not limited in its business activities.
Investor	Enjoys a wider investor from both Islamic and conventional investors.	Conventional debt can only tap the conventional investors.
Ownership	Investors take direct ownership of the business/asset/project.	A conventional debt is purely the financial debt of the issuers.
Administrative cost	Additional fees in terms of legal and shariah advisory fee.	No additional administrative costs.
Financing cost	A larger pool of sukuk investors creates more demand, hence may be able to achieve slightly more competitive pricing.	A comparatively smaller pool of conventional debt investors suggests that there is less demand for the debt.

Source: KFH, 2010

As noted in the earlier definition, Islamic debt is involved in real business/real asset/real projects. For the real asset, two types of structure are mostly used in transactions: asset-based structure and asset-backed structure. While the asset-backed structure is accepted widely and enjoys significant development, in a few countries, the asset-based structure has been debated regarding its compliance with Islamic law. The critical issues of shariah in the asset-based structure have been reviewed among Islamic scholars (Haneef, 2009; Dusuki 2010).

Haneef (2009) discusses the development of the asset-based structure and asset-backed structure, and outlines how Islamic debt has shifted from an asset-backed structure toward an asset-based structure, and the shariah issues arising in the asset-based structure. Furthermore, Dusuki (2010) has conducted a critical examination of the shariah issues in the asset-based structure. Dusuki states that there are many contentious shariah issues arising in the asset-based structure.

These issues include: the ownership issue, that is, sukuk holders have no interest on the underlying assets even though they are supposed to own the assets; that sukuk holders have no right to dispose of the asset; and the sukuk gives no additional security for the sukuk holders in the case of dissolution (financial insolvency) and therefore the underlying asset that will be sold back to the sukuk issuer at par is not sufficient to pay back the sukuk holders. The distinction between asset-based and asset-backed structure is provided below.

The difference between asset-based structure and asset-backed structure

The asset-based structure is referred to as a sale and purchase agreement involved in a financial activity. The sukuk holders' interest in the asset-based structure is only a security interest; therefore, the credit worthiness of the originator (obligor) is important to the sukuk holders as it affects the sukuk's credit quality and rating. In contrast, the asset-backed sukuk is referred to as a true sale transaction. The sukuk holders' interest in the asset-backed structure is an ownership interest, and the asset purchased by investors is the source of profit and capital payment from the originator.

Table 3.6 summarises the differences between asset-based structure and asset-backed structure:

Table 3.6: The differences between asset-based structure and asset-backed structure

Asset-based structure	Asset-backed structure
The transaction is closely similar to the mirror debt therefore the interest is limited to the security interest.	The transaction is a true transaction of an asset therefore the interest is ownership interest.
Credit quality of the originator/obligor is very important since it reflects the asset' credit quality.	The credit quality of the originator is not an issue because the investors buy and own the asset sold from the originator.
The source of payment usually comes from issuer/obligor's cash flow.	Main source of profit and capital payment is the revenue from the underlying assets.
Sukuk holders do not bear any losses due to the impairment of the asset.	Sukuk holders bear any losses due to the impairment of the asset.
Normally structured as on balance sheet.	Can either be on or off balance sheet.

While debate exists regarding the acceptance of asset-based structure, the asset-based structure enjoys considerable growth and the number of issuances in the debt market indicates that it is one of the most popular choices of debt. Why and how the asset-based structure has become more popular than the asset-backed structure has been attracting considerable attention among Islamic scholars and market players.

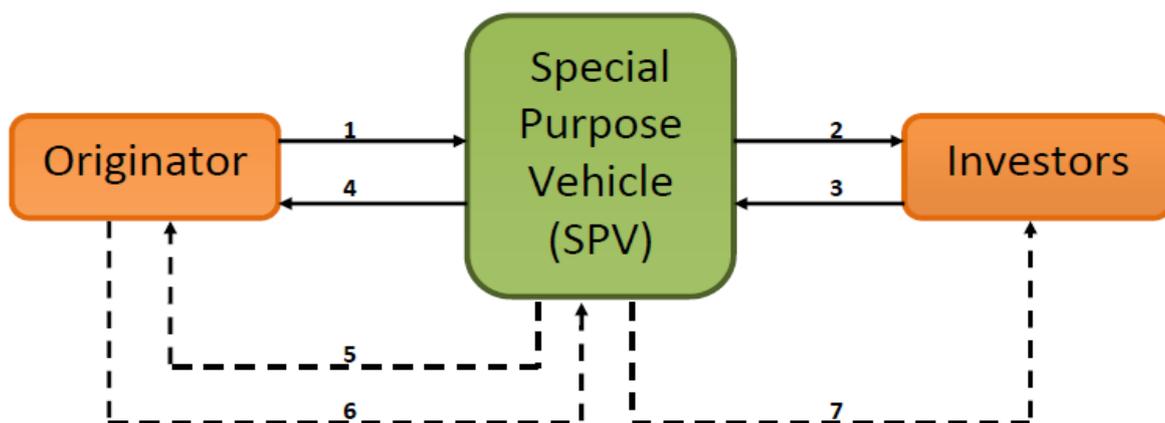
3.3.2 THE STRUCTURE OF ISLAMIC DEBT

Section 1 to section 4 provides the transaction process of the asset-based structure that is classified into lease-based (Ijarah) and sale-based (Murabahah, Salam and Istisna') respectively while section 5 to section 7 provides the transaction process of the asset-backed structure that is classified into partnership-based (Mudarabah and Musyarakah) and agency-based (Wakalah). Section 8 is the hybrid structure that can be comprised from a lease-based and sale-based structure or partnership-based and an agency-based structure.

1. Ijarah sukuk

Ijarah sukuk is divided into purchase agreements, lease agreements, servicing agreements and purchase undertakings. It is based on letting property rights to any other beneficiary based on the agreed price. Ijarah sukuk is issued on a sale and leaseback arrangement (Ijarah) of assets. The process can be represented schematically as shown in Figure 3.7.

Figure 3.7: Ijarah Sukuk Structure



Steps involved in the Ijarah sukuk structure:

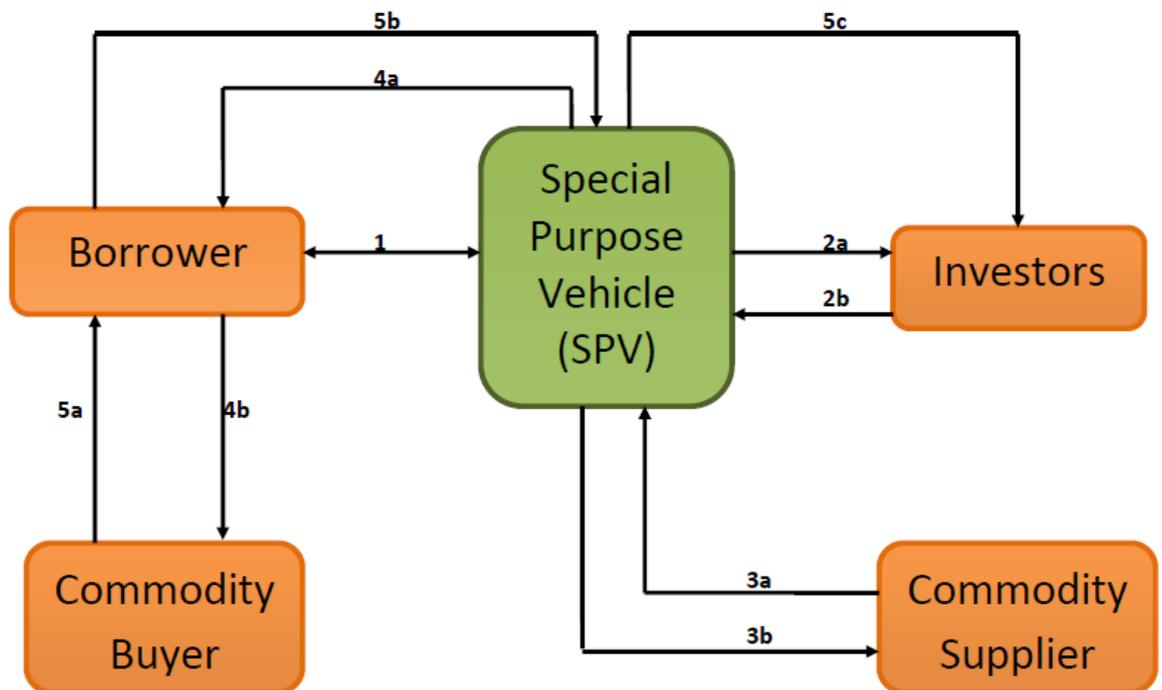
1. The originator sells certain assets to the SPV at an agreed pre-determined purchase price.
2. The SPV raises financing by issuing sukuk certificates in an amount equal to the purchase price of the asset, and the fund received from an investor is passed on to the originator.
3. A lease agreement is signed between the SPV and the originator for a fixed period of time where the originator leases back the asset as lessee.
4. The SPV receives periodic rental payment from the originator and this payment is distributed among the investors (sukuk holders).

5. At maturity/or on a dissolution event, the SPV sells the assets back to the seller at a predetermined value. That value should be equal to any amounts still owed under the terms of ijarah sukuk.

2. Murabahah sukuk

The issuer of murabahah sukuk certificate is the seller of the murabahah commodity and the subscribers are the buyers of that commodity, and they are entitled to its final sale price upon the re-sale of the commodity. Murabahah sukuk cannot be legally traded on the secondary market, as the certificate represents a debt owing from the subsequent buyer of the commodity to the sukuk holders, and such trading of debt on a deferred basis is not permitted under Islamic law. Figure 3.8 illustrates the structure and numbered steps of the Murabahah sukuk structure.

Figure 3.8: Murabahah Sukuk Structure



Steps involved in the Murabahah sukuk structure:

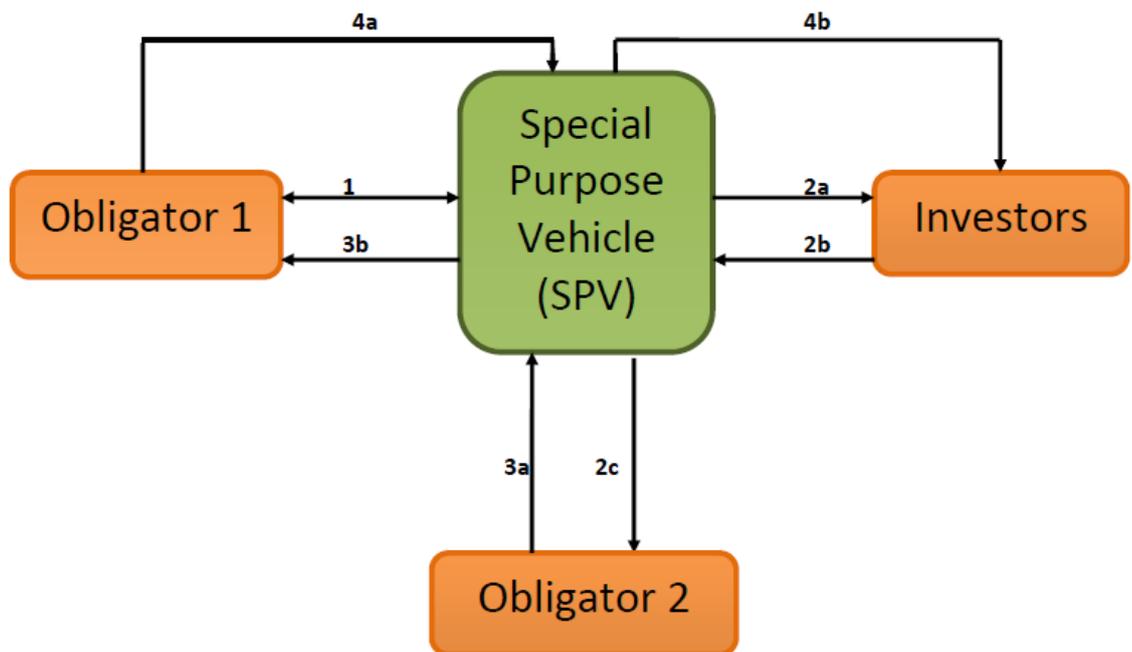
1. An agreement is signed between the borrower and the SPV.
2. The SPV issues sukuk to raise funds and receives cash from the investors.
3. The SPV buys the commodity from the commodity supplier on an on-the-spot-basis and the commodity supplier receives payment.
4. The SPV sells the commodity to the borrower on the spot price plus a profit margin based on the agreement, and the borrower sells the commodity to the commodity buyer on the spot price.
5. The borrower receives payment from the commodity buyer and pays the SPV. The Investor receives the final sale price and profit margin from the SPV.

3. Salam sukuk

Salam sukuk is the sale of a specific commodity well defined in its quality and quantity which will be delivered on a fixed date in the future, and full payment in advance based on the spot price. Additionally, salam sukuk is a certificate of equal value issued for the purpose of mobilizing salam capital, therefore the goods to be delivered on the basis of salam come into the ownership of the certificate holders.

Furthermore, the issuer of the certificates is a seller of the goods of salam and the subscribers are the buyers of the goods, while the funds received from the subscription are the purchase price (salam capital) of the goods. The holders of salam certificates are the owners of the salam goods and are entitled to the sale price of the certificate or the sale price of the salam goods sold. Figure 3.9 illustrates the structure and numbered steps of the salam sukuk structure.

Figure 3.9: Salam Sukuk Structure



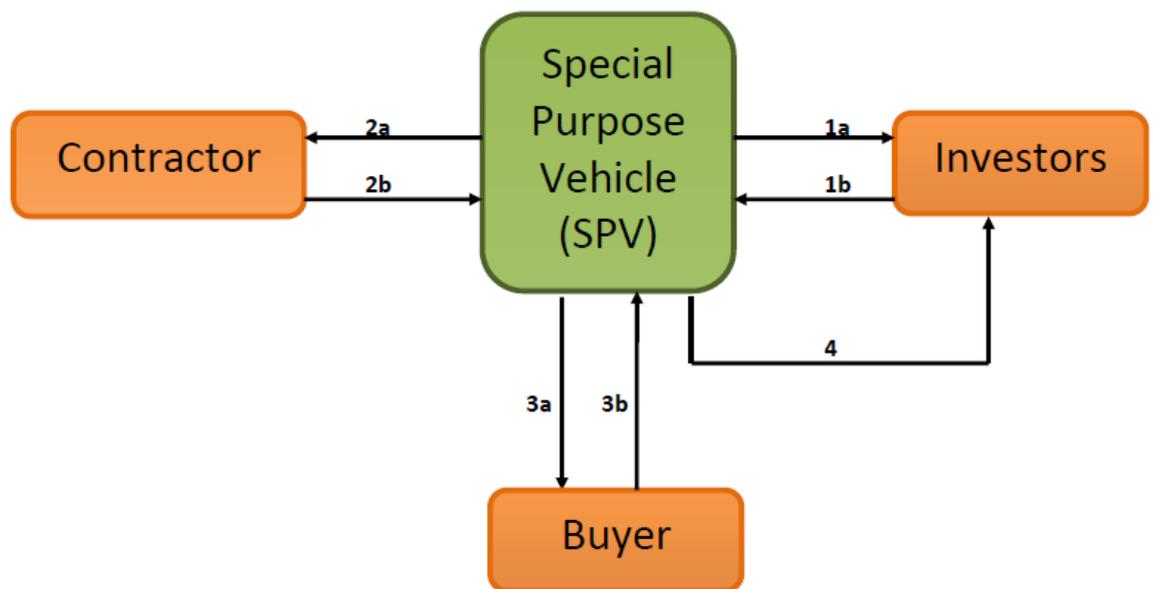
Steps involved in the Salam sukuk structure:

1. The SPV signs a contract with obligator 1 to provide both commodities and buyers. The contract of obligator 1 contract is to buy on behalf of the sukuk holders (investors) and to sell the commodity for the profit of the sukuk holders.
2. The SPV issues sukuk to raise funds and receives funds from the investors. The fund received is used to pay obligator 2 who sells the commodity on a forward basis.
3. The SPV receives the commodity from obligator 2 and hands over the commodity to obligator 1.
4. Obligator 1 sells the commodity for a profit and transfers the profit to the SPV. The SPV distributes proceeds of the commodity sale to the investors.

4. Istisna'sukuk

Istisna'sukuk is a sale and purchase agreement that serves to finance a project. The Istisna'sukuk certificate carries equal value and is issued to mobilize funds required for production of goods products that will be owned by the certificate holders. Moreover, the issuer of these certificates is the manufacturer and the subscribers are the buyers of the intended product, while the funds received from the subscription are the cost of the product. In addition, Islamic law prohibits these certificates to be traded in the secondary market. Figure 3.10 illustrates the structure and numbered steps of the Istisna'sukuk structure.

Figure 3.10: Istisna' Sukuk Structure



Steps involved in the Istisna'sukuk structure:

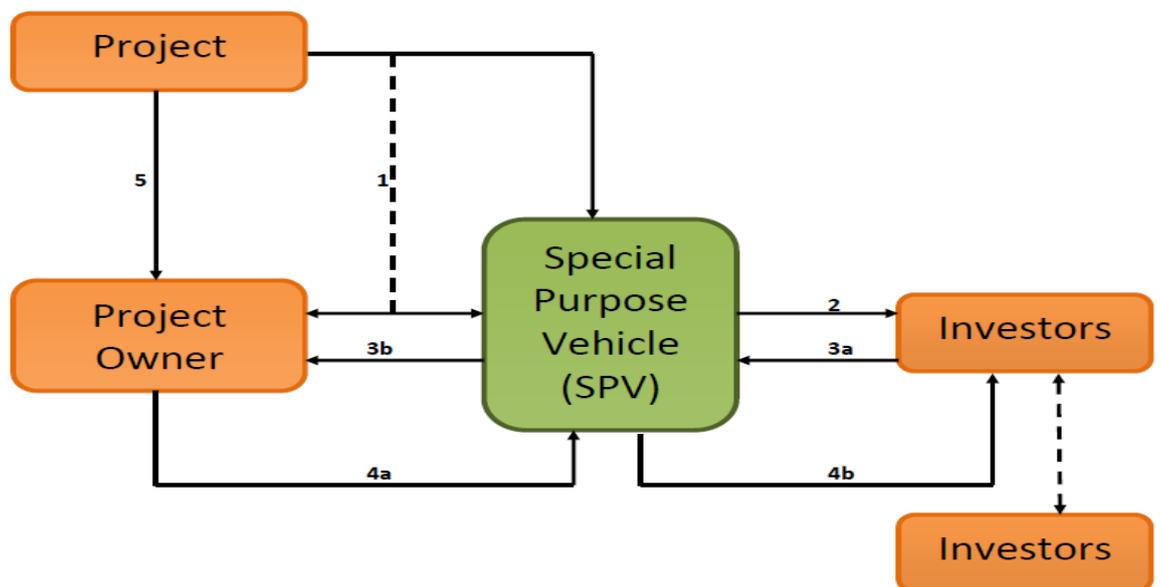
1. The SPV issues sukuk to raise funds and receives cash from the investor.
2. The SPV pays the contractor and the contractor delivers the goods/commodities to the SPV.
3. The SPV sells the goods/commodities to the buyer and receives periodic payments from the buyer.

4. The investor receives periodic payments from the SPV.

5. Mudharabah sukuk

Mudharabah sukuk is divided into mudharabah agreement and purchase undertaking. It is a cooperation agreement between two parties, that is, investors and managers of the capital. Mudharabah sukuk is investment sukuk that represents common ownership of units of equal value in the mudharabah equity. Moreover, the holders of Mudharabah sukuk are the suppliers of capital, the owner's shares in the mudharabah equity, and receive returns according to the percentage of ownership share. Additionally, mudharabah sukuk holders have the right to transfer the ownership by assets on the securities market. Figure 3.11 illustrates the structure and numbered steps of the Mudharabah sukuk structure.

Figure 3.11: Mudharabah Sukuk Structure



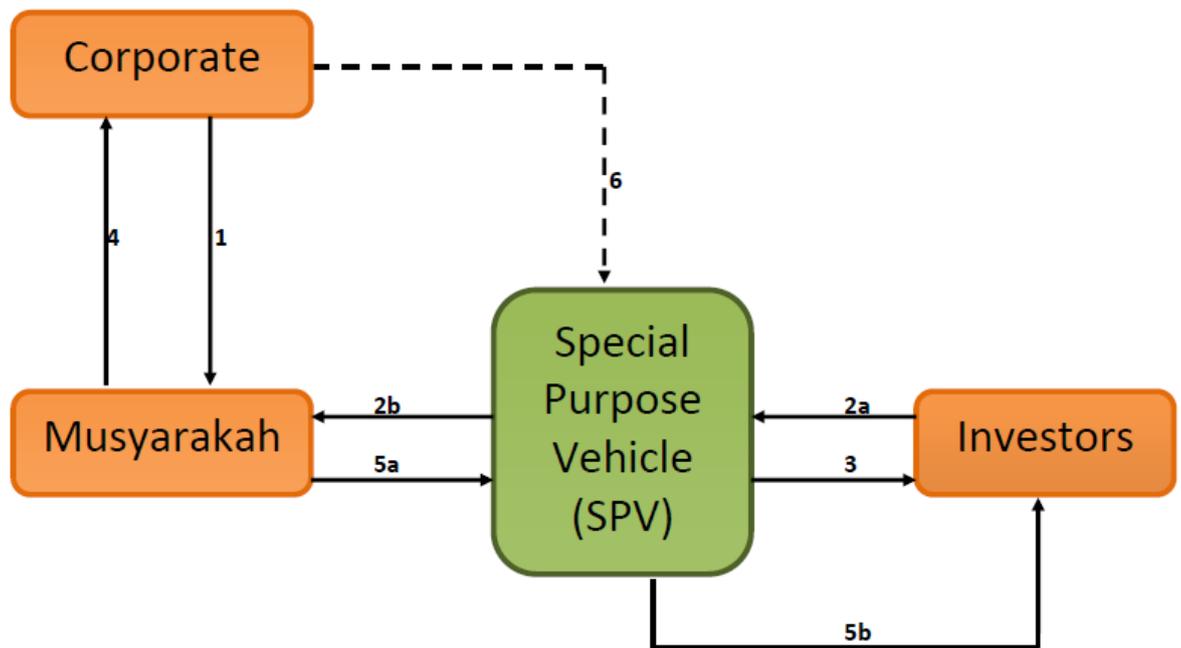
Steps involved in the Mudharabah sukuk structure:

1. The SPV makes an agreement with the project owner for a new project/existing project.
2. The SPV issues sukuk to raise funds and issues sukuk certificates to the investors.
3. (3a) The SPV receives the funds raised and (3b) transfers the funds to the project owner.
4. The SPV receives the regular profit payments and distributes the profit among investors (at the end of the project, the investor will receive principal capital and final profit).
5. Upon completion, the SPV hands over the finished project to the project owner.

6. Musyarakah sukuk

Musyarakah sukuk is divided into musyarakah agreements, management agreements, and purchase undertakings. It involves cooperation of two parties to incorporate a capital for a specific purpose. Moreover, the issuer of musyarakah sukuk contributes the subscription proceeds to create a joint venture with the originator who contributes either his/her own capital/asset or makes a contribution in kind. The issuer and the originator share the profits according to an agreed ratio; any losses must be shared according to the ratio of capital contributed as it is required under Islamic law. Figure 3.12 illustrates the structure and numbered steps of the Musyarakah sukuk structure.

Figure 3.12: Musyarakah Sukuk Structure



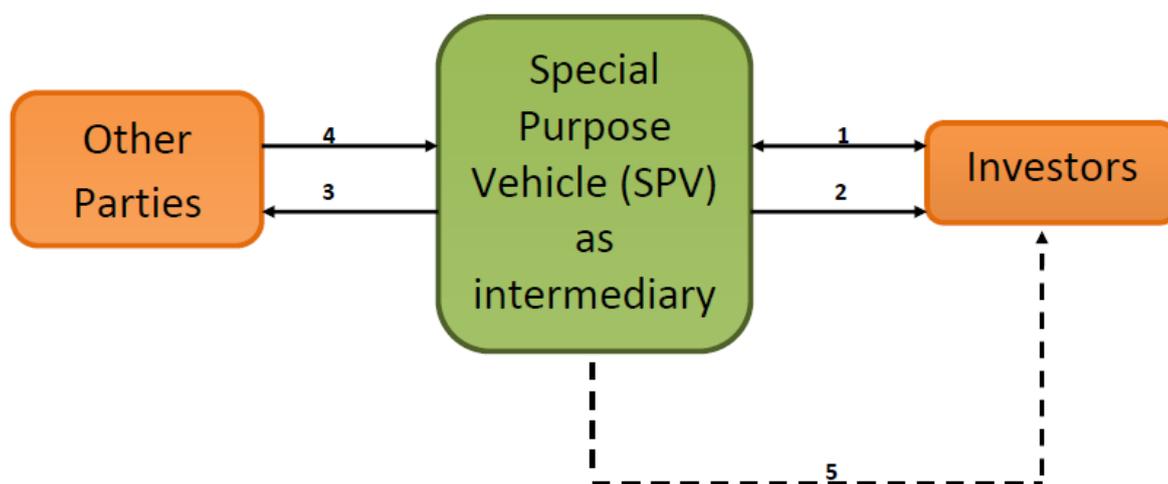
Steps involved in the Musyarakah sukuk structure:

1. The corporate contributes land or other physical assets to the musyarakah.
2. The SPV receives cash from the investors and transfers it to the musyarakah.
3. The SPV issues sukuk certificates to the investors as the investors are the owner of the project/assets as per their respective shares.
4. The musyarakah appoints the corporate as an agent to develop the project with the cash injected into the musyarakah. The musyarakah sells/leases the developed assets on behalf of the musyarakah, and the corporate will receive a fixed agency fee plus a variable incentive fee payable.
5. The SPV receives a profit and distributes the profit to the investors (profit sharing ratio).
6. The corporate irrevocably undertakes to buy at a pre-agreed price the musyarakah shares of the SPV (i.e. semi-annual basis), and at the end of the fixed period the SPV would no longer have any shares in the musyarakah.

7. Wakalah sukuk

Wakalah sukuk is defined as a contract whereby a party authorises another party to act on its behalf based on agreed terms and conditions. Figure 3.13 illustrates the structure and numbered steps of the Wakalah sukuk structure.

Figure 3.13: Wakalah Sukuk Structure



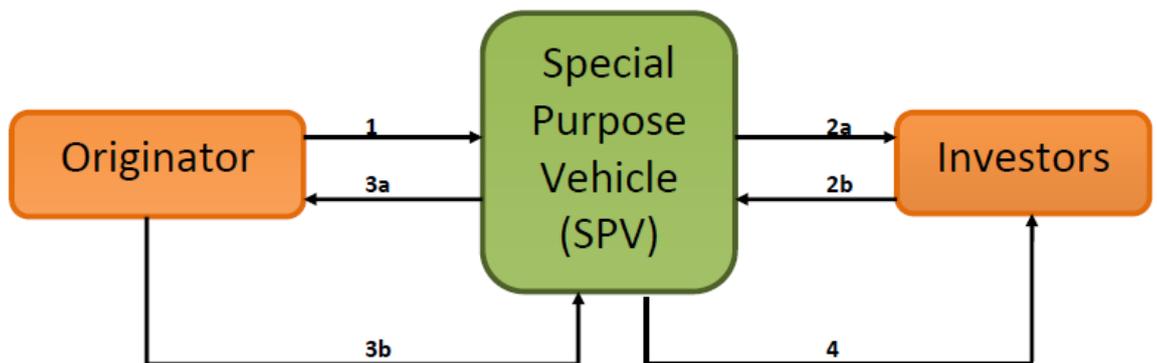
Steps involved in the Wakalah sukuk structure:

1. The SPV and the investors come into a contract agreement in that the SPV acts on behalf of the investors (The SPV will receive a management fee as their compensation).
2. The SPV issues sukuk certificates to the investors as the sukuk holders and the SPV receives funds from the investors to be invested in the shariah compliant activities or projects.
3. To generate profit, the SPV invests the funds to other parties (Mudharabah, Ijarah, and other shariah compliant contracts).
4. The SPV receives profit from the investment.
5. The SPV transfers the profit to the investors.

8. Hybrid sukuk

Hybrid sukuk is an innovative form of sukuk which is structured around the various demands of investors. Hybrid sukuk is a more diversified form of sukuk emerging in the market. The assets can comprise of istisna', murabahah as well as ijarah sukuk. For instance, the Islamic Development Bank issued the first Hybrid Sukuk for US\$400 million. The assets comprised 66% Ijarah sukuk, 31% Murabahah and 3% Istisna'sukuk. The hybrid sukuk structure represents the potential of new structures and benefits to the investors. Figure 3.14 illustrates the structure and numbered steps of the Hybrid sukuk structure.

Figure 3.14: Hybrid Sukuk Structure



Step involved in the Hybrid sukuk structure:

1. The originator transfers the tangible assets plus murabahah deals to the SPV.
2. The SPV issues sukuk to raise funds and receive funds from the investors.
3. The originator purchases the assets from the SPV and pays fixed payment to the SPV.
4. The investors receive fixed payment of return on the asset.

The various types of sukuk structures explained above have their own particular roles, positions and characteristics within the sphere of Islamic financial transactions. Therefore, the evolutionary process that has led to their creation is an important subject of discussion and has been taken up by the likes of Tariq and Dar(2007), Haneef (2009) and Dusuki (2010).

3.3.3 THE EVOLUTION OF ISLAMIC DEBT

The Islamic financial and economic system has existed since the time of the prophet Muhammad SAW. During that time, buying and selling, and savings and loans activities were not as extensive as they are now. However, the principle remains the same; no interest charged and no non halal products and activities permitted. The interest system is not used at all because it is forbidden by Allah SWT. The banning was declared in the Qur'an and the Hadith.

According to Ayub (2007), the prohibition of interest has been mentioned in several verses in the Qur'an, such as Verse Al Rum ayat 39, Verse An Nisa ayat 161, Verse Al Imran ayat 130, Verse Al Baqarah ayat 275, 276, 278, 279, 280 and 281. In order to perform better as human beings by committing the commands of Allah completely, all the shariah must be applied to every social and economic aspect. By doing so, Muslims will be rewarded with personal gratification and human kind will benefit overall.

Furthermore, Ayub (2007) describes how business is conducted in Islamic law. He mentions that the principle of partnership and other contracts based on genuine and valid trading, and leasing activities should be encouraged to replace interest

based business activities. Profit and loss is shared proportionately based on trading, leasing or the Shirkah (partnership) principles.

Hossain (2009) discusses three reasons behind the banning of interest in Islam; economic harm, social harm and moral harm. First, if people earn money without any effort, it will generate a reluctance to work and the decline of motivation. Eventually people will reduce their interest in productive work which influences and hampers the total welfare of society. There is also the probability that the exploitation of a loan by some people, who borrow money in the name of doing business, when it is not used for business at all, will damage the entire economy.

Secondly, the consequences of the poor and needy borrowing from the rich will increase class distinction and cause conflict as the rich become richer and the poor become poorer. Thirdly, when the interest system exists in society, greed is encouraged, and individuals become motivated to indulge in immoral acts such as theft or extortion in order to repay debts or secure their recovery. As a consequence, the kindness, fellow feeling, sense of brotherhood and the mentality of helping others gradually disappears from society. Muslims believe that if interest is charged, then a man's good deeds will not be accepted and rewarded and that he will be deprived from barakah and the blessing of Allah.

According to AAOIFI standards for investment sukuk, there are seven types of sukuk as investment certificates (Ayub, 2007; p.396):

1. Sukuk ownership in leased assets: further divided into sukuk of ownership of usufruct of existing assets, sukuk of ownership of described future assets,

sukuk of ownership of services of a specified party and sukuk of ownership of described future services

2. Salam Sukuk
3. Istisna'Sukuk
4. Murabaha Sukuk
5. Musharakah Sukuk: further divided into participation certificates, Mudarabah Sukuk and investment agency sukuk. Muzara'ah (share-cropping) Sukuk.
6. Musaqah (projects involving irrigation of fruit-bearing trees) Sukuk.
7. Mugharasah (projects involving plantation of gardens) Sukuk

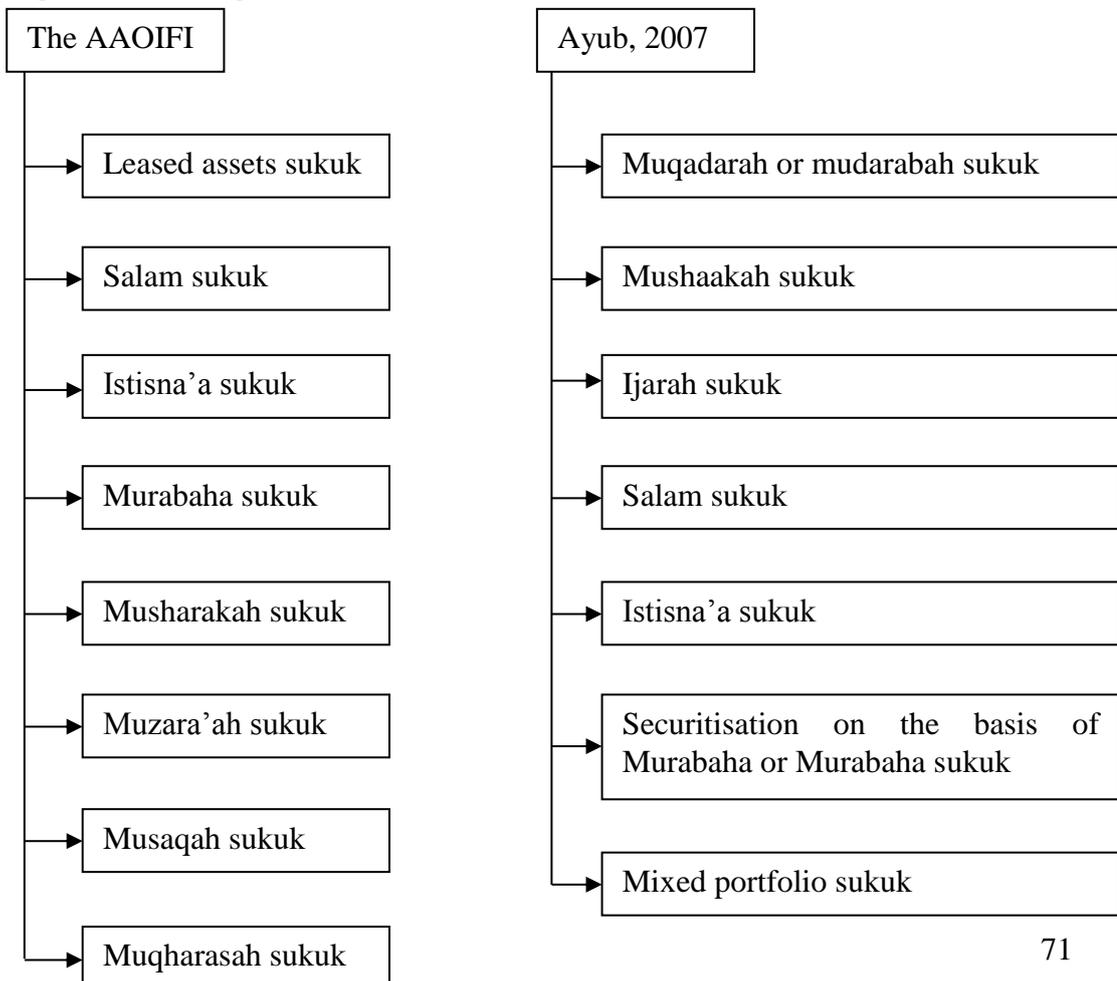
Meanwhile, Ayub (2007; pp.398-406) also discusses various categories of sukuk, such as:

1. Muqaradah or Mudarabah Sukuk, which refers to certificates that represent projects or activities managed on the mudarabah principle by appointing any of the partners or any other person as mudarib for management of the business.
2. Musharakah Sukuk, which refers to a mode of sukuk that can serve as a basis for securitisation easily, especially in the case of big projects where huge amounts of capital are required.
3. Ijarah Sukuk, which refers to certificates that are issued on stand-alone assets as identified on the balance sheet. The assets can be parcels of land to be leased or leased equipment, such as aircrafts and ships. The rental rates of returns on these sukuk can be fixed or floating depending on the particular originator.

4. Salam Sukuk, which refers to a contract in which advance payment is made for goods to be delivered later on.
5. Istisna'Sukuk, which refers to a contractual agreement for manufacturing goods, allowing cash payment in advance and future delivery of a future payment and future delivery of the goods manufactured, as per the contract.
6. Securitisation on the basis of murabahah and Murabahah Sukuk
7. Mixed Portfolio Sukuk, which refers to a combination or pool of musharakah, ijarah and some murabaha, salam, istisna' and ju'alah (a contract for performing a given task against a prescribed fee in a given period) contracts.

Figure 3.15 depicts sukuk categorisation from both AAOIFI and Ayub (2007) taxonomies.

Figure 3.15: Categorisation of sukuk



Jalil (2005) categorises Islamic debt into five categories, that is, loan-based bonds, sale-based bonds, and lease-based bonds, equity-based bonds, and hybrid-based bonds. Likewise, Mohd Zin et al (2011) also explain various categories of Islamic debt, that is, ijarah sukuk, mudharabah sukuk, musyarakah sukuk, istisna'sukuk, murabahah sukuk and hybrid sukuk.

In addition, Securities Commission's Shariah Advisory Council Malaysia (SAC Malaysia) and Securities Exchange Commission of Indonesia (SEC Indonesia) also define the sukuk structure concepts for the purpose of structuring, documenting and trading of Islamic securities (Securities Commission Malaysia, 2009). Table 3.16 shows the sukuk structure defined by SAC Malaysia and SEC Indonesia.

Table 3.7: Sukuk structure concepts defined by SAC Malaysia and SEC Indonesia

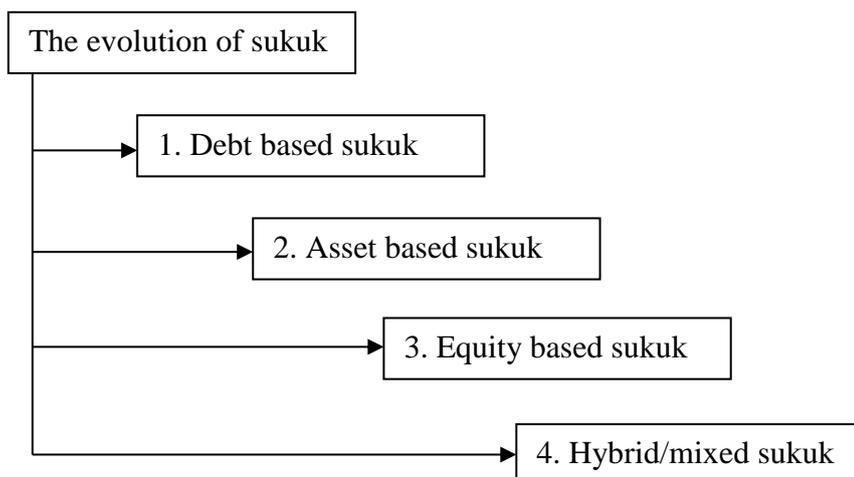
Profit and Loss-sharing (Musyarakah)	A partnership arrangement between two parties or more to finance a business venture, where all parties contribute capital either in the form of cash or in kind for the purpose of financing the business venture. Any profit derived from the venture will be distributed based on a pre-agreed profit-sharing ratio, but a loss will be shared on the basis of equity participation.
Profit-sharing (Mudharabah)	A contract between 2 parties to finance a business venture. The parties are a rabb al-mal or investor, who solely provides the capital; and a mudharib or entrepreneur, who solely manages the project. If the venture is profitable, the profit will be distributed based on a pre-agreed ratio. In the event of a business loss, it shall be borne solely by the provider of the capital.
Leasing (Ijarah)	A benefit (usufruct) type of contract, where a lessor (owner) leases out an asset or equipment to its client at an agreed rental fee and pre-determined lease period upon the 'aqad (contract). The ownership of the leased equipment remains in the hands of the lessor.
Deferred-payment Sale (Bai' Bithaman Ajil or BBA)	A contract that refers to the sale and purchase transaction for the financing of an asset on a deferred and instalment basis, with a pre-agreed payment period. The sale price will include a profit margin.
Sale with Immediate Repurchase (Bai' 'Inah)	A contract that involves the sale and buy-back of an asset by a seller. A seller will dispose of the asset to a buyer on a cash basis. The seller will immediately buy back the same asset on a deferred-payment basis, at a price that is higher than the cash price. It can also be applied when a seller sells the asset to a buyer on a deferred basis. The seller will later buy back the same asset on a cash basis, at lower than the deferred price.
Supply Sale (Bai' Istijrar)	A contract between a client and a supplier, where the supplier agrees to supply a particular product on an on going basis, e.g. monthly, at an agreed price and on the basis of an agreed mode of payment.
Advance Purchase (Bai' Salam)	A sale and purchase contract, where the payment is made in cash at the point of contract, but the delivery of the asset purchased will be deferred to a predetermined date.
Sale and Repurchase (Bai' Wafa')	A contract with the condition that when the seller pays back the price of goods sold, the buyer returns the goods to the seller.
Lease to Purchase (Ijarah Thumma Bai')	A contract that begins with an Ijarah contract, for the purpose of renting out a lessor's asset to a lessee. At the end of the lease period, the lessee will

		purchase the asset at an agreed price from the lessor, by executing a purchase (Bai‘) contract.
Purchase (Istisna’)	Order	A purchase contract for an asset, where a buyer will place an order to purchase the asset that will be delivered in the future. In other words, the buyer will require a seller or a contractor to deliver or construct the asset that will be completed in the future, according to the specifications in the sale and purchase contract. Both parties in the contract will decide on the sale and purchase prices as they wish, and settlement can be delayed or arranged based on the schedule of work completed.
Cost-plus (Murabahah)	Sale	A contract that refers to the sale and purchase transaction for the financing of an asset, where the cost and profit margin (mark-up) are made known and agreed to by all parties involved. The settlement of the purchase price can be either on a deferred lump-sum basis or an instalment basis, which will be specified in the agreement.
Benevolent (Qardh Hasan)	Loan	A contract of loan between two parties on the basis of social welfare or to fulfil a short-term financial need of the borrower. The sum of repayment must be equivalent to the amount borrowed. It is however legitimate for a borrower to pay more than the amount borrowed, as long as it is not stated or agreed at the point of contract.

Source: Bank Negara Malaysia and Securities Commission Malaysia, 2009

Tariq and Dar (2007), and Haneef (2009) divide sukuk based on the evolution of sukuk structures into three phases, namely, the asset-backed sukuk, asset-based sukuk, and hybrid sukuk. Many factors influence the evolution of sukuk structure. At the beginning of the emergence of sukuk, debt-based sukuk is Murabahah sukuk. The debt-based sukuk’s mechanism is that the sukuk holders (investors) purchase assets or goods from a third party based on the request of the sukuk issuers, then the sukuk holders resell it to the sukuk issuers at a higher price on deferred payment terms. The figure of the evolution of sukuk structure is depicted in Figure 3.16 below.

Figure 3.16: The Evolution of Sukuk Structure



There are some notable features of the Murabahah structure. First, the certificate holders own the murabahah commodity and are entitled to its final sale price upon the re-sale of the commodity. Secondly, it only exists in the primary market. Thirdly, trading of this sukuk in the secondary market is not permitted by shariah. The certificates represent a debt owing from the subsequent buyer of the commodity to the certificate-holders and such trading amounts to trading in debt on a deferred basis, which will result in *riba* (Ayub, 2007; Haneef, 2009; Muhammad Al Amine, 2008; Tariq & Dar, 2007; Usmani, n.d.; Wilson, 2008, n.d.). The debt-based structure is slowly shifted into other structures due to the fact that this structure can only be traded in the primary market.

The second stage of the evolution is asset-based sukuk. One of the forms of this structure is *Ijarah Sukuk*. *Ijarah sukuk* refers to the contract of hiring and renting any assets or commodity to benefit its yield. The features are embedded and clearly stipulated in the contract. It is the responsibility of the owners to cover any expenses which are occurred on the assets as basic characteristics, it is negotiable

and can be traded on the secondary market, and it can be issued by financial intermediaries or directly by users of the leased assets.

There is some constraint that prevents this kind of sukuk being used, such as the lack of suitable assets for the underlying ijarah transaction. Most governments or sovereigns are apprehensive about the possibility of negative sentiments coming from an investor. But this problem was solved by the issues of The Bahrain in 2001. It was a milestone in sukuk issuance in that it was positively perceived by the public. Then, in 2002, Malaysia issued the first Islamic global sukuk in compliance with the US regulations. It was the first Malaysian sukuk to be listed on the Luxembourg Stock Exchange and is rated by Standard & Poor's and Moody's, and incorporated with the conventional debt practices as well (Haneef, 2009).

The last stage of the evolution is equity-based sukuk or partnership based sukuk. The forms of this structure are musyarakah and istisna'. Established by the end of 2009, they are the third phase of the development of sukuk. Musyarakah sukuk is similar to mudarabah, the main difference being that in musyarakah, all the partners provide some capital and profits are shared in the pre-agreed ratio while losses are shared in proportion to the capital contributions. This sukuk may be used to finance of a new project or an existing one and the certificate holders are the owners of the project. They can also be traded in the secondary market. Lastly, Istisna Sukuk is a sale at an agreed price in which the buyer takes an order to manufacture, assemble or construct anything to be delivered in the future. The key

feature of this sukuk is that certificate holders own the product and are entitled to the sale price of the certificates or the sale price of the product.

Meanwhile, there is a continuing evolution in sukuk structure; the legality of the sukuk structure and its profit distribution is becoming a topic of interest among Islamic scholars as the interest system is strictly prohibited. Therefore, the principle of partnership and other contracts based on genuine and valid trading, and leasing activities should be encouraged to replace interest based business activities.

The legality of Islamic debt is strictly regulated by Islamic law under which there are rights embedded in sukuk, such as rights to an underlying asset and its cash flow. In cases where the sukuk represents ownership of assets (the underlying asset), the claim embodied in the sukuk is not just a claim on the underlying asset used in the sukuk transaction, but also the right to the cash flow and proceeds from the sale of the asset.

According to Wilson (2005), the various transaction contracts that form the provenance for a sukuk issue have different legal implications for investors. Sukuk investors should, therefore, be fully apprised of and knowledgeable on their rights and obligations under the various Islamic concepts and principles. Additionally, not only has the right of an underlying asset on the sukuk become a focus of discussion among Islamic scholars, but documentation in the sukuk contract is also very important as stipulated in the Holy Qur'an 2:282.

Shariah Resolutions in Islamic Finance allows the distribution of profit calculated based on gross profit in Islamic debt. The distribution of profit is made at the gross profit level, which is the profit for the whole operation after deducting all direct expenses for all investment funds and the deposits received. Moreover, the profit distribution method based on gross profit is aimed at safeguarding the customers' interest as investors or depositors (Usmani, 1999).

In addition, as the Shariah Advisory Council of Bank Negara Malaysia (SAC), in its 16th meeting dated 11 November 2000, resolved that the profit distribution method based on gross profit is permissible, Bank Negara Malaysia and Securities Commission Malaysia (2009) also resolved that profits are distributed according to a pre-agreed proportion while losses are pro-rated according to their equity share. Similarly, the Indonesian National Sharia Board also resolved that the income from bond investments has to be distributed based on a pre-agreed proportion.

There are some rules and guidelines for issuing and investing in the Islamic debt in Malaysia and Indonesia which are regulated by the Securities Commission Malaysia and the Securities Exchange Commission Indonesia. The regulation is aimed at providing secureness to the market players on the securities market.

ISSUING AND INVESTING ISLAMIC DEBT IN MALAYSIA AND INDONESIA

The purpose of these rules and guidelines is to expedite and create a facilitative as well as transparent approval scheme for corporate issuances. Furthermore,

corporate debt and Islamic debt issuance impose greater disclosure requirements and enhance legal protection for investors. Moreover, the guidelines govern all issues/offers/invitations involved in corporate debt. In addition to the issuance requirements stated in the corporate debt guidelines, the guidelines on the offering of Islamic securities stipulate the additional Shariah criteria that must be met with regard to all issues, offers, or invitations under the Capital Markets and Services Act 2007 (CMSA 2007). Additionally, the approval of the Shariah Advisory Committee (SAC) must be obtained prior to the submission of any declaration and information to the Securities Commission (Bank Negara Malaysia and Securities Commission Malaysia, 2009).

Similar to Malaysia, Indonesian Capital Market Regulatory (ICMR) also set some rules and regulations regarding Islamic instruments, which in 2002, saw the regulation of Islamic bond conduct No.32/DSN-MUI/IX/2002 being issued. In addition, the Islamic instruments issuance in Indonesian Capital Market is also monitored by the Indonesian Shariah Board (Majelis Ulama Indonesia).

There are various parties involved in sukuk issue, each one playing an important role. All parties should ensure that the issue is appropriately structured and investors' interests are fully protected. All parties involved in sukuk issue are listed below:

Table 3. 8: Parties involving in Islamic debt transaction in Malaysia and Indonesia

Lead Arranger/ Principal Advisor	The role of the Lead Arranger or Principal Advisor is to structure the debt securities or sukuk proposal, together with any other arrangers, and submit the application to the SC for approval.
Advisor	The role of the Advisor is to structure the debt or sukuk proposal together with the Lead Arranger.
Underwriter	Investment banks and commercial banks are the main underwriters of debt securities and sukuk.
Facility Agent	The Facility Agent is responsible for all administrative matters

	pertaining to the issue.
Paying Agent	The Paying Agent is responsible for the cash flow involved in the transaction, in terms of receiving the proceeds from the issuance on behalf of the issuer and remitting the proceeds to the issuer, as well as the payment of interest to investors. The Lead Arranger is often also the Paying Agent.
Legal Counsel	Before the finalisation of a debt securities or sukuk issue, a legal due diligence exercise is always conducted on the issuer, related projects and project information pertaining to the securities issue or sukuk. This is done by a team of lawyers appointed by the issuer.
Shariah Advisor	A Shariah Advisor must be appointed for a Sukuk issue to advise the issuer on the appropriate and acceptable concept(s) and principle(s) to be used in the issuance. The Shariah concepts and principles to be used must be approved by the Shariah Advisory Council.
Trustee	Trustees for a bond or sukuk issue have the responsibility of safeguarding the interests of the bond holders.
Credit Rating Agency	There are two credit rating agencies (CRAs) in Malaysia that provide independent opinions on the credit risks and potential default risks of specific issuers. The first rating agency, Rating Agency Malaysia Berhad; the second, Malaysian Rating Corporation Berhad. The credit rating agency in Indonesia is Pemingkat Efek Indonesia (PEFINDO).
Financial Guarantee Institution	Financial Guarantee Institutions (FGIs) help raise the credit rating of bond issues, which otherwise would normally be below investment grade, to a level deemed investment grade by investors who lend their own sterling ratings to these bond issues. Issuers will need to pay a premium, commensurate with the perceived risk of the issuer, to these FGIs who will undertake to pay the interest and capital repayment in the event that the issuer fails to do so.

Compiled from sources

Sukuk is experiencing a growing number of issuance in the debt market because of its popularity as a debt instrument in a few countries, particularly Malaysia. Why and how the sukuk structure has gained popularity, since its initial launch, has been attracting considerable attention among Islamic scholars and market players. One can say that the sukuk's massive trend in corporate debt innovation is only to meet market demand, or that there is some attractiveness in investing in Islamic debt. Some reasonable answers for why and how the sukuk structure has gained popularity are provided as follows:

1. Investors are provided with a steady stream of income through the regular payments that the issuer has contracted to pay.
2. Islamic debt has relatively attractive yields and profits that are usually higher than the interest received from savings and deposits in banks.

3. Islamic debt offers high liquidity, a welcome feature to investors who face the problem of not being able to fully recover their money on demand.
4. Islamic debt is a safer asset than shares, which offers low risk assets, and as long as the issuer does not default, the investor receives profit payments.

According to Ibrahim and Wong (2006), there are two key developments in the Malaysian bond market; first, the regulatory framework and market infrastructure, second, the regional corporation. In addition, Jalil (2005) reviews the Malaysian experience in managing the issuance and the development of the Islamic bonds market and states that at the beginning of Islamic debt issuance, the acceptance of the Islamic debt issued by Malaysia was barely accepted by global investors, especially Middle East investors. Therefore, to encourage the development of Islamic debt, some incentives have been provided to both investors and issuers based on the Finance Act 2007-Amendment to the Income Tax Act 1967 (Securities Commissions Malaysia, 2011).

Apart from its massive growth in a few countries, the growth of Islamic financial products in Indonesia is not as rapid as other countries though Indonesia is a potential and huge market for Islamic finance institutions and banks to develop their products and services with about 80% of the Indonesian population being Muslim (240 million people). There are three potential reasons for the slow growth of Islamic debt in Indonesia. First, Islamic financial institutions are still focused on standard and simple Islamic products due to the lack of knowledge and human resources in Islamic financial institutions. Second, the regulation in Islamic instruments is vague and not fully supported by the government, for

example, the double taxation issue that requires investors/issuers to pay double taxes in Islamic instruments transaction. Third, though the vast majority of the Indonesian population is Muslim, the share of Islamic instruments market is considerably small, representing only 5% of the market share of the whole financial market.

Until this year, there is no Islamic debt default in Indonesia. Unfortunately, in Malaysia there have been a few Islamic debt defaults, such as Johor Corporation, Ingress Sukuk Berhad, Tracoma Holdings Berhad and Nam Fatt Corporation Berhad (Majid et al., 2011). Therefore, to prevent future Islamic debt defaults, Islamic countries should have good and strong economic fundamentals. In developing countries such as Indonesia, political and public issues have important influences over the conditions of Indonesian industries and companies.

Although there have been a few Islamic debt defaults in Dubai, United Arab Emirates and Malaysia, the Islamic debt is still claimed to be more secure than conventional debts due to the requirement for physical assets. Islamic debt defaults in Malaysia have affected the credibility of Islamic debt as a feasible Islamic instrument and raise concern about the investors' protection and the survival of the Malaysian capital market in the future, but the development of Islamic debt still flourishes with certainty.

3.4. FURTHER EVOLUTION OF ISLAMIC DEBT

The market for sukuk, Islamic bonds, experienced phenomenal growth during its first years in existence. Despite this, in 2008, the number of sukuk issued globally

declined for the first time. Market commentators attribute this to a number of factors, including the global financial turbulence and resulting market conditions. The global financial turbulence has resulted in a number of high-profile defaults, and this has generated a timely debate by market participants as to the nature of investors' recourse to the underlying assets. In turn, this inevitably resulted in a better understanding by investors, bankers, originators and lawyers alike of what the consequences of a default are, leading to further innovation and development of existing sukuk structures and the further evolution of Islamic debt structures. However, the outlook for the sukuk market remains positive, with Standard & Poor's indicating that the total amount of sukuk issued or being talked about in the market is estimated to be \$50 billion (Standard & Poor's publication, 2010).

As a consequence, a more diversified kind of sukuk, referred to as hybrid sukuk, which is based on the various demands of investors, emerged in the market. The assets can comprise of Istisna', Murabahah as well as Ijarah. The hybrid sukuk structure represents the potential of new structures and benefits to the investors. Furthermore, a particular sukuk can also be converted into equity upon an IPO. The example of the convertible sukuk was issued by the Dubai based port operator ports, customs and free zone corporation (PCFC) which originally was issued in the form of Musharakah structure. The sukuk was targeted in particular at Islamic investors interested in the booming IPOs market in the Middle East. Therefore, the transaction demonstrates the continuing demand for sukuk products and the flexibility of sukuk, which can be adapted to meet the specific financing needs of the issuers.

3. 5. CONCLUSION

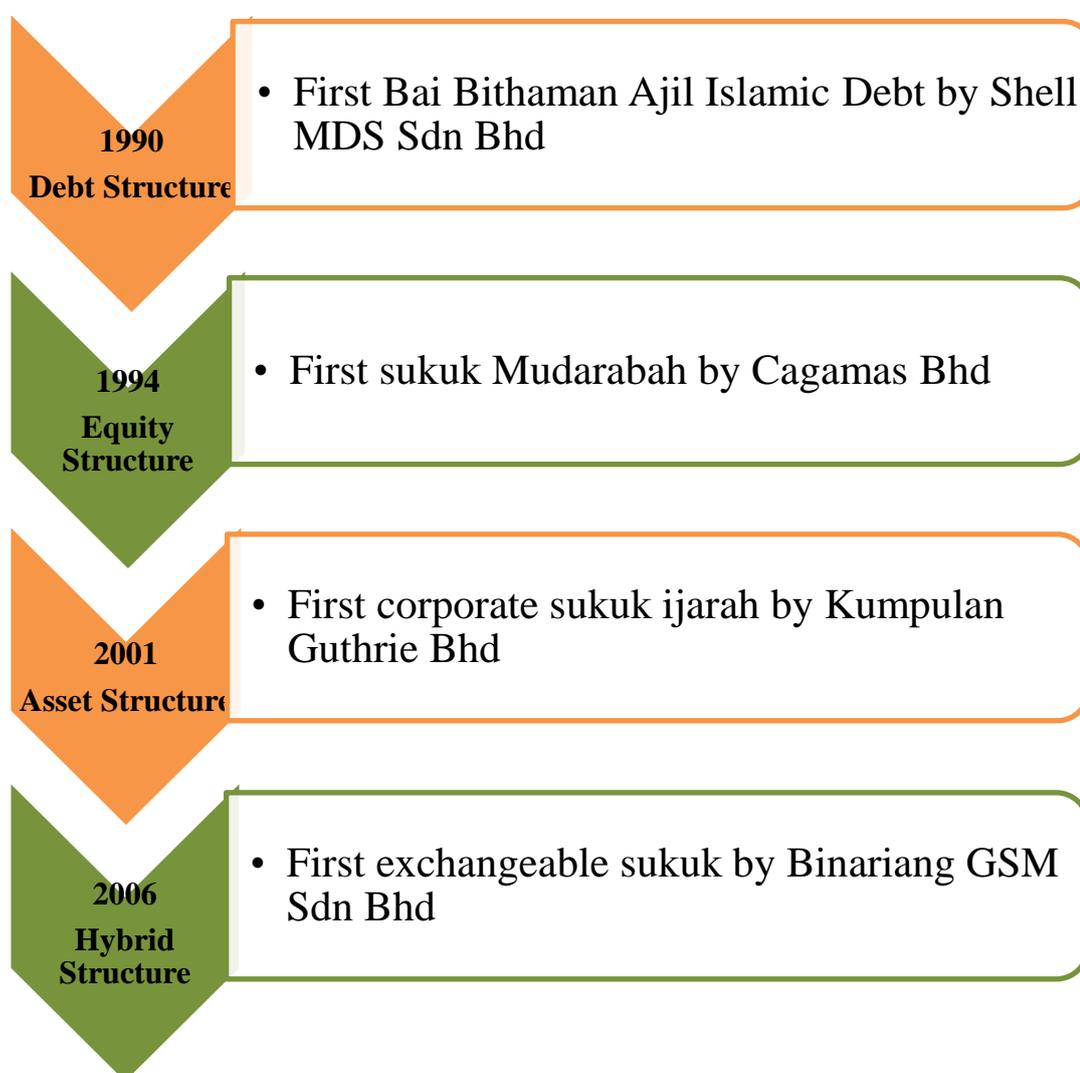
This chapter provides brief explanations of Islamic debt such as concept, structure, commercial practices and regulators. Islamic debt, also referred as sukuk, is a certificate of equal value representing undivided shares in the ownership of tangible assets or services of the particular projects or any specified investment activity. Unlike conventional debt which is viewed as homogeneous product, Islamic debt is viewed as heterogeneous product. There has been an emerging range of Islamic debt products since its inception, such as ijarah, murabahah, salam, istisna, mudarabah, musyarakah, wakalah and hybrid sukuk, each of which has different structure. The structure can be in the form of debt, asset and equity types, and the types of the structure depend on the asset/project/investment financed. The innovation of Islamic debt structures is provided in Figure 3.18.

In terms of commercial practices, Islamic debt issuance and Islamic debt trading are regulated by formal bodies as part of capital market regulators. Furthermore, since its establishment, the focus of the Securities Commission in both Malaysia and Indonesia has been to supervise and monitor the activities of market institutions including the exchange and clearing houses, as well as all persons licensed under some regulations in order to protect the interest of all parties, especially investors' interests. In addition, the Securities Commission in both Malaysia and Indonesia is responsible for promoting and developing the securities and futures markets. The Commission has established the Shariah Advisory Council (SAC) or Indonesia Sharia Board to advise on matters in relation to the Islamic capital market activities and products, and has constructed a comprehensive and facilitative framework for Islamic instruments. This action has

paved the way for the development of the Malaysian Islamic capital market and is contributing to the acceleration of the product innovation in the Islamic equity and debt (sukuk) sectors.

Chapter four will outline the research method, hypotheses and empirical models used in this study.

Figure 3.17: Timeline of Islamic debt



Source: PricewaterCoopers Malaysia, 2008

CHAPTER 4: DATA AND RESEARCH METHODS

4.0 INTRODUCTION

This chapter provides the research framework, develops hypotheses, presents empirical models and describes methods for examining the impact of Islamic debt on company value.

4.1 RESEARCH FRAMEWORK

Capital structure has been extensively investigated in recent years. The mixture of debt to equity in the financial structure of companies, and whether it will impact upon financial performance risk and valuation is the subject of theoretical and empirical studies. The method to investigate the capital structure impact is also a focus of discussions. This study investigates the Islamic debt impact on company value; Figure 4.1, Figure 4.2 and Figure 4.3 illustrate the structure of this study.

The linkage between debt structure and firm value/or a firm's financial performance are presented schematically. This study investigates whether there is difference in company value and/or financial performance attributable to the proportion of debt which is Islamic debt. The debt instruments in this study are either Islamic or non-Islamic. In addition, this study also examines whether there is a difference in financial performance attributable to the proportion of Islamic debt, and whether the form of sukuk (debt-based, asset-based and equity-based type) make a difference in company value and/or financial performance. Firm size is used to control the effect of size differences.

Figure 4.1: Structure of the study for chapter five

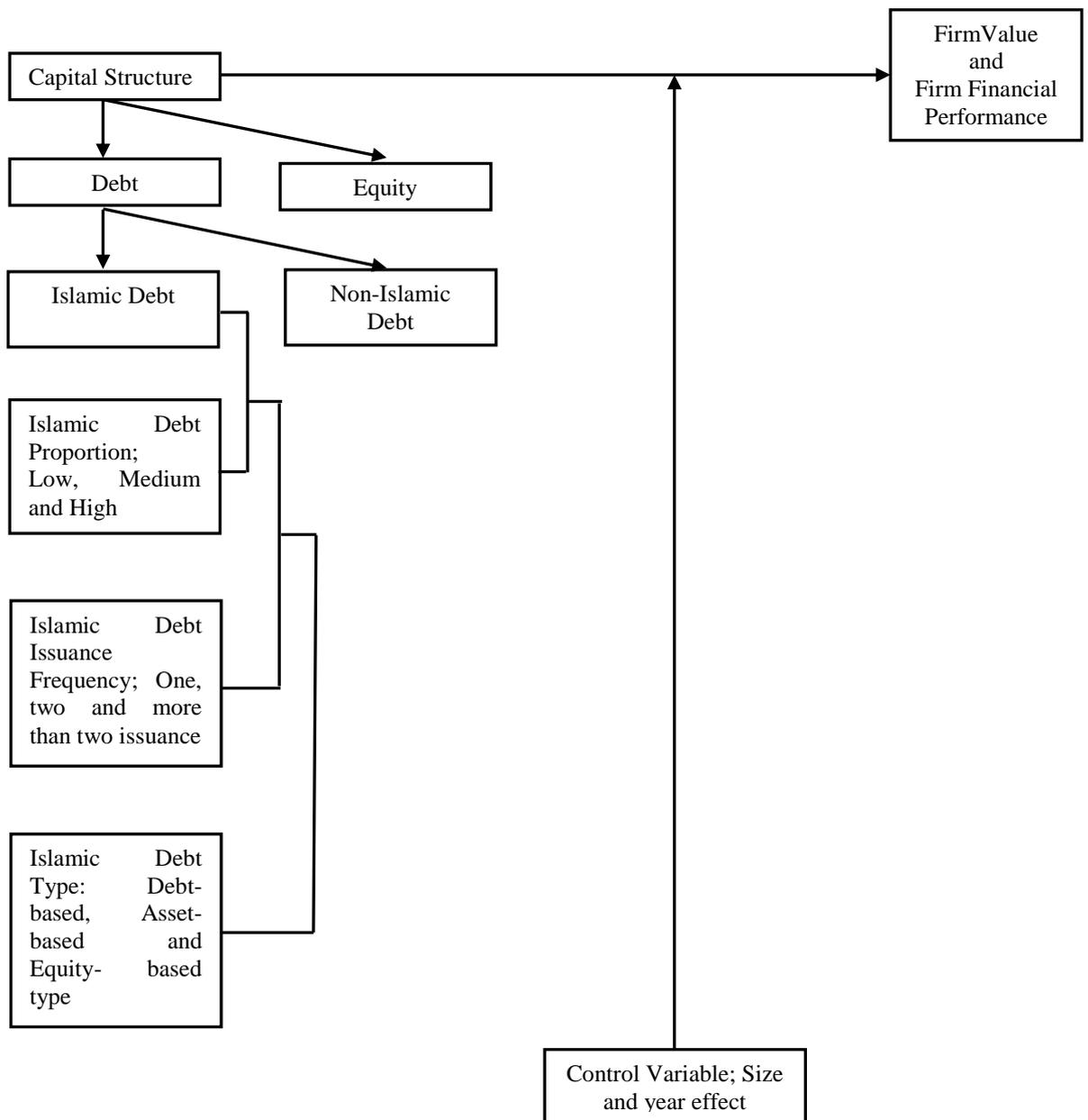


Figure 4.2: Structure of the study for chapter six

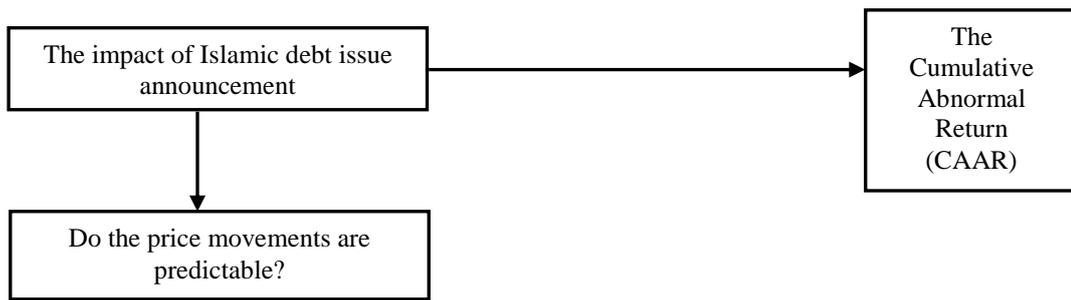
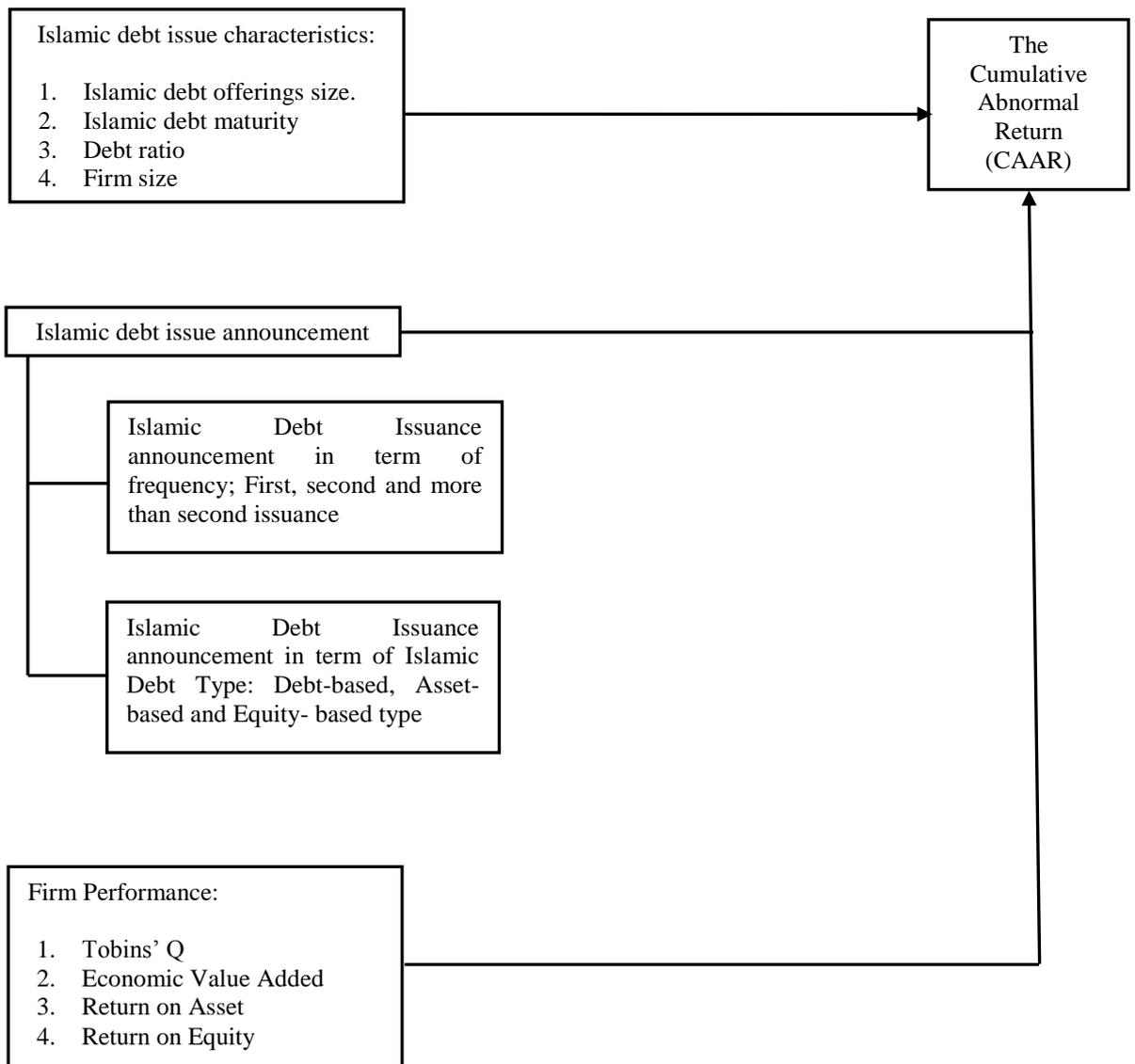


Figure 4.3: Structure of the study for chapter seven



The hypotheses presented in this study will be tested using two data from two countries, Malaysia and Indonesia. This section provides links between theoretical as well as empirical and research questions proposed in this study, from which research hypotheses are then constructed. According to the structure of the study (Figure 4.1, Figure 4.2 and Figure 4.3), the hypotheses are divided into three sections as follows:

4.2.1 HYPOTHESIS FOR FIGURE 4.1

Hypothesis 1.1

The relationship between company financial structure and value is important and continues to be debated in the literature. Modigliani and Miller (1958) achieved notoriety with their proof that capital structure made no difference to company value. Subsequent relaxation of Modigliani and Miller (M&M) assumptions suggested that debt to equity choice does impact on company value. More recent research considering bankruptcy costs has contributed to empirical estimates of optimal leverage. The M&M argument is that in a perfect market, how a firm is financed is irrelevant to its value. However, even though it is widely accepted that the world is not made up of perfect markets, the issue of optimal D/E ratio remains contentious and unresolved.

Following the work of M&M, subsequent works had been conducted to challenge their theory in which capital structure has an impact on firm value. They were Jensen and Meckling (1976), Myers (1984), Myers and Majluf (1984), and Jensen (1986). Jensen and Meckling (1976) suggest that a particular capital structure can result from using a debt as a monitoring and controlling device for managers. Furthermore, Jensen (1986) considers the point of free cash flow, wherein an excess of cash results in the “implausible” action of managers. In the position of free cash flow, debt issues will reduce free cash, and debt covenant and bondholders will act as monitoring and controlling agents over the manager’s behaviour. Myers (1984) contends that capital structure has a positive impact on firm value and his findings provided the basis for the trade-off theory. Further to this, Myers and Majluf (1984) find that capital structure has a negative impact on

firm value and their findings were called the pecking-order theory. Two years later, Jensen (1986) explains that debt mitigates the agency costs of free cash flow by reducing the cash flow available for spending at the preference of managers. Moreover, the threat of being unable to pay the debt serves as direct force in making firms become more efficient. In sum, as leverage increases, the agency costs of debt increases, including bankruptcy costs. Called the agency theory, this theory does not imply that debt issue will always has a positive impact on firm value, because at some point, the marginal costs of debt cannot offset the marginal benefits.

Frank & Goyal (2003) and Dang (2005) find that the trade-off theory holds well in developed countries. In addition, Abor (2007) and Coleman (2007) examine capital structure impact on financial performance of the small and medium enterprise (SME) in developing countries. Their results are contradictory since Abor finds that the SME tends to use short term debt whereas Coleman finds that the SME tends to use long term debt. The type of debt chosen by firms, then, may not necessarily be a definitive factor in affecting the financial performance of the SME. However, they find that, overall, capital structure influences the financial performance of the SME. Taking agency cost into the capital structure study, Berger and Bonaccorsi di Patti (2006) find that higher leverage is associated with higher profit.

However, it has been argued that different theories apply to firms under different circumstances. Islamic debt can cope with the Islamic law issues which allow Muslim investors to invest their funds in the debt instrument based on the Islamic

principles. Furthermore, Islamic debt is claimed to be more secure, and investors are provided with a steady stream of income through the regular payments that the issuer has contracted to pay. In the end, these reasons attract not only Muslim investors but also non-Muslim investors. This study adopts the trade-off theory and the agency theory, which assumes that Islamic debt has a positive impact on firm value. The testable hypothesis for Islamic debt and firm value/firm financial performance is:

H_{1.1a} : Islamic debt is positively associated with firm value/firm financial performance.

Hypothesis 1.2

The frequency of Islamic debt issues is assumed to have a positive impact on firm value and firm financial performance; therefore, the more frequent the Islamic debt issues, the greater the firm value and firm financial performance. The testable hypothesis for the frequency of Islamic debt and firm value/firm financial performance is:

H_{1.2a} : The frequency of Islamic debt is positively associated with firm value/firm financial performance.

Hypothesis 1.3

This study assumes that the proportion of Islamic debt has a positive impact on firm value and firm financial performance, given the previously mentioned reasons for positive impact. Harris and Raviv (1990) imply that higher leverage can be expected to be associated with larger firm value. In contrast, Krishnan and Moyer (1997), and Zeitun and Tian (2007) find a significant negative impact of

debt ratio on firm performance. In addition, Coleman (2007), consistent with other studies, finds that highly leveraged microfinance institutions perform better by reaching out to a wider clientele base and reducing default rates, further they enjoy scale of economies and are able to deal with moral hazards, adverse selection and risk. The testable hypothesis for the proportion of Islamic debt and firm value/firm financial performance is:

H_{1.3a} : The proportion of Islamic debt is positively associated with firm value/firm financial performance.

Hypothesis 1.4

Mikkelson and Partch (1986) affirm that there is a different impact of certain types of debts on shareholders' wealth; hence, this finding can also be applied to the Islamic debt. The type of Islamic debt issued is assumed to have a positive impact on firm value and firm financial performance. The testable hypothesis for the type of Islamic debt and firm value/firm financial performance is:

H_{1.4a} : The type of Islamic debt is positively associated with firm value/firm financial performance.

4.2.2 HYPOTHESIS FOR FIGURE 4.2

Hypothesis 2

The impact of debt issuance announcements on stock prices has been widely documented both in the United States and other countries. Most of the attention has been focused around non-Islamic debt, for example straight debt and convertible debt, and to date few studies examining the impact of debt announcement on stock price (Ashhari et al., 2009; Ibrahim & Minai, 2009;

Godlewski, Turk-Ariss & Weill, 2010; Modirzadehbami & Mansourfar, 2011; Modirzadehbami & Mansourfar, 2012; Ahmad & Radzi, 2011). Further, there is no consensus amongst academics and practitioners as to how the market should react to such securities. As such, in order to investigate the impact of Islamic debt issue on stock price and to construct the hypothesis for this study, this study will first discuss existing studies that have investigated the impact of debt issue on stock price. Masulis (1978), Mikkelson (1981), Dann and Mikkelson (1984), Korwar (1982) and many others afterwards show a statistically significant decrease in the price of firms' common stock at the earliest public announcement of certain types of capital structure changes. Further, under the assumption of asymmetric information, Miller and Rock (1985), and Myers and Majluf (1984) proposed that stock price is negatively correlated to the issuance of new securities.

In contrast, several other studies found no significant effect of debt issue on the stock price (Dann & Mikkelson, 84; Mikkelson & Partch, 1986; Eckbo, 1986; Shyam-Sunder, 1991). The stock price reaction can be potentially negative, positive or even null. In a recent study, a significant positive price reaction is recorded (Martel & Padron, 2006). As mentioned before, there has been little discussion about Islamic bond. Most of the studies, to date, have tended to focus on the legal aspects of Islamic debt, and few studies have examined the wealth impact of Islamic debt on stockholders. One of the few studies available on Islamic bond effects is the investigation by Ashhari et al. (2009), Ibrahim and Minai (2009), Goldlewski et al (2010), Modirzadehbami and Mansourfar (2011, 2012). Ashhari et al. (2009) concentrate on the difference between conventional bond and Islamic bond announcements and they attempt to show that certain types

of debts lead to abnormal returns, in accordance with the claim by Mikkelson and Partch (1986) that certain types of debts lead to abnormal returns. Ashhari et al. find that there was a positive reaction on the Islamic bond issues announcement; however, no wealth effect was associated with the conventional bond announcement. Similar to Ashhari et al. (2009), Ibrahim and Minai (2009) find a significant positive market reaction of -3, 0 and -3, 3 surrounding the announcement of Islamic debt issuance. In contrast, Goldlewski et al. (2010), Modirzadehbami and Mansourfar (2011) find a negative significant abnormal return surrounding the event date. This may indicate that there was adverse selection behaviour from the market participants toward the Islamic debt during the research study. A new debt issue is likely to be more predictable than a new equity issue because principal repayments are fixed and more predictable than earnings (Smith, 1986). Further, debt is viewed as a substitute device in reducing agency or asymmetric information problems because debt payments not only reduce the amount of free cash flow under management control but debt payments also give managers an incentive to avoid unprofitable new projects. What is more, debt payments provide an indication of the firm's future earnings and its quality (Jensen, 1986; Ravid & Sarig, 1991; Johnson, 1995). Thus, this study assumes that the market reacts positively to the issuance of Islamic debt. The testable hypothesis for Islamic debt and stock price is:

H_{2.1a} : The market reacts positively to the issuance of Islamic debt

H_{2.2a} : The price movements surrounding the announcement of Islamic debt are random

4.2.3 HYPOTHESIS FOR FIGURE 4.3

Hypothesis 3.1

The impact of Islamic debt characteristics, namely bond offerings size, the Islamic debt maturity, the debt ratio and firm size, on the cumulative average abnormal return (CAAR) has been investigated by Ashhari et al. (2009). A testable hypothesis is derived as follows:

H_{3.1a} : Islamic debt characteristic is positively associated with the CAAR.

Hypothesis 3.2

The impact of Islamic debt issuance frequency and Islamic debt type on the cumulative average abnormal return (CAAR) has been investigated by Ashhari et al. (2009). Testable hypotheses are derived as follows:

H_{3.2.1a} : The market reacts positively to the more frequent issuance of Islamic debt

H_{3.2.2a} : The market reacts positively to the type of Islamic debt issued.

Hypothesis 3.3

The capital structure study has been a topic of interest. It has been argued that profitable firms are less likely to depend on debt in their capital structure than less profitable ones. The more profitable firms have less debt than less profitable ones (Nivorozhkin, 2002). In addition, firm value and firm financial performance may also affect the choice of capital structure. Berger and Udell (2006) stipulate that more efficient firms are more likely to earn a higher return for a given capital structure, and that higher returns can act as a buffer against portfolio risk so that more efficient firms are in a better position to substitute equity for debt in their capital structure. Hence, under the efficiency-risk hypothesis, more

efficient firms choose to lower the costs of bankruptcy and financial distress. In essence, the efficiency-risk hypothesis is a spin-off of the trade-off theory of capital structure whereby differences in efficiency, all else equal, enable firms to fine-tune their optimal capital structure. The testable hypothesis for Islamic debt and stock price is:

H_{3.3a} : Firm value of firms having Islamic debt is positively associated with abnormal returns.

4.3 DATA

This section describes the research methods used to test the research framework and research hypotheses. The sections that follow describe the methodology used for the data collection, the measurement of variables, and the model specification for data analysis.

The data for this study were obtained from the Islamic Finance Information Service (IFIS) database. The sampling period is 2000 to 2009, which is ten years and, this study used quarterly data. This quarterly data is important since the issuance of Islamic debt for every firm is in different quarters. Initially, this study proposed to investigate the debt choice impact on a company value and firm's financial performance using Malaysia and the Middle East countries as a sample. However, only Malaysia can be used as a sample for this study because of the insufficient information and the unbalanced format of the data that were available. Fortunately, Indonesia, the closest country to Malaysia, issued Islamic debt in the period of 2000 to 2009. Thus, this data can be used as a comparison to explain how Islamic debt behaves for neighbouring countries under different

circumstances. List the sukuk issuers from Malaysian listed firms and Indonesian listed firms are provided in appendix 1 and appendix 2.

Further, this study notes that 227 companies from Malaysia issued Islamic debt from 2000 to 2009. From those 227 Malaysian companies, 106 companies are public companies, and 121 companies are limited companies. From the 106 public companies, 26 companies have been excluded from the data list because of the unavailability of their financial statement data. In addition, the sample of Islamic debt offering must have data availability on the size of the offering, the maturity length, the history of the issuance, and other accounting data information. There were 26 Indonesian firms which issued Islamic debt for the range of this study period, however only 14 firms have complete data. Therefore, a balanced panel of 80 Malaysian and 14 Indonesian companies are employed in this study.

Furthermore, an outlier in the data set may indicate that the data is not good, therefore, a statistical test, for example Grubbs' test and Dixon test, can be used to detect outliers in a univariate data set which assumed a normally distributed population, either creating a new variable (equal to 1 if the observation is an outlier and 0 otherwise) or dropping outliers out of the data set. The Grubbs test is also known as the maximum normed residual test. The outliers are expunged from the data set and the test is iterated until no outliers remain. The null hypothesis for the outlier test is there are no outliers in the data set. The Grubb test result reveals that all the data set employed in this study has no more outliers.

For panel data analysis, the availability of ten years' worth of data are required, particularly quarterly data. For event study and multivariate regression method analysis, the data of the daily closing stock prices for two years prior and one year after the announcement date is required in order to calculate the abnormal return using the abnormal return benchmark (mean adjusted return, market adjusted return and market model return).

To mitigate the problem of missing values, this study uses multiple imputations. The common practice to deal with the missing values is to delete firms for which some of the necessary data items are missing, however, this practice can create missing-data-bias. According to Raghunathan (2004) which reviewed three approaches for analysing incomplete data: firstly, missing-data can be resolved by including the weighted value to compensate the missing value excluded in the model, secondly, by including two or more plausible values to replace the missing values, and thirdly, by constructing the likelihood based on the incomplete data. Further, Raghunathan states that these three approaches are valid under the missing at random (MAR) mechanism and missing data mechanism assumption implies that the missing values in any variable are independent of the underlying values in the model.

In addition, Raghunathan and Siscovick (1996) demonstrate that using an auxiliary variable in the imputation process can considerably improve the efficiency and the non-response problem in the same way for all observations, so that analysis will be consistent across observations. However, because the plausible replacements of the imputed values for the missing values are not true

values themselves, this creates a degree of uncertainty that results in smaller estimated standard errors, narrowed confidence intervals, and smaller *p-values* of the significance tests. However, the key idea about imputation is to use data on aspects of the firm that we can observe to make a reasonable replacement about the values that are missing; the replacement values will not be perfect, but they provide a better reflection than simply disposing them. To cope with the missing data problem, this study employed multiple imputations by replacing the missing value with its mean and median where it was appropriate to do so.

The investigation of 14 Indonesian companies, compared with the 80 Malaysian companies studies, may, perhaps be viewed as something of an unbalanced. However, econometricians often use co-integration analysis for several different countries, wherein the size sample for each country is not necessarily identical. It is on this basis that this study generates findings and inferences, despite the disproportionate sample size of Malaysian companies being examined vis-a-vis Indonesian companies. Though this study has two data sets which is Malaysia and Indonesia, this study did not combine these two data sets as cointegrated data set. Moreover, the cointegration test result, using the four error-corrections based panel co-integration tests developed by Westerlund in 2007 (Persyn & Westerlund, 2008); strongly reject the hypothesis that the series are cointegrated. The reason is that these two data sets are in the different stage of development; hence the factors impacting each data set might be different, therefore cointegration might be seemed inappropriate.

Table 4.1 presents the composition of Islamic debt type in the Malaysian public firms. There was a slight upward change in the debt-based type for the first, second, third and fourth issuance. In contrast to the debt-based type, the asset-based type experienced a downward change for the first, second, third and fourth issuance, meanwhile the equity-based type fluctuated slightly for the first, second, third and fourth issuance.

Table 4.1: The composition of Islamic debt type from listed Malaysian firms

	First Issuance		Second Issuance		Third Issuance		Fourth Issuance	
	Number	%	Number	%	Number	%	Number	%
<u>Debt Based</u>								
Bai Inah	2	1.89%	1	1.89%	1	2.78%	1	4.76%
Bai' Bithaman Ajil (BBA)	15	14.15%	1	1.89%	1	2.78%	1	4.76%
Murabahah	52	49.06%	35	66.04%	23	63.89%	15	71.43%
		65.09%		69.81%		69.44%		80.95%
<u>Asset Based</u>								
Sukuk Al Ijarah	12	11.32%	4	7.55%	2	5.56%	1	4.76%
<u>Equity Based</u>								
Sukuk al Musharakah	14	13.21%	8	15.09%	7	19.44%	3	14.29%
Mudharabah	6	5.66%	4	7.55%	1	2.78%	0	0.00%
Istisna	2	1.89%	0	0.00%	0	0.00%	0	0.00%
Sukuk Al Wakalah	1	0.94%	0	0.00%	1	2.78%	0	0.00%
		21.70%		22.64%		25.00%		14.29%
<u>Not specified</u>	2	1.89%	0	0.00%	0	0.00%	0	0.00%
	106		53		36		21	

Table 4.2: The composition of Islamic debt type from limited Malaysian firms

	First Issuance		Second Issuance		Third Issuance		Fourth Issuance	
	Number	%	Number	%	Number	%	Number	%
<u>Debt Based</u>								
Bai Inah	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Bai' Bithaman Ajil (BBA)	40	37.74%	3	5.66%	1	2.78%	0	0.00%
Murabahah	37	34.91%	21	39.62%	16	44.44%	8	38.10%
		72.64%		45.28%		47.22%		38.10%
<u>Asset Based</u>								
Sukuk Al Ijarah	16	15.09%	5	9.43%	3	8.33%	2	9.52%
<u>Equity Based</u>								
Sukuk al Musharakah	15	14.15%	8	15.09%	3	8.33%	3	14.29%
Mudharabah	3	2.83%	0	0.00%	0	0.00%	0	0.00%
Istisna	9	8.49%	3	5.66%	1	2.78%	0	0.00%
Sukuk Al Wakalah	0	0.00%	0	0.00%	0	0.00%	0	0.00%
		25.47%		20.75%		11.11%		14.29%
<u>Not specified</u>	1	0.94%		0.00%		0.00%		0.00%
	121		40		24		13	

Table 4.2 presents the composition of Islamic debt type in the Malaysian limited firms. There was a significant drop in the debt-based type for the second issuance, and a slight fluctuation from the second issuance to the fourth issuance. Likewise, the asset-based type experienced a steep drop for the second issuance, and a slight fluctuation from the second issuance to the fourth issuance, meanwhile the equity-based type experienced a downward trend from the first to the fourth issuance.

In comparing public and limited Malaysian firms, an opposite trend can be seen for the debt-based types. The debt-based type for Malaysian public firms maintained an upward trend, and the debt-based type for Malaysian limited firms experienced a downward trend. The changes in the asset-based and the equity-based type for both firms were similar.

4.4 VARIABLES

This section describes the dependent variables and independent variables used in this study. This section is divided into three parts: section 4.4.1 explains the variables for panel data analysis, section 4.4.2 explains the variables for an event study analysis and section 4.4.3 explains the variables for the multivariate regression method for event study.

4.4.1 VARIABLES FOR PANEL DATA ANALYSIS

4.4.1.1 DEPENDENT VARIABLES

Firm value and firm financial performance are dependent variables. Tobin's Q is used as a firm value indicator and EVA, ROA, and ROE metrics are used as a firm financial performance indicator. Previous studies use a number of different

measures of the performance of firms. These measures include accounting based measures calculated from the financial statements of firms such as return on equity, return on assets, return on invested capital, gross margin, etc (Rajan & Zingales, 1995; Boyle & Eckhold, 1997; Wiwattanankantang, 1999; Booth, et al., 2001; Prasad, et al., 2001; Phillips & Sipahioglu, 2004; Mayer & Sussman, 2004; Deesomsak, et al., 2004; Dang, 2005; Rao, et al., 2007; Buferna, et al., 2008; De Jong, et al., 2008; Mira & Gracia, 2008; Seifert & Gonenc, 2008; Bahbra & Tirtiroglu, 2008; Kim & Berger, 2008; Mitton, 2008; Ni & Yu, 2008; Sen & Oruc, 2008; Abor a& Biekpe, 2009; Achy, 2009; Jasim, Hameeda Abo & Nadhem, 2009; Karadeniz, et al., 2009; Mihalca & Antal, 2009), market based measures such as stock returns and volatility (Dhankar & Boora, 1996), accounting and market measures: (Abor, 2007; Krishnan & Moyer, 2007; Zeitun & Tian, 2007; Salehi & Biglar, 2009), and other measures such as firm efficiency measures (Margaritis & Psillaki, 2007). This study proposes to use Tobin's Q to evaluate the firms' value, and EVA to measure financial firms' performance. In addition, other metrics such as return on assets will be included to support the robustness of the analysis.

Tobin's Q mixes market value with accounting value and is used to measure the firm's value in many studies (McConnel & Servaes, 1990; Himmelberg, 1999; Zeitun & Tian, 2007). Tobin's Q was developed by James Tobin (1969) as the ratio between the market value and replacement value of the same physical asset, or the ratio of the market value of a firm's assets as measured by the market value of its outstanding stock and debt, to the replacement cost of the firm's assets. Thus, when Tobin's Q is less than one, it means that the market value of the company is less than the total asset value, indicating that it is undervalued. Likewise, when it

is more than one, it indicates that the market value is higher than the total asset value and that the company might be overvalued.

Tobin's Q is a ratio between the market value of a firm's assets and the book value of the same assets. If Tobin's Q is greater than one, then the market value is greater than the book value of the assets recorded or otherwise. A company having Tobin's Q greater than one indicates that it has higher performance and a company having smaller than one indicates lower performance. However, for a particular industry such as the manufacturing industry, scoring less than one in Tobin's Q does not indicate that the company has low performance. Further, diversified firms have a lower Tobin's Q ratio compared to niche market firms, since the value of the firm's assets is penalised by the market (Lang & Stulz, 1993). In addition, Tobin's Q takes less consideration of the intellectual assets of the firm, for example goodwill, knowledge, technology and other intangible assets, and the Tobin's Q can be affected by the market hype and speculation. Therefore, Tobin's Q only partially represents the firm value (Jonathan & Bichler, 2009).

Tobin's Q has been extensively used by most of the researchers as an indicator of firm value, for different purposes; for example, corporate governance issues, investment and diversification decisions, managerial performance, tender offers, and many other related issues (Hermalin & Weisbach, 1991; Chung & Pruitt, 1994; Perfect & Wiles, 1994; Yermack, 1996; Agrawal & Knoeber, 1996; Kang & Stulz, 1996; Barnhart & Rosenstein, 1998; Bhagat & Black, 2000; Hossain et al, 2001; Loderer & Peyer, 2002; Keil & Nicholson, 2003; Panasian et al, 2003; Anderson & Reeb, 2004; Randoy & Jenssen, 2004; Chin et al, 2004; Choi et al, 2007; Chan

& Li, 2008; Reddy et al, 2008a; Vera & Ugedo, 2007). Using Tobin's Q, McConnell and Servaes (1990) study corporate governance in the context of the relationship between ownership equity and firm value. Blundell et.al (1992) study the importance of Tobin's Q in the process of investment decision, and find that Tobin's Q has a small effect but remains significant in investment decisions.

Tobin's Q also measures the managerial performance in the tender offer activities, and Lang, Stulz and Walking (1989) find that well-managed bidders benefit substantially from the tender offers of poorly managed targets. Further, Lang and Stulz (1994) examine the benefit of firm diversification on shareholders' wealth, and conclude that more diversified firms have lower Tobin's Q compared to specialised firms.

This study uses Tobin's Q because it has been widely considered as a firm value indicator as it reflects the real value of a firm assessed by the market. In this study, Tobin's Q is calculated as the market value of equity, plus the book value of long term liabilities, plus the book value of current liabilities, less current assets divided by total assets. Market value equity is the product of a firm's share price and the common stock outstanding. The formula of Tobin's Q is shown as follows (Reddy et al., 2010):

$$Tobin's\ Q = \frac{(Market\ Value\ of\ Equity + Book\ Value\ of\ Islamic\ Debt) + (Current\ Liabilities - Current\ Assets)}{Total\ Assets}$$

While economic value added (EVA) has been adopted by many firms as one of the indicators of a firm's performance, numerous studies have been conducted to test and compare the effectiveness of EVA, as the driver of shareholders wealth, to other firm performance metrics (Birchard, 1994; Dodd and Chen, 1996; Lehn and Makhija, 1996; Chen and Dodd, 1997-1998-2001; Kramer and Pushner, 1997). Furthermore, the financial performance measure EVA is widely regarded as the most useful measure to test firm performance since it not only measures net income but also the cost required to generate that income (Gapenski, 1996; Jeffrey, John, Todd & Anjan, 1997; O'Hanlon & Peasnell, 1998).

Studies of EVA provide two different propositions; the claim that EVA is the best measurement as opposed to the other accounting metrics has been challenged (O'Bryne, 1996; Grant, 1996). Similarly, some studies find no evidence to support the contention that EVA is the best measure of shareholder value added (Birchard, 1994; Dodd and Chen, 1996; Lehn and Makhija, 1996; Chen and Dodd, 1997; Chen and Dodd, 2001; Kramer and Pushner, 1997; Ismail, 2006). Even though EVA is not the best measurement compared to some others firm financial metrics, EVA still has information content in terms of value-relevance (Chen and Dodd, 1997; Chen and Dodd, 2001).

EVA is a measure of shareholder wealth and a measure of financial performance developed by Stern Stewart & Co. It is closely related to shareholder value analysis (SVA). It is used to evaluate a company's true profit, defined by Stern Stewart as the amount by which earnings exceed or fall short of the required minimum rate of return that shareholders and lenders could get by investing in

other investments. In other words, EVA is equivalent to after tax income that exceeds the required minimum return on capital. It is computed by deducting the cost of capital (both debt and equity) from the after tax profit, and it is tied to cash flow and not to earnings per share (EPS).

This study uses EVA because it measures the managerial effectiveness of the firm in maximising shareholders' wealth as it represents the residual income remaining after all costs have been paid, and it does not focus directly on the market values. In this study, EVA is calculated as the return on capital, less the weighted average cost of capital, multiply by the total capital (Birchard, 1994; Kramer and Pushner, 1997; Stern, Stewart, and Chew, 1995). The formula of EVA is given as follows:

$$EVA = \text{Return on Capital} - (WACC \times \text{Total Capital})$$

$$WACC = \text{Cost of Equity} + \text{Cost of Debt}$$

$$\text{Cost of Equity} = R_f + (R_m - R_f) \cdot \beta$$

$$\beta = \frac{\text{Cov}(R_i, R_m)}{\text{Var}(R_m)}$$

$$\text{Cost of Debt} = \frac{\text{Interest Expenses}}{\text{Long Term Debt}}$$

where cost of debt is similar to the company's interest expenses after adjusting for the tax deductibility of interest.

Other performance indicators are accounting performance, such as Return on Assets (ROA), and Return on Equity (ROE). The variation of the accounting performance used is aimed at providing a different valuation result according to their purpose. These metrics are included to support the robustness of the analysis (Rajan & Zingales, 1995; Boyle & Eckhold, 1997; Wiwattanankantang, 1999;

Booth, et al., 2001; Prasad, et al., 2001; Phillips & Sipahioglu, 2004; Mayer & Sussman, 2004; Deesomsak, et al., 2004; Dang, 2005; Rao, et al., 2007; Buferna, et al., 2008; De jong, et al., 2008; Mira & Gracia, 2008; Seifert & Gonenc, 2008; Bahbra & Tirtiroglu, 2008; Kim & Berger, 2008; Mitton, 2008; Ni & Yu, 2008; Sen & Oruc, 2008; Abor & Biekpe, 2009; Achy, 2009; Jasim, et al., 2009; Karadeniz, et al., 2009; Mihalca & Antal, 2009).

ROA is an indicator of how profitable a firm is relative to its total assets, and it measures the operating efficiency of the total business. ROA provides investors an idea of how effectively the firm management is at using its assets to generate earnings. However, ROA may vary substantially for public firms and is highly dependent on the industry. Higher ROA indicates an effective firm management in managing their assets to generate profits. In contrast, lower ROA indicates an inefficient firm management in achieving their profits' target.

ROE is an indicator of how profitable a firm is relative to its total equity, and it measures the operating efficiency in contributing to the owners' wealth. ROA and ROE are widely used in evaluating firm performance, however, this accounting based measure is criticised as being a historical firm performance. In this study, ROA is calculated as net income divided by total book value of assets. ROE is calculated as net income divided by total book value of equity (Demsetz & Villalonga, 2001; Finch & Shivadasani, 2006; Thomsen et al, 2006). The formula for ROA and ROE is given as follows:

$$ROA = \frac{\text{Net Income}}{\text{Book Value of Total Assets}}$$

$$ROE = \frac{\text{Net Income}}{\text{Book Value of Total Equity}}$$

Each of the performance indicators measures a different aspect of performance. Tobin's Q measures the value of a firm, and it is considered as a market reflection of the firm's activities and performances. EVA measures the financial success of the corporation in relation to shareholders' wealth. Likewise, ROE also measures the performance from the perspective of the equity holders; meanwhile ROA measures the asset productivity and operating profit margin. It is important to note that none of these measures truly reflect the complete picture by themselves but have to be seen in conjunction with other metrics.

4.4.1.2 EXPLANATORY VARIABLES

The study of leverage impact on firm value has become an important aspect of capital structure theory. Myers (1984) claims that the firm value depends on the debt ratio, similarly, many studies have focused on the impact of the debt level and the debt type on a firm's financial performance (Ebaid, 2009; Ghosh & Cai, 1999; Hatfield, Cheng & Davidson, 1994; Coleman, 2007; Talberg, Winge, Frydenberg & Westgaard, 2008). However, few recent studies investigate the impact of the Islamic debt type on a firm's value and financial performance. This study attempts to investigate the impact of Islamic debt on company value and a firm's financial performance. The proportion of the Islamic debt to non-Islamic debt, the proportion of Islamic debt, the frequency of Islamic debt issuance and the type of Islamic debt issued are used as independent variables.

The proportion of Islamic debt is calculated as the total Islamic debt divided by the total assets. The proportion of non-Islamic debt is calculated as the total of

non-Islamic debt divided by the total assets. The formula for the Islamic debt and non-Islamic debt proportion is provided as follow:

$$ID_{Proportion} = \frac{Islamic\ Debt}{Total\ Assets}$$

$$NID_{Proportion} = \frac{Non\ Islamic\ Debt}{Total\ Assets}$$

For the proportion of Islamic debt, the frequency of Islamic debt issued and the type of Islamic debt, dummy variables are employed. To avoid too many parameters and to find the unique least square estimates for the model, this study uses only n-1 dummy; therefore, the baseline is chosen for every set of the specifications. In addition, n-1 dummy may mitigate the problem of multicollinearity among the regressors (Baltagi, 2005). The choice of a baseline category is essentially arbitrary, for this study fits precisely with all regression models regardless of which category is selected for this role. The value and meaning of the individual dummy-variable coefficients δ_1 , δ_2 , ζ_1 , ζ_2 , η_1 and η_2 depend, however, on which category is chosen as the baseline.

The first group dummy is aimed at examining the effect of the Islamic debt proportion on each company, and three categories are set: first, a company having an Islamic debt proportion below the average of the Islamic debt proportion; second, a company having an average Islamic debt proportion; and third, a company having an Islamic debt proportion higher than the average of the Islamic debt proportion. The first category will be set as “1” if companies have a below average Islamic debt proportion; otherwise it is set equal to “0”. The second category will be set as “0” if companies have an average Islamic debt proportion. The third category will be set as “1” if companies have a higher than average

Islamic debt proportion; otherwise it is set equal to “0”. The baseline category is used for this dummy if the company has an average proportion Islamic debt. The average of the Islamic debt proportion is 8.06%, which is calculated by the total of the Islamic debt proportion over the total number of companies.

The second group dummy is aimed at examining the effect of the Islamic debt issuance frequency on each company, and three categories are set: first, a company issuing an Islamic debt only once; second, a company issuing an Islamic debt for the second time; and third, a company issuing an Islamic debt more than twice. The first category will be set as “0” if companies issue an Islamic debt only once. The second category will be set as “1” if companies issue an Islamic debt for the second time; otherwise it is set equal to “0”. The third category will be set as “1” if companies issue an Islamic debt more than twice; otherwise it is set equal to “0”. The baseline category is used for this dummy if the company issued Islamic debt for the first time.

The third group dummy is aimed at examining the effect of the Islamic debt type on each company, and three categories are set: first, a company issuing a debt-based type of Islamic debt; second, a company issuing an asset-based type of Islamic debt; and third, a company issuing an equity-based type of Islamic debt. The first category will be set as “0” if companies issue a debt-based type. The second category will be set as “1” if companies issue an asset-based type; otherwise it is set equal to “0”. The third category will be set as “0” if companies issue an equity-based type; otherwise it is set equal to “0”. The baseline category

is used for this dummy if the company issues an debt-based type of the Islamic debt.

Prior research suggests that the performance of each firm may differ according to their size, because larger firms have greater economies of scale in the transaction costs associated with long term debt, which may influence the results and inferences (Ramaswamy, 2001; Frank & Goyal, 2003; Coleman, 2007; Jermias, 2008; Ebaid, 2009). In addition, larger firms have less potential of bankruptcy cost; therefore, firm size should be positively related to the borrowing capacity (Krishnan & Moyer, 1997). This study uses a natural logarithm of the total assets as a proxy for firm size as the control variable (Naceur & Goaid, 2002; Akhtar, 2005; Zeitun & Tian, 2007; Talberg et al., 2008). The natural logarithm is applied for the firm size variable owing to the skewness and kurtosis problem. Further, natural logarithm ensures that the actual regressor has less statistical noise in the regression model, and moderates the effects of the large size of the firm. Table 4.3 provides a brief explanation for all research variables.

Table 4.3 Description of the research variables for panel data analysis

Variable	Acronym	Description
Dependent Variable: Tobin's Q	Tobin's Q (Y)	Value of the firm's assets as measured by the market value of equity, plus the book value of long term liabilities, plus the book value of current liabilities, less current assets divided by total assets. Market value equity is the product of a firm's share price and the common stock outstanding.
Economic Value Added	EVA (Y)	Economic value of the firm as it measures managerial effectiveness of the firm in maximising shareholders wealth. It represents the residual income remained after all cost have been paid, and does not focus directly on the market values. EVA is calculated as the return on capital, less the weighted average cost of capital, multiply by the total capital.
Return on Assets	ROA (Y)	An indicator of how profitable a firm is relative to its total assets, and it measures the operating efficiency of the total business. Measured by the net profit/total assets.
Return on Equity	ROE (Y)	An indicator of how profitable a firm is relative to its total equity, and it measures the operating efficiency in contributing the owners' wealth. Measured by the net profit/total equity.
Explanatory variables: The proportion of the Islamic debt to non-Islamic debt.	PROP ID- NID (X)	The proportion of Islamic debt is calculated as the total Islamic debt divided by the total assets/or total Islamic debt divided by the total Islamic debt plus total equity.
The proportion of Islamic debt.	PROP ID (K)	Three categories are set: the first category will be set as "1" if companies have a below average Islamic debt proportion; otherwise it is set equal to "0". The second category will be set as "0" if companies have an average Islamic debt proportion. The third category will be set as "1" if companies have a higher than average Islamic debt proportion; otherwise it is set equal to "0".
The frequency of Islamic debt issuance.	FREQ ID (N)	Three categories are set: the first category will be set as "0" if companies issue an Islamic debt for only once. The second category will be set as "1" if companies issue an Islamic debt for the second times; otherwise it is set equal to "0". The third category will be set as "0" if companies issue an Islamic debt more than twice; otherwise it is set equal to "0".
The type of Islamic debt issued.	TYPE ID (Z)	Three categories are set: the first category will be set as "0" if companies issue a debt-based type. The second category will be set as "1" if companies issue an asset-based type; otherwise it is set equal to "0". The third category will be set as "0" if companies issue an equity-based type; otherwise it is set equal to "0".

4.4.2 VARIABLES FOR EVENT STUDY ANALYSIS

There are two variables used for event study analysis, which are average abnormal return (AAR) and cumulative average abnormal return (CAAR). AAR is the average abnormal return across the firms while CAAR is the cumulative average abnormal return across the firms. Abnormal return is defined as the difference between the expected return and the actual return on investment. Abnormal return may be either positive or negative. Abnormal return is calculated using three abnormal return benchmarks, which are mean adjusted return, market adjusted return, and market model return.

4.4.3 VARIABLES FOR MULTIVARIATE REGRESSION METHOD (MVRM) FOR EVENT STUDY

4.4.3.1 DEPENDENT VARIABLES

The cumulative average abnormal return is dependent variable. This variable is calculated using two abnormal return benchmarks; namely, mean adjusted return and market model return.

4.4.3.2 EXPLANATORY VARIABLES

There are three equations of MVRM used in this study. Islamic debt frequency and Islamic debt type are used as dependent variables for the first equation. Islamic debt offerings size, Islamic debt maturity, debt to equity ratio and firm size are used as independent variables for the second equation. Firm performance (Tobin's Q, EVA, ROA and ROE) is used as the independent variable for the third equation. Table 4.4 provides a description of the research variables.

Table 4.4 Description of the research variables for multivariate regression for event study

Variable	Acronym	Description
Dependent Variable: Cumulative Average Abnormal Return	CAAR (Y)	The daily abnormal return across firms.
Explanatory variables: Islamic debt frequency	IDFREQ (X)	The frequency of the Islamic debt issuance.
Islamic debt type	IDTYPE (X)	The type of Islamic debt issued.
Islamic debt offerings size	IDOS (X)	The ratio of Islamic debt size offering divided by total asset for the period prior to the announcement.
Islamic debt maturity	IDMAT (X)	The Islamic debt maturity length.
Debt ratio	D/E (X)	The ratio of total debt to total asset for the period prior to the announcement date
Firm size	SIZE (X)	The logarithm of the total asset.
Firm performance	FP (X)	Firm performance (Tobin's Q, EVA, ROA, ROE).

4.5 MODEL SPECIFICATION

This section includes the models used to test the relationship between Islamic debt and firm value/firm performance. There are three sections of analysis: first, panel data analysis, second, event study analysis, and third, multivariate regression method analysis. The econometric tests discussed in this chapter included the dynamic panel GMM regression and the panel corrected standard error (PCSE) for panel data analysis. The panel data analysis is primarily directed toward investigating explanatory variables related to the performance of various dependent variables. Regression models for panel data are employed according to the diagnostic testing of the data. This will include normality test, heteroskedasticity test, and some other tests relating to the specification of the regression model.

An event study method is used to investigate whether the market reacts favourably to a firm issuing Islamic debt. Two situations will be considered: first, a company which issues an Islamic debt for the first time and, second, a company which issues Islamic debt more than once. This will provide evidence concerning whether the market reacts positively or negatively to the first issuance, and whether the market reacts favourably or unfavourably to on-going issues of sukuk. Last, the multivariate regression method is employed to examine whether the Islamic debt issuance has an impact on the abnormal return. This method is aimed at investigating some variables which determine the abnormal return. Figure 4.5, Figure 4.6 and Figure 4.7 provide schematic outlines of the data processing.

Figure 4.5 shows the process in determining the regression method employed for chapter five, which is panel data analysis. Figure 4.6 provides the process for event study analysis, which is chapter six. Figure 4.7 exhibits the process in determining the regression method employed for chapter seven, which is multivariate regression analysis for event study.

Figure 4.4: General process in specifying the final method

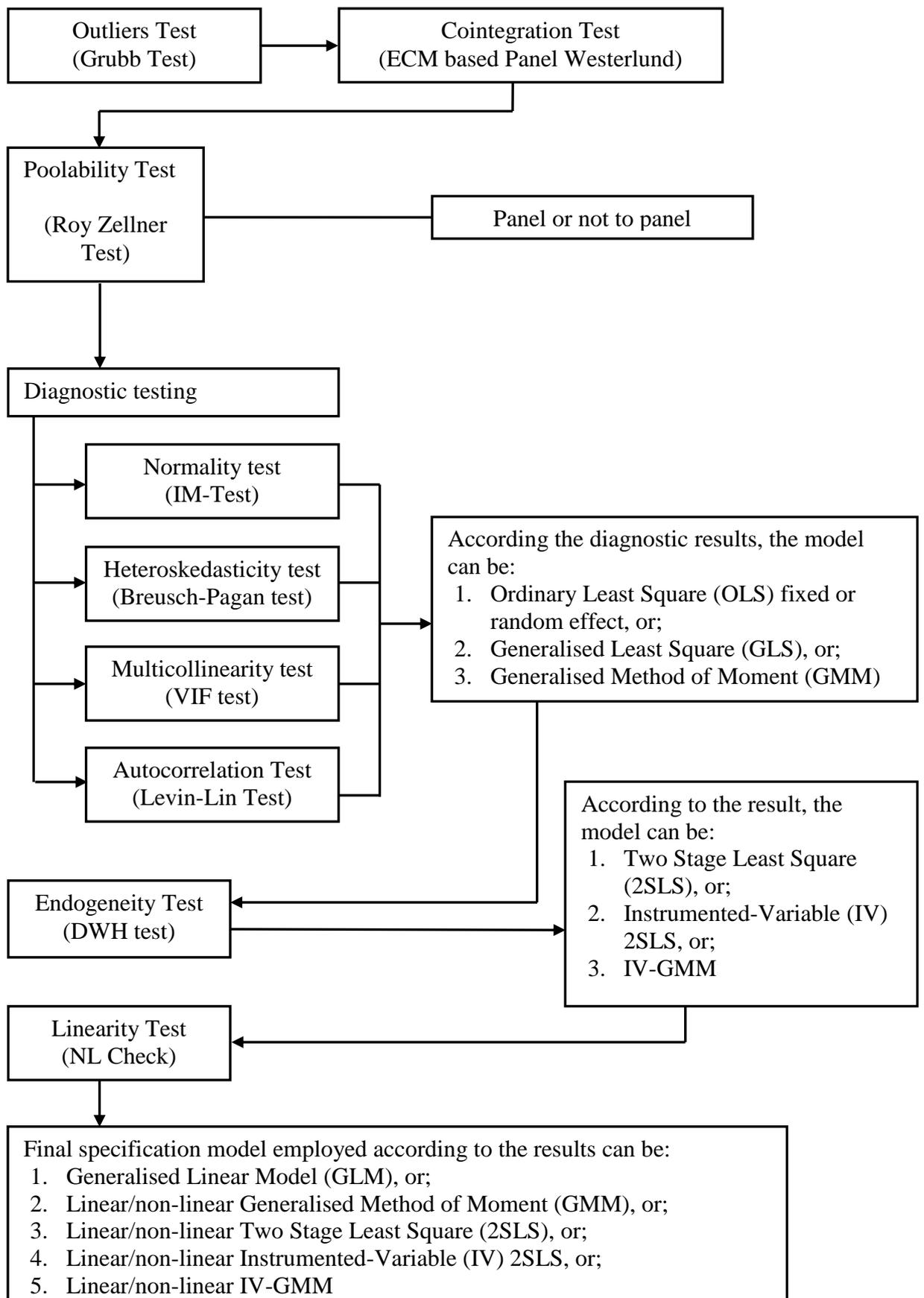


Figure 4.5: process in determining the regression method for panel data analysis

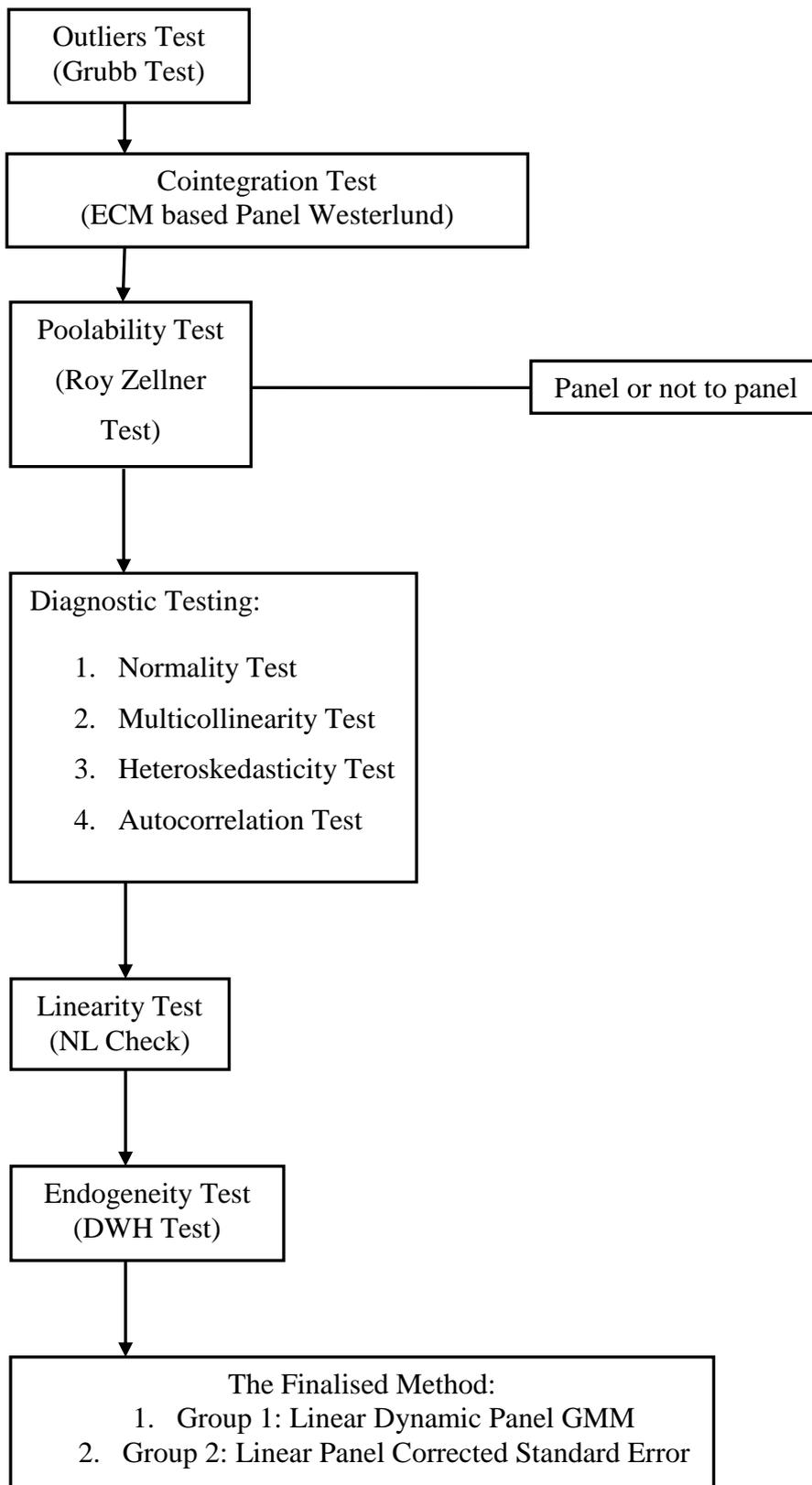


Figure 4.6: The process for event study analysis

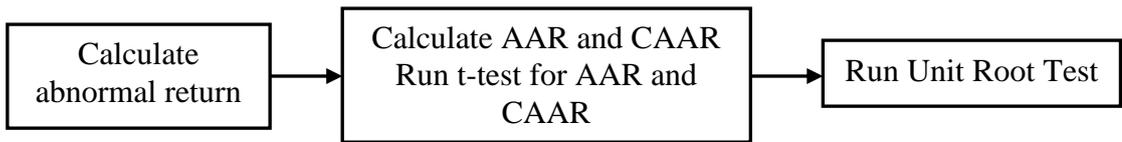
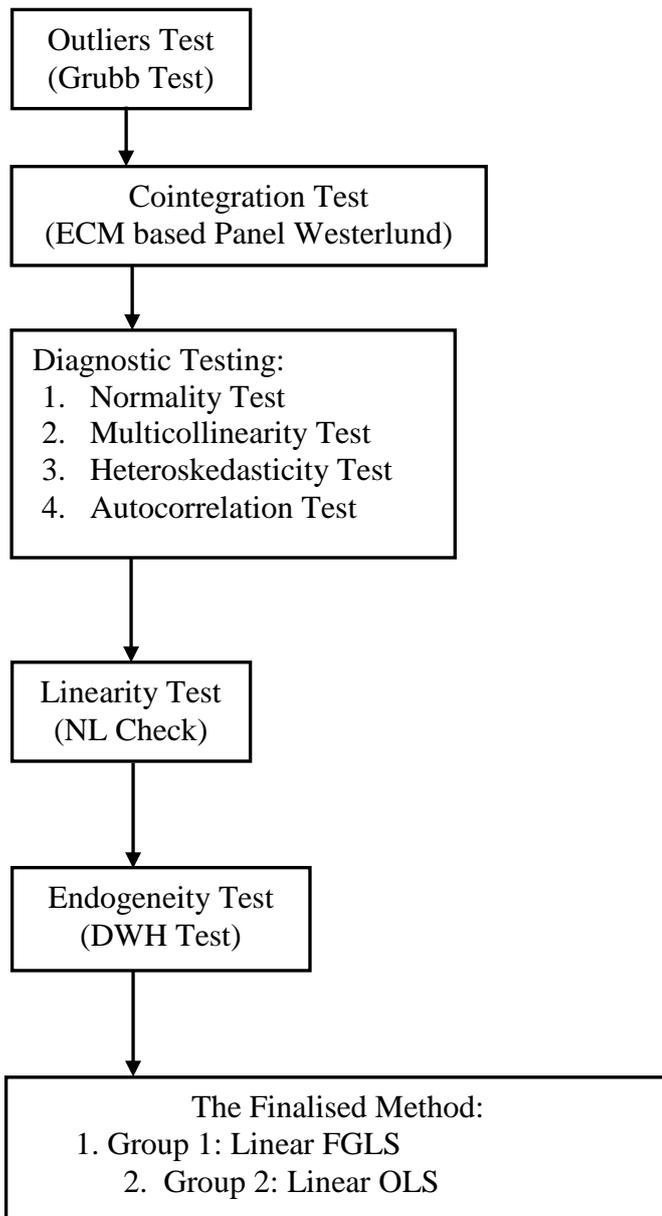


Figure 4.7: The process in determining the regression method for multivariate regression analysis for event study



4.5.1. PANEL DATA ANALYSIS

This study uses the panel data method which allows the unobservable heterogeneity for each observation in the sample to be eliminated and multicollinearity among variables to be alleviated. Unobservable heterogeneity might result in spurious correlations with the dependent variables, which would bias the coefficient obtained (Baltagi, 2005). However, test for poolability is necessary because the parameters of the prediction equation may vary across firms and observation years. To support the panel method of this study, there are some tests of the poolability, for example the Chow test, the ANCOVA test and the Roy-Zellner test. This study employed the Roy-Zellner test to confirm poolability in order to avoid type I error (rejecting the null hypothesis when it's true).

The Roy-Zellner poolability test result across firms and across time are 10.86 with *p-value* 0.9001 and 144.71 with *p-value* 0.000 respectively. Though the result across time can reject the null hypothesis, the result across firms cannot reject the null hypothesis of poolability, suggesting that the panel method is appropriate for this study.

Before proceeding to the model specification, diagnostic testing of normality, heteroskedasticity, multicollinearity, and autocorrelation, was conducted to determine the appropriate method used in this study. This step is necessary because the estimators in the regression model have to comply with the basic assumptions that estimators should be linear, unbiased and have minimum variance, and these basic assumptions are commonly referred to as the best linear unbiased estimator (BLUE) coefficients. Further, model misspecification can arise

when omitted variables, improper specification of a lag structure and misspecification of functional form exist; therefore, specification testing is important prior to model building.

Maddala and Lahiri (2009) specify problems that might be present in the regression model. First, normality is present when the regression model contains a non-normal distribution of error terms. Second, heteroskedasticity is present when the regression model exhibits unequal variance of each disturbance term (the individual dependent values are not spread around their mean values with the same variance). Third, multicollinearity is present when the regression model shows a high correlation among independent variables (their dependency resulting in high coefficient standard errors). Fourth, autocorrelation is present when the regression model contains a high correlation between the errors terms. Those problems lead to inefficiency of the least square estimators and biased estimates, which will invalidate the tests of significance (Maddala & Lahiri, 2009).

If heteroskedasticity is present on the dependent variable, the Ordinary Least Square (OLS) is no longer an efficient and unbiased estimator; therefore, the model that is robust to heteroskedasticity should be applied. White or a Breusch-Pagan test can be used to detect the heteroskedasticity. If the sample size is considerably large and errors exhibit autocorrelation, then feasible generalised least square (FGLS) is appropriate. Furthermore, Greenberg (2003) affirmed that the OLS with panel corrected errors provided more efficient estimation than the FGLS. Moreover, if the model exhibits autocorrelation, first differences

(Wooldridge, 2002) or GLS corrected for autoregressive moving average (Says, 1989) can be used.

If there is autocorrelation in the model, it is necessary to deal with it. The Durbin-Watson test is one of several tests which can be used to test residual autocorrelation. The Durbin-Watson test for first-order autocorrelation in the residuals was modified by Bhargava et al. to handle balanced panel data. Baltagi and Wu (1999) modified it further to handle unbalanced panel data.

Autocorrelation is inherent within the panel from one period to another. Some problems with dynamic panels that contain autocorrelation in the residuals are handled with a Prais-Winstone transformation and/or a Cochrane-Orcutt transformation that amounts to a first partial differencing to remove the bias from the autocorrelation and/or a weight-adjusted combination of the White and Newey-West estimator to handle both the heteroskedasticity and the autocorrelation in the model. Furthermore, Arellano, Bond and Bover developed one and two step general methods of moments (GMM) estimators for panel data analysis. GMM is usually robust to deviations of the underlying data generation process to violations of heteroskedasticity and normality; GMM are asymptotically normal but they are not always the most efficient estimators.

If no autocorrelation is assumed, then problems from the correlation of the lagged endogenous and the disturbance term may yield biased results particularly when the sample is finite or small. If one uses general methods of moments (GMM), with instrumental variables, the use of the proxy variables or instruments may

circumvent problems with correlations or errors. If the autocorrelation is prevalent in the random errors, an autoregressive error structure of the first order using two-stage generalised least square (2-stage GLS) procedure is appropriate.

When heteroskedasticity and autocorrelation are prevalent, GMM with a combination of White and Newey-West estimators is appropriate as it obtains robust panel standard errors. Moreover, GMM model tends to be robust with respect to non-normality.

The diagnostic testing reveals that the data present a heteroskedasticity problem; therefore, Generalised Least Square (GLS) method is appropriate to be used; however, to finalise the appropriate method employed in this study, the linearity and the endogeneity tests were conducted.

In practice, a linear functional form for dynamic panel data models is often assumed for convenience. However, the danger of inappropriate model specification is prevalent when inappropriate specification testing is not conducted properly, hence, it is important to first determine whether a panel model is linear before proceeding to a non-linear specification. Moreover, when the time dimension in the panel data is short, the linearity test result is likely to yield non-linearity, although the true relationship is linear. To test for linearity, Baltagi and Griffins (1997) applies the double-length artificial regression to test whether the panel model is linear or log-linear.

Linearity means that the amount of change or rate of change between scores on two variables are constant for the entire range of scores for the variables. If the relationship is nonlinear, the statistics which assume it is linear will underestimate the strength of the relationship, or fail to detect the existence of a relationship. The regression equation for each firm under an unrestricted model is:

$$y_i = Z_i\delta_i + u_i \quad i = 1, 2, \dots, N \quad (1)$$

where δ_i is different for every firm equation, and the hypothesis $H_0 : \delta_i = \delta$ for all i , hence the restricted model given in (1) as:

$$y_i = Z\delta + u \quad (2)$$

The linearity testing of the data is important as the characteristics of the data may affect the results and this study still has to confirm the linearity of the data characteristics because the dynamic debt effect should be consider as an important matter when affecting firm value. The linearity test result for group 1 is 2.905506 with *p-value* 0.0000, which rejects the null hypothesis of nonlinearity. Similar to the result for group 1, the linearity test result for group 2 is -4.659 with *p-value* 0.000, which supports the linear model.

Even though panel data method gives an important advantage – it can reveal whether a static or dynamic model is in fact appropriate – some of the unobserved determinants of capital structure and firm value are likely to change significantly over time. Therefore, specifying exogenous and endogenous variables in the explanatory variables are important as they will affect the estimations.

The endogeneity causes inconsistency of the OLS estimates and requires instrumental variable methods to obtain consistent parameter estimates. If the possible endogeneity of the variables exists, a Two-Stage Least Squares (2SLS) analysis using Instrumental Variables (IV) or Generalised Method of Moments (GMM) is more appropriate (Vera & Ugedo, 2007).

The endogeneity is primarily controlled for an analysis of omitted variables, measurement error, and an inverse causality, and, in case of doubt, checked with the Hausman test. The Hausman test is used to detect the endogeneity in the explanatory variables, and this test allows for verification of the presence of correlations between the unobservable heterogeneity and the explanatory variables (Cameron & Trivedi, 2010).

Agrawal & Knoeber (1996) address the endogeneity issue of debt and firm performance when they examined the mechanisms to control agency problems. They use a simultaneous equations system with equations for Tobin's Q and debt in which debt is allowed to depend on each other. Likewise, Dessi & Robertson (2003) and Maghyreh (2005) treat leverage as an endogenous variable in examining variables that are relevant for explaining capital structure. Further, profitability, firm size, and non-debt tax shield are some capital structure determinants; the high possibility that capital structure might have an inverse causality with profitability might be present, which would lead to the endogeneity problem.

In accord with numerous studies of capital structure determinants (Agrawal and Knoeber, 1996; Dessi & Robertson, 2003; Maghyereh, 2005; Coricelli, Driffield, Pal & Roland, 2011), this study assumes that the debt choice has an inverse causality with the firm's value and/or firm's financial performance, and the choice of debt might be affected by other factors. To confirm the endogeneity further, this study has employed endogeneity testing using the Durbin-Wu Hausman (DWH) testing.

Let $d = b_{IV} - b_{OLS}$ Then a test can be based on

$$H = d' \{E_{st.Asy.Var}[d]\}^{-1} d;$$

The Hausman test usually compares the coefficients of the endogenous variables, and if there is considerable difference between Ordinary Least Square (OLS) and IV estimation (IV, 2SLS, and GMM), then the model has to be instrumented using an appropriate technique. Such a technique is only valid under the condition that errors are independent and homoskedastic. However, in the presence of heteroskedasticity, the test of $H_0: \rho = 0$ can be implemented using robust variance estimates (Cameron & Trivedi, 2010).

The endogeneity tests result reveals that the regressors in the model present endogeneity. Anderson and Hsiao (1982) propose the instrumental variable (IV) technique to overcome the endogeneity by using the lagged instruments. Further, Antoniou, Guney and Paudyal, (2002) employ the lagged independent variable to address the endogeneity problem in their model.

This technique results in consistent estimations, therefore, the endogeneity model in this study uses lagged leverage (lagged independent variable) because capital structure is only one of the factors affecting the firm value, and it is assumed that firms change their capital structure over time and the changes might contribute to the firm value.

Supported by numerous previous studies, by the assumptions above, by the endogeneity tests and by the linearity tests, the Generalised Method of Moments is appropriate for group 1 as it corrects for heteroskedasticity, the endogeneity problems and reduces multicollinearity, hence improving the efficiency of the estimates. Meanwhile the appropriate regression model for group 2 is the panel corrected standard error (PCSE), because group 2 is imposed with only heteroskedasticity.

Before constructing the dynamic panel GMM model for group 1 and the PCSE for group 2, the equation below is a starting point for this study to establish if the debt choice has an impact on a firm's value and firm's financial performance. A model for the regression of Islamic debt, non-Islamic debt, the proportion of Islamic debt, the frequency of Islamic debt issuance, and the type of the Islamic debt issued is then:

$$y_{it} = \alpha + \beta_{i1}X_{i1} + \beta_{i2}X_{i2} + \delta_1K_{i1} + \delta_2K_{i2} + \zeta_1N_{i1} + \zeta_2N_{i2} + \eta_1Z_{i1} + \eta_2Z_{i2} + u_{it} \quad (3)$$

$$u_{it} = \mu_i + \lambda_t + v_{it} \quad (4)$$

$$i = 1, \dots, N; t = 1, \dots, T$$

where y_i is firm's value and/or firm's financial performance. X_{i1} is Islamic debt, X_{i2} is non-Islamic debt and , X_{i3} is firm size. K is the dummy proportion for Islamic debt, N is the dummy frequency for Islamic debt and Z is the dummy Islamic debt type. μ_i denotes the unobservable individual effect, λ_t denotes the unobservable time effect, and v_{it} is the remainder stochastic disturbance term. This model describes three parallel regression planes, which can differ in their intercepts. Hereafter, the X, K, N, Z will be referred as X_{it} (set of regressors):

$$y_{it} = \alpha_i + \beta' x_{it} + u_{it}, \quad i = 1, \dots, N \text{ and } t = 1, \dots, T \quad (5)$$

where x_{it} is a $K \times 1$ vector of regressors, β is a $K \times 1$ vector of parameters to be estimated, and α_i represents time-invariant individual nuisance parameters. Under the null hypothesis, u_{it} is assumed to be independent and identically distributed (i.i.d.) over periods and across cross-sectional units.

When using the Ordinary Least Squares (OLS) to estimate β , one assumes that x'_{it} is orthogonal with u_{it} of equation (1), but this may not be true, and thus the estimated β may be biased with endogeneity. Therefore, the instrumental variable (IV), denoted as z , approach may be used to solve the endogeneity; while the changes in the new IV are associated with changes in x but they do not lead to changes in y (except indirectly via x). Therefore, the equation which includes endogeneity is specified as follows (Cameron & Trivedi, 2010);

$$y_{1i} = y'_{2i}\beta_1 + x'_{1i}\beta_2 + \dots + x'_{ni}\beta_n + u_i, \quad i = 1, \dots, N \quad (6)$$

The intercepts for Islamic debt, Islamic debt proportion (low and medium proportion), Islamic debt issuance frequency (one and two issues), and Islamic debt type issued (debt-based and asset based type) are provided as follows:

$$y_i = (\alpha + \delta_1) + (\alpha + \delta_2) + (\alpha + \zeta_1) + (\alpha + \zeta_2) + (\alpha + \eta_1) + (\alpha + \eta_2) + \beta_{i1}X_{i1} + \beta_{i2}X_{i2} + \beta_{i3}X_{i3} + \varepsilon_1 \quad (7)$$

or, δ_1 represents the constant vertical distance between the regression for low Islamic debt proportion and high Islamic debt proportion (fixing the values of Islamic debt and non-Islamic debt); δ_2 represents the constant vertical difference between the parallel regression for average Islamic debt proportion and high Islamic debt proportion (fixing the values of Islamic debt and non-Islamic debt); ζ_1 represents the constant vertical difference between the parallel regression for one Islamic debt issue and more than two Islamic debt issues (fixing the values of Islamic debt and non-Islamic debt); ζ_2 represents the constant vertical difference between the parallel regression for two Islamic debt issues and more than two Islamic debt issues (fixing the values of Islamic debt and non-Islamic debt); η_1 represents the constant vertical difference between the parallel regression for the debt-based Islamic debt type and equity-based Islamic debt type (fixing the values of Islamic debt and non-Islamic debt); η_2 represents the constant vertical difference between the parallel regression for the asset-based Islamic debt type and equity-based Islamic debt type (fixing the values of Islamic debt and non-Islamic debt).

$$y_i = (\alpha + \delta_1) + \beta_{i1}X_{i1} + \beta_{i2}X_{i2} + \beta_{i3}X_{i3} + \varepsilon_1 \quad (7.1)$$

$$y_i = (\alpha + \delta_2) + \beta_{i1}X_{i1} + \beta_{i2}X_{i2} + \beta_{i3}X_{i3} + \varepsilon_1 \quad (7.2)$$

$$y_i = (\alpha + \zeta_1)\beta_{i1}X_{i1} + \beta_{i2}X_{i2} + \beta_{i3}X_{i3} + \varepsilon_1 \quad (7.3)$$

$$y_i = (\alpha + \zeta_2) + \beta_{i1}X_{i1} + \beta_{i2}X_{i2} + \beta_{i3}X_{i3} + \varepsilon_1 \quad (7.4)$$

$$y_i = (\alpha + \eta_1) + \beta_{i1}X_{i1} + \beta_{i2}X_{i2} + \beta_{i3}X_{i3} + \varepsilon_1 \quad (7.5)$$

$$y_i = (\alpha + \eta_2) + \beta_{i1}X_{i1} + \beta_{i2}X_{i2} + \beta_{i3}X_{i3} + \varepsilon_1 \quad (7.6)$$

The coefficient α , therefore gives the intercept for non-Islamic debt, Islamic debt proportion (high proportion), Islamic debt issuance frequency (more than two issues), and Islamic debt type issued (equity-based type):

$$y_i = \alpha + \beta_{i1}X_{i1} + \beta_{i2}X_{i2} + \beta_{i3}X_{i3} + \varepsilon_1 \quad (8)$$

Because non-Islamic debt, Islamic debt proportion (average proportion), Islamic debt issuance frequency (first issuance), and Islamic debt type issued (debt-based type) are coded 0 for all dummy regressors, therefore non-Islamic debt, Islamic debt proportion (average proportion), Islamic debt issuance frequency (first issuance), and Islamic debt type issued (debt-based type) serve as the baseline category to which the other regressors are compared.

The GMM was first introduced by Holtz-Eakin et al. (1988) and further developed by Arellano and Bond (1991), who claimed that GMM deploys additional instruments obtained by utilising the orthogonality conditions that exists between the disturbances and the lagged values of the dependent variable. Furthermore, Hansen (1982) explains that one can find a GMM estimator of the true parameter by finding the element of the parameter space which sets linear combination of the sample cross products as close to zero as possible. Thus, the advantage of GMM stems from the fact that it optimally exploits all the linear moment restrictions specified by the model. Further, the dynamic panel data model is examined in extensively by Kiviet (1995), Hahn and Kuersteiner (2002), and Alvarez and Arellano (2003) in their study.

The GMM equation model (Blundell & Bond, 1998) is specified as follows (Cameron & Trivedi, 2010):

$$y_{it} - y_{it-1} = (\alpha - 1)y_{it-1} + \beta'X_{it} + \eta_i + \varepsilon_{it}$$

Where y_{it} is the Tobin's Q at time t for firm i, X_{it} is a set of regressors, η_i is an unobserved firm-specific effect and ε_{it} is a stochastic error. Moving to the right y_{it-1} , it is to obtain;

$$y_{it} = \alpha y_{it-1} + \beta'X_{it} + \eta_i + \varepsilon_{it}$$

Taking first difference, one can elide the unobserved firm-specific effect;

$$y_{it} - y_{it-1} = \alpha(y_{it-1} - y_{it-2}) + \beta'(X_{it} - X_{it-1}) + (\varepsilon_{it} - \varepsilon_{it-1})$$

where X includes lag performance for explanatory variables, y_{it-1} as well as dependent variables. The first-differencing eliminates potential bias that arises from unobservable heterogeneity. After first-differencing, GMM estimation uses lagged values as instruments for $X_{it} - X_{it-1}$:

Supposing that the regressors are predetermined, it is possible to obtain consistent estimates of coefficients performing a GMM estimator that exploits the following orthogonality conditions;

$$E[y_{it-s}(\varepsilon_{it} - \varepsilon_{it-1})] = 0 \text{ for } s \geq 2 \text{ and } t = 3, \dots, T$$

$$E[X_{it-s}(\varepsilon_{it} - \varepsilon_{it-1})] = 0 \text{ for } s \geq 2 \text{ and } t = 3, \dots, T$$

Then, the instrumental variable estimation in the first difference model is:

$$\Delta y_{it} = \gamma_1 \Delta y_{it-1} + \dots + \gamma_p \Delta y_{it-p} + \Delta X'_{it} \beta + \Delta \varepsilon_{it}, \quad t = p + 1, \dots, T$$

where Δ is the first difference operator. The first difference in equations and levels using their past levels/first differences are used for the instrumented variables.

There are some drawbacks of GMM: first-differencing may increase the signal to noise ratio and reduce the power of the test (Beck et al., 2000); weak instruments of the variables in levels for first-differenced equations (Arrelano & Bover, 1995); higher chance to be imposed of measurement errors in the dependent variable due to first-differencing (Griliches & Hausman, 1986).

Further, a test of overidentifying restrictions is necessary to test the validity of overidentifying instruments in an overidentified model to identify that the parameters of the model are estimated using optimal GMM. This test is called Hansen's test, and the null hypothesis is that all instruments are valid. At last, weak instruments testing is done to identify whether the instrument is weak, and the overidentified model is used because the model has only one endogenous regressor that is overidentified (Cameron & Trivedi, 2010; p. 191-199).

It is typically assumed that disturbances in panel data models are cross-sectionally independent, particularly for panels with large cross-section dimension (N). However, testing for cross-sectional dependence is important in fitting panel-data models particularly for a short dynamic panel-data model, where the number of observation is considerably high or infinite with fixed length of time or finite (De Hoyos & Saradivis, 2006).

This study uses fixed N and sufficiently large T , and the cross correlations of the errors can be tested statistically either using the Lagrange multiplier (Breusch & Pagan, 1980) or the seemingly unrelated regression equation (Zellner, 1962). Further, Jensen and Schmidt (2011) compare the cross-section dependence test of

the Pesaran test (2004), the Schott test (2005) and the Liu-Lin-Shao test (2008). They find that the Schott test is superior when controlling for panel-specific and time-specific fixed effects (with few time periods and relatively many cross-sectional units).

Under the alternative, u_{it} may be correlated across cross sections, but the assumption of no serial correlation remains.

$$H_0: \rho_{ij} = \rho_{ji} = \text{cor}(u_{it}u_{jt}) = 0 \quad \text{for } i \neq j$$

$$H_1: \rho_{ij} = \rho_{ji} \neq 0 \quad \text{for some } i \neq j$$

Where ρ_{ij} is the product-moment correlation coefficient of the disturbances and is given by:

$$\rho_{ij} = \rho_{ji} = \frac{\sum_{t=1}^T u_{it}u_{jt}}{(\sum_{t=1}^T u_{it}^2)^{1/2}(\sum_{t=1}^T u_{jt}^2)^{1/2}}$$

The number of possible pairings $u_{it}u_{jt}$ rises with N.

Finally, the same specification testing is also employed for group 2 to determine the appropriate regression method such as poolability test, normality test, heteroskedasticity test, multicollinearity test, autocorrelation test, linearity test and endogeneity test. The Roy-Zellner poolability test across firms and across time for group 2 reject the null hypothesis. However, a rejection of the null hypothesis does not imply that the data from different factors cannot be pooled for estimation. This is supported by Liu, Tung and Pong (2006), as they affirmed that the hypothesis of equality for intercepts and slopes is not the correct hypothesis for poolability across design factors.

The heteroskedasticity result for group 2 is 12.5800 with *p-value* 0.9605, suggesting no heteroskedasticity problem. The skewness and kurtosis are 8.1500 with *p-value* 0.2270 and 1.9300 with *p-value* 0.1652, suggesting that group 2 exhibits normal distribution. The multicollinearity result is 2.34 with *p-value* 0.000, suggesting no multicollinearity problem. The endogeneity tests result reveals that the regressors in the model present no endogeneity. The linearity test result for group 2 is -4.659 with *p-value* 0.000, which supports the linear model.

As a result of the specification tests results obtained for group 2, panel corrected standard errors (PCSE) is employed. PCSE allows heteroskedasticity and allows the error u_{it} in the model to be correlated over i .

4.5.2. EVENT STUDY ANALYSIS AND UNIT ROOT TEST

Event study analysis relates to the information uncertainty in the market. When the market absorbs particular information, it will reflect in the firm value which is indicated by the stock price movement. Earning announcement, stock splits announcement, and mergers and acquisitions announcements are examples of that particular information affecting the stock price.

Event study analysis was first introduced by James Doley (1933), and it examined the impact of stock split on the stock price. In his study, Doley finds a significant difference in the stock price movement in which the price increased in 57 of the cases and declined in only 26 of the cases. Further, a series of research in the event study field has been continuously conducted since its initial momentum

until 1960, and John H. Myers (1948), C. Austin Barker (1956) and John Ashlery (1962) are examples of researchers using event study (MacKinlay, 1997).

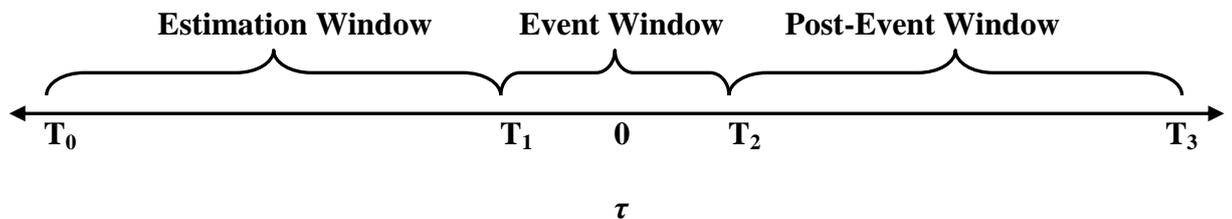
However, event study has been popular since the seminal work of Ball & Brown (1968) and Fama, Fisher, Jensen & Roll (1969), in which they introduced the methodology of the event study that has been employed by most researchers until now. Ball and Brown (1968) examine the impact of earning announcements, and Fama et al. (1969) examine the impact of stock split on the stock price, using 29 months before the split was announced to 30 months after as the event period, and the abnormal return was calculated using the market model. The result reveals that the stock price quickly adjusted to the split announcement, and no investors should gain abnormal return from the split announcement.

This study uses event study methodology to examine whether the market reacts favourably to a firm announcing an issue of Islamic debt. Even though Brown and Warner (1985) reveal a series of problems with daily returns– non-normality of the returns, non-synchronous trading affects the reliability of the Ordinary Least Square (OLS) estimates, autocorrelation in daily excess returns, and variance increases on the days around an event – a daily stock return is used in this study because it can capture the effect of the announcement date surrounding the event date. Further, daily returns are more powerful than those using monthly returns (Peterson, 1989).

Typically, the estimation window is about 250 days for daily data, however, there is discretion to determine the estimation window, and it may depend on the

characteristics and circumstances (Thomson, 1995). Therefore, this study uses 120 days estimation window, 31 days event window, and 120 days post-estimation window. The aim of 120 days estimation window is to capture the signalling effect of the Islamic debt issuance before the event window. The reason for using 15 days before the event date as the event window is because the securities commission will grant its approval for Islamic debt (sukuk) proposal issuance within 14 working days as mentioned in the Malaysian Securities Commission Guidelines, 2009. Figure 4.8 presents the estimation window.

Figure 4.8: Estimation Window



$\tau = 0$ as the event date

$\tau = T_1 + 1$ to T_2 as the event window

$\tau = T_0 + 1$ to T_1 as the estimation window

$\tau = T_2 + 1$ to T_3 as the post-estimation window

The estimation period is the period of time over which no event has occurred, and is used to establish how the return should behave normally in the absence of the event. There is no set standard for the number of periods to include in the estimation period; one can set a longer estimation window to capture the relationship between the stock and the market, but it should be noted that longer estimation window may cause a spurious correlation between the stock and the market.

The event window is the number of trading days preceding and following the event date that are considered necessary to capture both the leakage and the time needed for the information to be absorbed by the market. The length of the event window is a matter of judgement for the researcher, and it is preferable to have the least number of days possible for the event window because multiple events within an event window may occur and affect the significance of the result.

Brown and Warner (1985) use 244 days as the estimation window and 11 days as the event window; 5 days before and 5 days after the event date. Eckbo and Weir (1989) use 200 days as the estimation window, and 31 days as the event window; 20 days before and 10 days after the event date. Furthermore, Johnson (1995) uses 150 days estimation window, 21 days event window, and 170 days post-event window to examine the effect of straight debt announcement issues. Johnson uses a post-event window to capture the change of the market model parameters due to the effect of the leverage changes caused by a debt issue.

Moreover, Castillo (2004) uses 180 days as the estimation window, and 21 days as the event window; 10 days before and 10 days after the event date, to examine the announcement effect of bond and equity issues. In addition, Asshari et al. (2009) use 120 days as the estimation window and 61 days as the event window; 30 days before and 30 days after the event date, and divide the estimation window into two groups; period 1 (3 months before the event window or 4 months before the event date), and period 2 (2 months before the event window or 3 months before the event date). Such researchers investigate the announcement effect of debt and equity issues. However, in the value effects study of regulatory regime,

the event window is shorter, ranging from 1 to 3 days (Forbes, 1994; Oxera, 2006; Arnold & Parker, 2007). Therefore, the length of the event window depends on the event investigated.

According to Brown and Warner (1980), different abnormal return benchmarks used in the event studies give less benefit and may worsen the result. Moreover, there is no difference among the alternative estimators with regard to their ability to detect abnormal performance in the absence of event-time clustering (Peterson, 1989). In addition, Binder (1998) discusses Chandra, Moriarty and Willinger's work (1990) in which they re-examine Brown and Warner results (1980). Chandra et al. imply that the mean adjusted returns and market adjusted returns have an equal power as the market and risk adjusted returns in estimating parameters, however, Binder affirms that the mean adjusted returns is less powerful than the market adjusted returns and the market and risk adjusted returns in estimating parameters.

According to Castillo (2004), who examined the impact of bond and equity announcement, the market corrected model and the market model minimise the variance of the abnormal return by removing the portion of the returns related to the market movements, hence, this widens the possibility to detect the event effect. Therefore, the abnormal return benchmarks that are the mean adjusted return and the market model are employed in this study.

The mean adjusted return model is one of the simplest models of abnormal returns that yields similar results compared to other sophisticated models in the short term

interval and general market movement is not allowed (Brown & Warner, 1985).

The mean adjusted return is formulated as (Peterson, 1989; MacKinlay, 1997; Binder 1998):

$$A_{it} = R_{it} - \bar{R}_i$$

This method is the simplest method because only one parameter is estimated, and return market is not required. The risk of the mean adjusted returns on the market portfolio is uncontrollable during the event period, and its estimators have considerably greater variance than the market model disturbances (Binder, 1998).

The market adjusted returns is the difference between return on stock and return on market. This method may be appropriate especially when the stocks have betas close to one. This method allows for general market movement but assumes each firm has the same average return and risk characteristics as a whole. The market adjusted return is formulated as (Brown & Warner, 1985; Peterson, 1989; Binder, 1998);

$$A_{it} = R_{it} - R_{mt}$$

Where R_{it} and R_{mt} are the period t returns on security i and the market portfolio, this method only requires the return market.

The market model represents a potential improvement over the constant mean return model by removing the portion of the return that is related to the return on the market portfolio. Hence, the return generated by the security is dependent on that generated by the market portfolio and the degree to which the security responds as evaluated by beta. Typically, security returns are linearly related to

market returns through stock betas. Stock betas are estimated over firm estimation periods. This method considers market trends and the firm's risk characteristics, and risk-adjusted returns may vary across securities and over time. The market model is potentially superior as it removes the portion of the return that is related to movement in the market, hence the variance of any abnormal returns detected should be reduced. The market model is formulated as follows (Peterson, 1989; Shyam-Sunder, 1991; MacKinlay, 1997; Binder, 1998; Martel & Padron, 2006; Ibrahim & Minai, 2009; Ashhari, Chun & Nassir, 2009; Modirzadehbami and Mansourfar, 2011);

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}$$

$$E(\varepsilon_{it}) = 0 \quad \text{Var}(\varepsilon_{it}) = \sigma_{\varepsilon_i}^2$$

where R_{it} and R_{mt} are the period t returns on security i and the market portfolio, ε_{it} is the zero mean disturbance term. $\alpha_i, \beta_i, \sigma_{\varepsilon_i}^2$ are the parameters of the market model. This method controls for the risk (beta) of the stock and the movement of the return market during the period estimated. The benefit of using the market model will depend on the R^2 regression; the higher R^2 , the greater is the reduction in the variance of abnormal returns, which increases the power to detect the abnormal performance. This method simply pertains to the running of an Ordinary Least Square (OLS) regression on a time series to formulate daily expected returns, and from these, abnormal returns and cumulative abnormal returns. However, in the presence of thin trading in a particular share, the market model will produce outputs that bias expected returns downwards and therefore bias the resulting abnormal returns upwards, generating in exaggerated results.

According to Blume (1975), the estimated beta deriving from the historical data is biased, and it may affect the empirical results. Therefore, the estimated beta has to be adjusted to avoid biasness, and the adjustment of beta is important since it will be used to forecast the future beta for a security in which it will be used to estimate its market risk. Furthermore, the beta changes overtime as the uncertainty arises in the value of the expected return which can result in biasness, therefore several time periods are used to measure the beta. If the true beta follows a linear trend, it can be easily shown that the estimated beta is unbiased so that the results are more accurate. In addition, Blume's method is generally appropriate for any conditions arising in the market.

A linear regression is a common method used in the beta estimation, Harvey, Lins and Roper (2004) estimate the beta using returns from 120 trading days prior to the announcement date and excluding the 21 days of the event window, and the adjusted beta is calculated using Blume's method to acquire unbiased beta for the forecast period, therefore the results are more accurate. The linear regression for beta is:

$$\beta_{i2} = a + b\beta_{i1} + \varepsilon_{i2} \quad (9)$$

Where β_{i1} is the beta of security i in time period 1, β_{i2} is the beta of security i in time period 2 and ε_{i2} is the error term. The formula 1 is used to calculate the beta in time period 2. The beta in time period 2 (first 60 days prior to announcement, excluding the 31 days event window), are regressed on the corresponding beta in the time period 1 (second part of 60 days). The regression coefficient a and b is

utilised in the following equation to obtain the ex-ante betas in time period 3, β_{i3} (event window), by using the ex-post betas (β_{i2}) in time period 2 as:

$$\beta_{i3} = a + b\beta_{i2} + \varepsilon_{i3} \quad (10)$$

The β_{i3} obtained is used to forecast the corresponding “true” betas in time period 3 (three).

Non-synchronous trading is a problem in a daily return, as mentioned by Brown and Warner (1985). If non-synchronous trading is an issue, then the market model parameter can be calculated using the estimators derived by Scholes and Williams (1977) (Binder, 1998).

Table 4.5 presents the list of the return benchmark used by researchers from 1983 to 2010. The market model, the calendar time approach (Three-Factor Model), the size/industry control firm, the size/book to market portfolio, and the event time approach (Buy and hold abnormal return) are the common benchmarks used to measure the abnormal return, although of these, the market model is the most frequent benchmark used to measure the abnormal return. This study uses market adjusted returns to calculate abnormal returns. Mean adjusted return is used to support the robustness of the analysis.

Table 4.5: Return benchmark

Year	Author(s)	Return Benchmark
1983	Bjerring, Lakonishok and Vermaelen	Market Model Event time portfolio method
1984	Dann and Mikkelson	Market Model
1986	Eckbo	Market Model
1986	Mikkelson and Partch	Market Model
1989	Bernard and Thomas	Market Model
1991	Ritter	Market Index Size/Industry control firm Size Portfolio
1991	Shyam and Sunder	Market Model
1992	Agrawal, Jaffe and Mandelker	Size Portfolio
1995	Ikkenberry, Lakonishok and Vermaelen	Market Index Size Portfolio Size and Book to market portfolio
1995	Loughran and Ritter	Market Index Size control firm Calender time approach (Three-Factor Model)\
1995	Spiess and Affleck	Market Index Size Portfolio Size/Industry control firm Size/Book to market control firm
1995	Michaely, Thaler and Womack	Market Index Size Portfolio Size/industry portfolio
1996	Desai and Jain	Size Portfolio Book to market portfolio
1996	Huffman and Ward	Market Model
1996	Womack	Size Portfolio Calender time approach (Three-Factor Model)\
1997	Best	Market Model
1998	Howton, Howton and Perfect	Market Model
1998	Roon and Veld	Market Model
1999	Abhyankar and Dunning	Market Model
2000	Megginson, Nash, Netter and Schwartz	Event time approach (BHAR)
2004	Castillo	Market portfolio (market corrected model) Market Model
2004	Zhang	Calender time approach (Three-Factor Model)\
2009	Asshari, Chun and Nassir	Market Model
2009	Dutta and Jog	Event time approach (BHAR) Calender time approach (Three-Factor Model)\
2010	Ameer and Othman	Market Model
2010	Duca, Dutordoir, Veld and Verwijmeren	Market Model

Source: Compiled from sources

The abnormal returns in the sample firms are aggregated to draw overall inferences for a specific event, and the aggregation is calculated through time and across securities. The aggregation of the cross-sectional distribution of returns at the time of an event is intended to examine whether the distribution is abnormal or whether the mean abnormal return at the time t is equal to zero (equation 1). The independence assumption for the abnormal returns in the cross-section may fail to be met due to the event-time clustering (Collins & Dent, 1984; Bernard, 1987; Petersen, 2005). This would bias the standard deviation estimated, and to address the bias, the significance of the event-period average abnormal return is often gauged using the variability of the time series of event portfolio returns in the period preceding or after the event date (event portfolio return).

The standard deviation of the portfolio returns can be used to assess the significance of the event-window average abnormal return. The cross-sectional dependence is accounted for because the variability of the portfolio returns through time incorporates whatever cross-dependence exists among the returns on individual event securities. Due to the uncertainty factor, the use of historical or post-event time-series variability might understate the true variability of the event-period abnormal performance because the event might have been triggered by uncertainty-increasing factors and/or the event itself causes uncertainty in the economic environment for the firm, thus the variance is estimated using the variability of returns during the event and non-event periods (Collins & Dent, 1984; Brown & Warner, 1985). Further, abnormal returns may vary cross-sectionally because the economic effect of the event differs by firm. Events are

endogenous, reflecting a firm's self-selection to choose the event, which in turn reflects insiders' information.

The aggregation of the time series distribution of returns at the time length of an event is intended to examine whether mean abnormal returns for periods around the event are equal to zero (equation 2 or 3). In estimating the performance measure over any multi-period interval (e.g., time 0 through +10), there are a number of methods for time-series aggregation over the period of interest. The cumulative average residual method (CAR) uses as the abnormal performance measure the sum of each month's average abnormal performance. The cumulative abnormal return (CAR) is to accommodate a multiple period event window.

$$AR_t = \frac{1}{N} \sum_{i=1}^N e_{it} \quad (1)$$

$$CAR_i = AR_{i,t1} + \dots + AR_{i,t2} \quad (2)$$

$$CAR_i(\tau_1, \tau_2) = \sum_{\tau=\tau_1}^{\tau_2} AR_{i\tau} \quad (3)$$

Under the null hypothesis, H_0 , that the event has no impact on the behaviour of returns (mean or variance) in observation length of the event window (MacKinlay, 1997):

$$AR_{i\tau} \sim N(0, \sigma_i^2(AR_{i\tau})) \quad (4)$$

The variance of CAR_i is:

$$\sigma_i^2(\tau_1, \tau_2) = (\tau_2 - \tau_1 + 1) \sigma_{\varepsilon_i}^2 \quad (5)$$

The distribution of the CAR under H_0 is no abnormal return, then:

$$CAR_i(\tau_1, \tau_2) \sim N(0, \sigma_i^2(\tau_1, \tau_2)) \quad (6)$$

The aggregation is calculated through time and across securities

$$AAR_t = AR_{i,t1} + \dots + AR_{i,t2} \quad (7)$$

$$AAR_t = \frac{1}{N} \sum_{i=1}^N AR_i \quad (8)$$

$$CAAR_t = \sum_{t=t1}^{t2} AAR_t \quad (9)$$

The variance of $CAAR_i$ is:

$$\sigma_i^2(\tau_1, \tau_2) = (\tau_2 - \tau_1 + 1) \sigma_{\varepsilon_i}^2 \quad (10)$$

The distribution of the $CAAR$ under H_0 is no abnormal return, then:

$$CAAR_i(\tau_1, \tau_2) \sim N(0, \sigma_i^2(\tau_1, \tau_2)) \quad (11)$$

A test statistic is typically computed and compared to its assumed distribution under the null hypothesis that mean abnormal performance equals zero. The null hypothesis is rejected if the test statistic exceeds a critical value, typically corresponding to the 5% or 1% tail region (i.e., the test level or size of the test is 0.05 or 0.01). The test statistic is a random variable because abnormal returns are measured with error. Two factors contribute to this error. First, predictions about securities' unconditional expected returns are imprecise. Second, individual firms' realised returns at the time of an event are affected for reasons unrelated to the event, and this component of the abnormal return does not average to literally zero in the cross-section. For the CAR shown in equation (2 or 3), a standard test statistic is the CAR divided by an estimate of its standard deviation.⁵ Many alternative ways to estimate this standard deviation have been examined in the literature (MacKinlay, 1997). The test statistic is given by:

$$\frac{CAR(t_1 t_2)}{[\sigma^2(t_1 t_2)]^{1/2}} \quad (12)$$

$$\text{Where, } \sigma^2(t_1 t_2) = L\sigma^2(AR_t) \quad (13)$$

The test statistic in equation 12 provides the variance of one-period mean abnormal return and equation 13 assumes time-series independence of one-period mean abnormal return. $\sigma^2(AR_t)$ is the variance of the one-period mean abnormal return.

After testing the power of AAR and CAAR, this study tested for randomness to examine whether the price movements are predictable or not. There are a few methods that can be used to test randomness, such as run test, variance ratio test, autocorrelation test, unit root test, and autoregressive conditional heteroskedasticity (ARCH) test. This study employed the unit root test. The early and pioneering work on testing for a unit root test in time series was done by Dickey and Fuller (1979). The basic objective of the test is to test whether the series is random. This test is employed to support the event study analysis, therefore a broader insight can be provided.

4.5.3. MULTIVARIATE REGRESSION MODEL FOR EVENT STUDY

A Multivariate Regression Model (MVRM) methodology was first introduced by Gibbons, (1980) and is used to measure the effect of new information on asset prices. Binder (1985, 1998) uses MVRM applying Fama et al (1969)'s method to measure abnormal return, and outlines the advantage of the MVRM method over other event study methodologies. According to Modigliani & Miller (1963) and Masulis (1983), an increase in financial leverage has a positive effect on stock prices.

The MVRM methodology begins by parameterising the abnormal returns γ_{ia} in the individual return equations (Binder, 1985, 1998):

$$\tilde{R}_{it} = \alpha_i + \beta_i \tilde{R}_{mt} + \sum_{a=1}^A \gamma_{ia} D_{at} + \tilde{u}_{it} \quad (1)$$

Using dummy variables D_{at} if there are A announcements about the event, each D_{at} equals one during the period of a th announcement and otherwise. When the explanatory variables in the return generating process are the same for each of the N stocks the system of return equations:

$$\begin{aligned} \tilde{R}_{1t} &= \alpha_1 + \beta_1 \tilde{R}_{mt} + \sum_{a=1}^A \gamma_{1a} D_{at} + \tilde{u}_{1t} \\ \tilde{R}_{2t} &= \alpha_2 + \beta_2 \tilde{R}_{mt} + \sum_{a=1}^A \gamma_{2a} D_{at} + \tilde{u}_{2t} \\ &\vdots \\ \tilde{R}_{Nt} &= \alpha_N + \beta_N \tilde{R}_{mt} + \sum_{a=1}^A \gamma_{Na} D_{at} + \tilde{u}_{Nt} \end{aligned} \quad (2)$$

After testing the MVRM for each firm, this study applies joint hypothesis testing for all firms and all announcements, and then the portfolio return equation is:

$$\tilde{R}_{pt} = \alpha_p + \beta_p \tilde{R}_{mt} + \sum_{a=1}^A \gamma_{pa} D_{at} + \tilde{u}_{pt} \quad (3)$$

To investigate the impact of Islamic debt offering (equation 1), the Islamic debt characteristics (equation 2) and firm performance (equation 3) on the CAAR, a multivariate regression model (MVRM) is employed. Hence, the MVRM formula for each part is as follows:

$$CAAR(-t, +t) = \alpha + \beta_1 IDFREQ + \beta_2 IDTYPE + \varepsilon \quad (1)$$

$$CAAR(-t, +t) = \alpha + \beta_1 IDOS + \beta_2 IDMAT + \beta_3 D/E + \beta_4 SIZE + \varepsilon \quad (2)$$

$$CAAR(-t, +t) = \alpha + \beta_1 FP + \varepsilon \quad (3)$$

where:

CAAR_{t,+t} : the cumulative average abnormal return at time -1 to +1, -3 to +3, -5 to +5, -10 to +10, -15 to +15.

IDFREQ : the frequency of Islamic debt issuance.

IDTYPE : the type of Islamic debt issued.

IDOS : the ratio of Islamic debt size offering divided by total asset for the period prior to the announcement.

IDMAT : the Islamic debt maturity length.

D/E : the ratio of total debt to total asset for the period prior to the announcement date.

SIZE : the logarithm of the total asset.

FP : firm performance (Tobin's Q, EVA, ROA and ROE)

Before proceeding to the model specification, diagnostic testing of normality, heteroskedasticity, multicollinearity, and autocorrelation, was conducted to determine the appropriate method used in this study. This step is necessary because the estimators in the regression model have to comply with the basic assumptions that estimators should be linear, unbiased and have minimum variance, and these basic assumptions are commonly referred to as the best linear unbiased estimator (BLUE) coefficients.

For group 1, there is a heteroskedasticity problem in equations, as the p-value is lower than the level of significance range from 1% to 5% significance level. Therefore, the regression method used for all equations has to encounter this problem. For skewness and kurtosis, the value for all equations is greater than 10% level of significance, suggesting that all the equations have a normal distribution. The value for multicollinearity is less than ten, suggesting no multicollinearity among the independent variables. The value of linearity for all equations is greater

than 10% level of significance. Thus, the null hypothesis of linearity cannot be rejected and all the equations have linear functions. At last, there is no endogeneity problem found in all equations model (the results for all specification testing can be seen in Chapter seven Table 7.1). Therefore, the regression method employed for group 1 is Feasible Generalised Least Square (FGLS) regression. As mentioned previously, if the sample size is considerably large and errors exhibit autocorrelation, then feasible generalised least square (FGLS) is appropriate. Furthermore, Greenberg (2003) affirmed that the OLS with panel corrected errors provided more efficient estimation than the FGLS. Moreover, if the model exhibits autocorrelation, first differences (Wooldridge, 2002) or GLS corrected for autoregressive moving average (Says, 1989) can be used.

For group 2, there is no heteroskedasticity problem in all equations, as the p-value is greater than the level of significance range from 10% level of significance. For skewness and kurtosis, the value for all equations is greater than 10% level of significance, suggesting that all the equations have a normal distribution. The value for multicollinearity is less than ten, suggesting no multicollinearity among the independent variables. The value of linearity for all equations is greater than 10% level of significance. Thus, the null hypothesis of linearity cannot be rejected, and all the equations have linear functions. At last, there is no endogeneity problem found in all equations model (the results for all specification testing can be seen in Chapter seven Table 7.2). Therefore, the regression method employed for group 2 is Ordinary Least Square (OLS) regression.

4.6 SUMMARY

This chapter describes the research framework for this thesis and presents a conceptual model for the empirical analysis. The sample and data used in this study are presented. Variables are also defined and a summary of variables are given. It explores the research methods used for data analysis to test the hypotheses. As this thesis contains three chapters of analysis, in which each chapter employs a different method, three sections of model specification are provided.

Diagnostic testing, dynamic panel GMM and PCSE are described for panel data analysis. Abnormal returns, t-test for AAR, t-test for CAAR and unit root are described for event study analysis. Finally, for multivariate regression model for event study, the specification testing, GLS regression and OLS regression are also presented.

Chapter 5 provides the empirical results for the relationship between the debt choice and financial performance according to the method used and discussed in this chapter.

CHAPTER 5: THE IMPACT OF ISLAMIC DEBT ON FIRM VALUE AND/OR FIRM FINANCIAL PERFORMANCE

5.0 INTRODUCTION

This chapter presents the empirical results of the relationship between the debt choices and financial performance of firms in Malaysia and Indonesia. A panel data analysis is employed, and specific panel regression models are employed according to specification testing results. Henceforth, Malaysia is referred to as group 1 and Indonesia is referred to as group 2. These two groups are tested separately to determine the most appropriate method, and according to the specification testing results, a linear dynamic panel GMM is employed for group 1 and a linear panel corrected standard errors is employed for group 2. The specification testing used is described in chapter four including the name for each test. This chapter has five sections; first, a specification testing; second, a description of the sample; third, a pairwise correlation; fourth, the discussions of the results; five, a brief conclusion of the results.

5.1 SPECIFICATION TESTING RESULTS

As mentioned in chapter four, the specification testing is employed for group 1 and group 2. The specification testing results are shown in Table 5.1 for group 1 and group 2, while the endogeneity testing results are provided in a separate table due to the different dependent variables used for each equation. The endogeneity test results for group 1 and group 2 are provided in Table 5.2 and Table 5.3.

For group 1, the results for the Roy-Zellner poolability test, across firms and across time, are 10.86 with *p-value* 0.9001 and 144.71 with *p-value* 0.000 respectively. Though the result across time can reject the null hypothesis, however, the result across firms cannot reject the null hypothesis of poolability, suggesting that the panel method is appropriate for group 1 according to cross section testing. In contrast to the result for group 1, the results for the Roy-Zellner poolability test, across firms and across time for group 2, can reject the null hypothesis which suggest not to panel. However, a rejection of the null hypothesis does not imply that the data from different factors cannot be pooled for estimation. This notion is supported by Liu, Tung and Pong (2006), as they affirmed that the hypothesis of equality for intercepts and slopes is not the correct hypothesis for poolability across design factors.

The heteroskedasticity result for group 1 is 462.99 with *p-value* 0.0000, suggesting that group 1 exhibits a heteroskedasticity problem. Therefore, this problem needs to be catered to obtain efficient and unbiased results. In contrast, the heteroskedasticity result for group 2 is 12.5800 with *p-value* 0.9605, suggesting no heteroskedasticity problem imposed.

The skewness and kurtosis results for group 1 are 45.72 with *p-value* 0.000 and 4.25 with *p-value* 0.0392, suggesting that group 1 exhibits non-normal distribution, thus this non-normal distribution has to be treated. Therefore, outliers' checking is conducted prior to data analysing. In contrast, the skewness and kurtosis results for group 2 are 8.1500 with *p-value* 0.2270 and 1.9300 with *p-value* 0.1652, suggesting that group 2 exhibits a normal distribution.

The multicollinearity result for group 1 is 10.9100 with *p-value* 0.000, suggesting no multicollinearity problem among the explanatory variables. Similar to the multicollinearity result for group 1, the multicollinearity result for group 2 is 2.34 with *p-value* 0.000, which suggests no multicollinearity problem posed.

Before proceeding to the endogeneity test and linearity test results, a brief conclusion made for group 1 is that heteroskedasticity and non-normality problems have to be treated. Meanwhile no other treatment is employed for group 2.

Table 5.2 and Table 5.3 present the Durbin-Wu-Hausman Test results for group 1 and group 2. Anderson and Hsiao (1982) propose the instrumental variable (IV) technique to overcome the endogeneity by using the lagged instruments. Further, Antoniou, Guney and Paudyal, (2002) employ lagged independent variables to address the endogeneity problem in their model. This technique reveals consistent estimations, hence, lagged leverage (lagged independent variable) is used as the instrument to test the endogeneity in this study. The reason is mainly because capital structure is only one of the factors affecting the firm value, and it is assumed that firms change their capital structure over time, and the changes might contribute to the firm value. The endogeneity test result for group 1 reveals that the regressors in the model present endogeneity. In contrast to the group 1 result, the endogeneity test for group 2 reveals no endogeneity in the model. In particular, the form of endogeneity in group 1 is non-Islamic debt for Tobin's Q, ROE, and EVA; meanwhile, the form of endogeneity for ROA is Islamic debt.

Table 5.1: Summary of the specification testing results

Tests	Group 1	p-value	Group 2	p-value
Poolability across time	144.71***	0.0000	-	-
Poolability across firms	10.8600	0.9001	-	-
Heteroskedasticity	462.99***	0.0000	12.5800	0.9605
Skewness	45.72***	0.0000	8.1500	0.2270
Kurtosis	4.25***	0.0392	1.9300	0.1652
Multicollinearity	10.91***	0.0000	2.34***	0.0000
Linearity	2.9055***	0.0000	-4.659***	0.0000
Endogeneity	Endogeneity exist		No endogeneity exist	

*** Sig. at 1% significance level, **Sig. at 5% significance level, *Sig. at 10% significance level

Table 5.2: The DWH test for endogeneity of regressors group 1

Variables	Tobin's Q	ROA	ROE	EVA
Islamic Debt Proportion	0.0820 (0.7745)	6.9848*** (0.0083)	0.0035 (0.9526)	0.2473 (0.6190)
Non-Islamic Debt Proportion	37.4723*** (0.0000)	0.0036 (0.9523)	14.2038*** (0.0002)	4.0904** (0.0432)

*** Sig. at 1% significance level, **Sig. at 5% significance level, *Sig. at 10% significance level. Probability value is in parentheses

Table 5.3: The DWH test for endogeneity of regressors group 2

Variables	Tobin's Q	ROA	ROE
Islamic Debt Proportion	0.5916 (0.4421)	0.0234 (0.8783)	0.0003 (0.9857)
Non-Islamic Debt Proportion	0.0135 (0.9074)	0.0037 (0.9517)	0.0033 (0.9540)

*** Sig. at 1% significance level, **Sig. at 5% significance level, *Sig. at 10% significance level. Probability value is in parentheses

The linearity test result for group 1 is 2.905506 with *p-value* 0.0000, which rejects the null hypothesis of nonlinearity. This suggests that the model for group 1 is a linear model. Similar to the result for group 1, the linearity test result for group 2 is -4.659 with *p-value* 0.000, supporting the linear model.

In conclusion, according to specification testing results, a linear dynamic panel GMM is employed for group 1, and a linear panel corrected standard errors is employed for group 2.

5.2 DESCRIPTIVE STATISTICS

There are two groups of sample used in this study. Ten years of financial data, which is quarterly data, is used. The sample used for group 1 consists of 80 listed firms issuing Islamic debt for the period of 2000 to 2009. Therefore, there are approximately 3,200 observations used for group 1. The sample used for group 2 consists of 14 listed firms issuing Islamic debt for the period of 2000 to 2009. Therefore, there are approximately 560 observations used for group 2.

Table 5.4 and Table 5.5 provide the descriptive statistics for group 1 and group 2 used in this study. The table depicts the number of observations, mean, standard deviation, minimum and maximum value of each variable. The dependent variables are Tobin's Q, ROA, ROE and EVA for group 1, while the dependent variables are Tobin's Q, ROA and ROE for group 2, and each of these dependent variables is regressed toward its explanatory variables. This study divides all explanatory variables into four categories. The first category is the debt structure used by the firm. The second category is the frequency of Islamic debt issuance. The third category is the Islamic debt proportion issued. The fourth category is the Islamic debt type issued. Firm size and year of Islamic debt issued are used as control variables.

Table 5.4: Descriptive statistics group 1

Variables	Obs.	Mean	Std. Dev.	Min	Max
Dependent variables					
Tobin's Q	80	0.1679	0.2129	-1.6600	1.9938
ROA	80	0.0925	0.0004	0.0100	0.1526
ROE	80	0.0156	0.0352	0.0021	0.2292
EVA	80	0.3948	0.5871	-0.3946	3.0791
Explanatory variables					
The debt structure of the firm					
Islamic Debt Proportion	80	0.0806	0.0847	0.0102	0.4576
Non-Islamic Debt Proportion	80	0.2174	0.1725	0.0598	0.8732
The frequency of Islamic debt issuance					
First Issuance	80	0.0000	0.0000	0.0000	0.0000
Second Issuance	80	0.1316	0.3381	0.0000	1.0000
More Than two Issuance	80	0.4211	0.4938	0.0000	1.0000
The proportion of Islamic debt issued					
Islamic Debt Below Average	80	0.8813	0.3235	0.0000	1.0000
Islamic Debt Average	80	0.0000	0.0000	0.0000	0.0000
Islamic Debt Above Average	80	0.1164	0.3208	0.0000	1.0000
The type of Islamic debt issued					
Debt Type of Islamic Debt	80	0.0000	0.0000	0.0000	0.0000
Asset Type of Islamic Debt	80	0.1053	0.3069	0.0000	1.0000
Equity Type of Islamic Debt	80	0.1316	0.3381	0.0000	1.0000
Control Variables					
Size effect					
Firm Size	80	6.0388	0.7254	4.6032	8.4924
Year effect					
Year 2001	80	0.0119	0.1081	0.0000	1.0000
Year 2003	80	0.0625	0.2440	0.0000	1.0000
Year 2004	80	0.1563	0.3660	0.0000	1.0000
Year 2005	80	0.3438	0.4787	0.0000	1.0000
Year 2006	80	0.1719	0.3803	0.0000	1.0000
Year 2007	80	0.1406	0.3504	0.0000	1.0000
Year 2008	80	0.0938	0.2938	0.0000	1.0000
Year 2009	80	0.0313	0.1754	0.0000	1.0000

For group 1:

- 1) **Tobin's Q:** The mean value for Tobin's Q is 0.1679 with a range of -1.6600 to 1.9938, suggesting that most of the firms experienced low firm performance based on the market measure. A low Tobin's Q may indicate that the stock is undervalued. Theoretically, stock being undervalued is likely

to happen in a firm which has a stable earning history, a historically consistent return on equity and a higher earnings growth rate compared to the market average. Apparently, this seems to be consistent with the sample used for this group, in which the majority of firms are large firms (see point 17 below; the mean value of firm size, which suggests that most of the firms are big firms).

- 2) **ROA:** The mean value for ROA is 0.0925 with a range of 0.0100 to 0.1526. Though the mean value of ROA is considerably small, this positive value indicates that the firms in the sample create shareholder value over the sampling period. This positive value also indicates an effective utilisation of firm assets in generating an operating surplus in the business. This lower value of ROA may indicate that the firms are asset-intensive firms. If so, they thus require more money to be invested into the business to continue generating earnings. According to a common rule, ROA below 5% indicates asset-heavy firms (for example; manufacturing, railroads, telecommunication providers, car manufacturers, etc); meanwhile ROA above 20% indicates asset-light firms (for example, agency firms, software firms, advertising firms, etc). The ROA is approximately 9% which may indicate that the majority of the firms used in the sample are asset-heavy firms, and represent a variety of sectors. These are a few examples of the firms used in the sample: Esso Malaysia is one of the biggest fuel providers in Malaysia, Hubline is one of the biggest shipping service providers, Kinsteel is one of the largest steel millers, Kuala Kepong is the largest rubber plantation and manufacturer, and Zecon is a construction, infrastructure, toll concession and property development.

- 3) **ROE:** The mean value for ROE is 0.0156 with a range of 0.0021 to 0.2292, suggesting that most of the firms experienced low firm performance based on accounting measures. However, the positive value indicates that the firms in the sample create shareholder value and operating efficiency is positively translated into benefits to the owners. Furthermore, the lower value of ROE may indicate that the majority of the firms require more capital invested as discussed in point two, where it is noted that the majority of the firms are asset-heavy firms. Therefore, the lower value of ROE does not mean that they have lower performance. Moreover, those asset-heavy firms have less competition as the entry barrier is high. This can be said to be one of the competitive advantages of these firms.
- 4) **EVA:** The mean value for EVA is 0.3948 with a range of -0.3946 to 3.0791, suggesting that most of the firms experienced low firm performance based on economic value measure. EVA tells corporate managers and investors if the value of a business has been created or destroyed. Since EVA is greater than zero, it indicates that the project will add value for shareholders. This metric is appropriate as the majority of the firms in the sample are asset-heavy firms.
- 5) **Islamic debt proportion:** The mean value for Islamic debt proportion is 0.0806 with a range of 0.0102 to 0.4576, indicating that most of the firms issued small amounts of Islamic debt. This may be due to the fact that this Islamic debt is traded in the thin trading, moreover, some of the Islamic debt type certificates cannot be traded in the stock exchange due to its Islamic law issue.
- 6) **Non-Islamic debt proportion:** The mean value for non-Islamic debt proportion is 0.2174 with a range of 0.0598 to 0.8732, indicating that most of

the firms are not highly leveraged. This also suggests that the majority of the firms are less risky since excessive debt can lead to greater interest payments and principal repayment burden.

- 7) **The first issuance:** First issuance is used as a baseline category for the frequency of Islamic debt issuance, and it takes the value of zero.
- 8) **The second issuance:** The mean value for the second issuance of Islamic debt is 0.1316 with a range of 0.0000 to 1.0000, suggesting that only 13.16% of the firms issued Islamic debt for the second time.
- 9) **More than two issuance:** The mean value for more than two issuance is 0.4211 with a range of 0.0000 to 1.0000, suggesting that most of the firms issued Islamic debt more than twice.
- 10) **Islamic debt below average:** The average of the Islamic debt proportion is 8.06%, which is calculated by the total of the Islamic debt proportion over the total firms in the sample, and thus, this 8.06% average value is used as the average category. The mean value for Islamic debt below average is 0.8831 with a range of 0.0000 to 1.000, suggesting that most of the firms issued Islamic debt no greater than 10% (below the average).
- 11) **Islamic debt average:** Islamic debt average is used as a baseline category for the proportion of Islamic debt issued and it takes the value of zero.
- 12) **Islamic debt above average:** The mean value of Islamic debt above average is 0.1164 with a range of 0.0000 to 1.0000, suggesting that only a few firms issued Islamic debt greater than the average. This may be due to the fact that excessive debt issued might increase the probability of default. Therefore, the issuers have to assess the trade-off between the Islamic debt and any other potential risks arising as a result of this debt.

- 13) **Debt type of Islamic debt:** Debt type is used as a baseline category for the Islamic debt type and it takes the value of zero.
- 14) **Asset type of Islamic debt:** The mean value for asset type of Islamic debt is 0.1053 with a range of 0.0000 to 1.0000, suggesting that only 10.53% of the firms in the sample issued this type of Islamic debt.
- 15) **Equity type of Islamic debt:** The mean value for the equity type of Islamic debt is 0.1316 with a range of 0.0000 to 1.0000, suggesting that only 13.16% of the firms in the sample issued this type of Islamic debt.
- 16) **Firm size effect:** The mean value for firm size is 6.0388 with a range of 4.6032 to 8.4924, suggesting that most of the firms are big firms (see explanation on point two).
- 17) **Year effect:** During the sampling period 2000 to 2009, Islamic debt is only issued during these eight years – 2001, 2003 to 2009. Islamic debt is mostly issued in 2005 which accounted for 34.38%. The mean value for 2001, 2003, 2004, 2005, 2006, 2007, 2008 and 2009 are 1.19%, 6.25%, 15.63%, 34.38%, 17.19%, 14.06%, 9.38% and 3.13% respectively from the total sample.

Table 5.5: Descriptive statistics group 2

Variables	Obs.	Mean	Std. Dev	Min	Max
Dependent variables					
Tobin's Q	14	1.5192	1.7874	-0.2489	25.5134
ROA	14	0.0300	0.4244	-7.6563	0.1031
ROE	14	0.0320	0.0634	-0.0030	0.1489
Explanatory variables					
The debt structure of the firm					
Islamic Debt Proportion	14	0.0085	0.0062	0.0010	0.0312
Non-Islamic Debt Proportion	14	0.3205	0.1726	0.2895	0.9115
The frequency of Islamic debt issuance					
First Issuance	14	0.0000	0.0000	0.0000	0.0000
Second Issuance	14	0.0714	0.2578	0.0000	1.0000
The proportion of Islamic debt issued					
Islamic Debt Below Average	14	0.8679	0.3389	0.0000	1.0000
Islamic Debt Average	14	0.0000	0.0000	0.0000	0.0000
Islamic Debt Above Average	14	0.1321	0.3389	0.0000	1.0000
The type of Islamic debt issued					
Asset Type of Islamic Debt	14	0.0000	0.0000	0.0000	0.0000
Equity Type of Islamic Debt	14	0.2857	0.4522	0.0000	1.0000
Control Variables					
Size effect					
Firm Size	14	6.2201	0.5072	4.9997	7.6766
Year effect					
Year 2003	14	0.0714	0.2673	0.0000	1.0000
Year 2004	14	0.2857	0.4688	0.0000	1.0000
Year 2005	14	0.1429	0.3631	0.0000	1.0000
Year 2007	14	0.0714	0.2673	0.0000	1.0000
Year 2008	14	0.2857	0.4688	0.0000	1.0000
Year 2009	14	0.1429	0.3631	0.0000	1.0000

For group 2

- 1) **Tobin's Q:** The mean value for Tobin's Q is 1.5192 with a range of -0.2489 to 25.5134, suggesting that most of the firms experienced low firm performance based on the market measure. A low Tobin's Q may indicate that the stock is undervalued. According to theory, undervalued of stock is most probably happened to a firm which has a stable earning history, a historically consistent return on equity and a higher earnings growth rate compared to the market average. Apparently, this seems to be consistent with

the sample used for this group, in which the majority of firms are large firms (see point 14 below; the mean value of firm size, which suggests that most of the firms are big firms).

- 2) **ROA:** The mean value for ROA is 0.0300 with a range of -7.6563 to 0.1031, suggesting that most of the firms experienced low firm performance based on accounting measures. Though the mean value of ROA is considerably small, this positive value indicates that the firms in the sample create shareholder value over the sampling period. This positive value also indicates an effective utilisation of firm assets in generating an operating surplus in the business. This lower value of ROA may indicate that the firms are asset-intensive firms. If so, they require more money to be invested into the business to continue generating earnings. According to a common rule, ROA below 5% indicates asset-heavy firms (for example; manufacturing, railroads, telecommunication providers, car manufacturers, etc); meanwhile ROA above 20% indicates asset-light firms (for example; agency firms, software firms, advertising firms, etc). The ROA is approximately 3% which may indicate that the majority of the firms used in the sample are asset-heavy firms, and represent a variety of sectors. These are a few examples of the firms used in the sample: Bakrie is one of the largest group firms which has some subdivision such as coal, agribusiness, oil and gas, metal, infrastructure, telecommunication and property; Berlian Laju Tanker is one of Indonesia's largest oil and gas shipping firms, Apexindo is one of Indonesia's largest oil, gas and geothermal drilling firms, Mayora Indah is one of the largest sellers of various food products, HITS is an international shipping company, Adhi

Karya is a major Indonesian state-owned enterprise (BUMN) engaged in construction services, including roads, buildings, bridges, etc.

- 3) **ROE:** The mean value for ROE is 0.0320 with a range of -0.0030 to 0.1489, suggesting that most of the firms experienced low firm performance based on accounting measures. However, the positive value indicates that the firms in the sample create shareholder value and operating efficiency is positively translated into benefits to the owners. The lower value of ROE may indicate that the majority of the firms require more capital invested as discussed in point two that the majority of the firms are asset-heavy firms. Therefore, the lower value of ROE does not mean that they have lower performance. Moreover, those asset-heavy firms have less competition as the entry barrier is high, a competitive advantage held by these firms (see a few example of the firms used as sample).
- 4) **Islamic debt proportion:** The mean value for Islamic debt proportion is 0.0085 with a range of 0.0100 to 0.0312, indicating that most of the firms issued small amounts of Islamic debt. This may be due to the fact that this Islamic debt is traded in the thin trading, moreover, Islamic debt is considered a new instrument in Indonesia, therefore, greater amounts issued may affect the investors' perspective on the current performance of the firm.
- 5) **Non-Islamic debt proportion:** The mean value for non-Islamic debt proportion is 0.3205 with a range of 0.2895 to 0.9115, indicating that most of the firms are not highly leveraged. This also suggests that the majority of the firms are less risky since excessive debt can lead to greater interest payments and principal repayment burden.

- 6) **The first issuance:** First issuance is used as a baseline category for the frequency of Islamic debt issuance, and it takes the value of zero.
- 7) **The second issuance:** The mean value for the second issuance of Islamic debt is 0.0714 with a range of 0.0000 to 1.0000, suggesting that only 7.14% of the firms issued Islamic debt for the second time.
- 8) **Islamic debt below average:** The average of the Islamic debt proportion is 0.85%, which is calculated by the total of the Islamic debt proportion over the total companies, and thus this average value is used as the average category. The mean value for Islamic debt below average is 0.8679 with a range of 0.0000 to 1.000, suggesting that most of the firms issued Islamic debt no greater than 0.85% or no greater than the average.
- 9) **Islamic debt average:** Islamic debt average is used as a baseline category for the proportion of Islamic debt issued, and it takes the value of zero.
- 10) **Islamic debt above average:** The mean value of Islamic debt above average is 0.1321 with a range of 0.0000 to 1.0000, suggesting that only few firms issued Islamic debt greater than the average. This may indicate that only 13.12% of the sample issued Islamic debt greater than the average (0.85%).
- 11) **Asset type of Islamic debt:** Asset type is used as a baseline category for the Islamic debt type, and it takes the value of zero.
- 12) **Equity type of Islamic debt:** The mean value for the equity type of Islamic debt is 0.2857 with a range of 0.0000 to 1.0000, suggesting that the majority of the firms in the sample are issued asset type.
- 13) **Firm size effect:** The mean value for firm size is 6.2201 with a range of 4.9997 to 7.6766, suggesting that most of the firms are big firms (see the explanation in point two)

14) **Year effect:** During the sampling period 2000 to 2009, Islamic debt is only issued during these six years: 2003 to 2005 and 2007 to 2009. Islamic debt is mostly issued in 2004 and 2008 which accounted for 28.57% for each year. The mean value for 2003, 2004, 2005, 2007, 2008 and 2009 are 7.14%, 28.57%, 14.29%, 7.14%, 28.57% and 14.29% respectively from the total sample.

5.3 PAIRWISE CORRELATION OF THE EXPLANATORY VARIABLES

A pairwise correlation matrix of the explanatory variables for group 1 and group 2 is provided in Table 5.6 and Table 5.7. The highest correlation for group 1 is between the Islamic debt proportion and Tobin's Q, which counts for 0.4379 (*p-value* 0.0000) and this value is significant. The second highest correlation is between the proportion of Islamic debt and the Islamic debt above average, which counts for 0.5979 (*p-value* 0.0000). The third highest correlation is between the proportion of Islamic debt and the Islamic debt below average, which counts for -0.5965 (*p-value* 0.0000). The rest of the correlation coefficient for group 1 is less than 0.5, and it is considered as a low correlation between the explanatory variables, thus, giving less cause for concern about the multicollinearity problem.

Table 5.6: Pairwise correlation matrix for explanatory variables group 1

Variables	Tobin's Q	ROA	ROE	EVA	Islamic Debt Proportion	Non-Islamic Debt Proportion	First Issuance
Tobin's Q	1.0000						
ROA	0.1525*** (0.0000)	1.0000					
ROE	0.0382** (0.0353)	0.1829*** (0.0000)	1.0000				
EVA	0.0055 (0.7614)	0.0925*** (0.0000)	0.3106*** (0.0000)	1.0000			
Islamic Debt Proportion	0.4379*** (0.0000)	0.0393** (0.0304)	0.1006*** (0.0000)	0.0127 (0.4846)	1.0000		
Non-Islamic Debt Proportion	0.0997*** (0.0000)	0.0528*** (0.0036)	0.0466*** (0.0101)	0.0938* (0.0000)	-0.2773*** (0.0000)	1.0000	
First Issuance	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)
Second Issuance	-0.0681*** (0.0002)	0.0285 (0.1162)	0.003 (0.8666)	0.1270* (0.0000)	-0.0847*** (0.0000)	-0.0919*** (0.0000)	0.0000 (0.0000)
More Than 2 Issuance	-0.0699*** (0.0001)	0.0346** (0.0565)	0.0920*** (0.0000)	0.0296 (0.1024)	-0.0334* (0.0659)	-0.0780*** (0.0000)	0.0000 (0.0000)
Islamic Debt Below Average	-0.3119*** (0.0000)	0.0780*** (0.0000)	0.1048*** (0.0000)	0.0042 (0.8172)	-0.5965*** (0.0000)	0.0788*** (0.0000)	0.0000 (0.0000)
Islamic Debt Average	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)
Islamic Debt Above Average	0.3119*** (0.0000)	0.0813*** (0.0000)	0.1059*** (0.0000)	0.0062 (0.7327)	0.5979*** (0.0000)	-0.0817*** (0.0000)	0.0000 (0.0000)
Debt Type of Islamic Debt	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)
Asset Type of Islamic Debt	-0.0556*** (0.0021)	0.0228 (0.2080)	0.0087 (0.6304)	0.0511* (0.0048)	-0.0400** (0.0274)	-0.0587*** (0.0012)	0.0000 (0.0000)
Equity Type of Islamic Debt	0.0045 (0.8056)	0.0073 (0.6892)	0.1006*** (0.0000)	-0.0141 (0.4387)	0.1094*** (0.0000)	0.2026*** (0.0000)	0.0000 (0.0000)
Firm Size	-0.2079*** (0.0000)	0.0082 (0.6878)	0.1971*** (0.0000)	0.0110 (0.5868)	-0.1369*** (0.0000)	0.4492*** (0.0000)	0.0000 (0.0000)
Year 2001	-0.0056 (0.7587)	0.0000 (1.0000)	-0.0483*** (0.0078)	-0.0109 (0.5493)	0.1882*** (0.0000)	0.1362*** (0.0000)	0.0000 (0.0000)
Year 2003	0.0573*** (0.0016)	0.0000 (1.0000)	-0.0292 (0.1074)	-0.0290 (0.1095)	0.0611*** (0.0007)	0.0971*** (0.0000)	0.0000 (0.0000)
Year 2004	0.0348** (0.0547)	-0.1001*** (0.0000)	-0.0884*** (0.0000)	-0.0019 (0.9161)	0.0271 (0.1349)	-0.1106*** (0.0000)	0.0000 (0.0000)
Year 2005	0.2012*** (0.0000)	0.0097 (0.5919)	-0.0105 (0.5624)	0.0461* (0.0109)	0.3000*** (0.0000)	-0.0901*** (0.0000)	0.0000 (0.0000)
Year 2006	0.0689*** (0.0001)	0.0000 (1.0000)	0.0037 (0.8368)	0.0532* (0.0033)	0.0496*** (0.0062)	-0.0866*** (0.0000)	0.0000 (0.0000)
Year 2007	0.0078 (0.6681)	0.0355** (0.0501)	0.0542*** (0.0028)	0.1515* (0.0000)	0.0237 (0.1917)	0.0624*** (0.0006)	0.0000 (0.0000)
Year 2008	-0.0361** (0.0466)	0.0000 (1.0000)	0.0732*** (0.0001)	-0.0050 (0.7838)	0.0153 (0.398)	0.0330*** (0.0690)	0.0000 (0.0000)
Year 2009	-0.0688*** (0.0001)	0.0000 (1.0000)	0.0010 (0.9572)	0.0027 (0.8813)	-0.0177 (0.3304)	-0.0148 (0.4135)	0.0000 (0.0000)
	Second Issuance	More Than 2 Issuance	Islamic Debt Below Average	Islamic Debt Average	Islamic Debt Above Average	Debt Type of Islamic Debt	Asset Type of Islamic Debt
Second Issuance	1.0000						
More Than 2 Issuance	-0.3320*** (0.0000)	1.0000					

Islamic Debt Below Average	0.1188*** (0.0000)	-0.0309* (0.0886)	1.0000				
Islamic Debt Average	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	1.0000			
Islamic Debt Above Average	-0.1170*** (0.0000)	0.0290 (0.1103)	-0.9890*** (0.0000)	0.0000 (0.0000)	1.0000		
Debt Type of Islamic Debt	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	1.0000	
Asset Type of Islamic Debt	-0.1335*** (0.0000)	0.0548*** (0.0025)	0.0199 (0.2732)	0.0000 (0.0000)	-0.0209 (0.2487)	0.0000 (0.0000)	1.0000
Equity Type of Islamic Debt	-0.0364** (0.0450)	-0.0166 (0.3603)	0.0075 (0.6785)	0.0000 (0.0000)	-0.0109 (0.5496)	0.0000 (0.0000)	-0.1335*** (0.0000)
Firm Size	0.1010*** (0.0000)	-0.0076 (0.7086)	0.2083*** (0.0000)	0.0000 (0.0000)	-0.2060*** (0.0000)	0.0000 (0.0000)	-0.0363* (0.0740)
Year 2001	-0.0426*** (0.0188)	-0.0934*** (0.0000)	-0.1008*** (0.0000)	0.0000 (0.0000)	0.1025*** (0.0000)	0.0000 (0.0000)	-0.0375** (0.0384)
Year 2003	0.0088 (0.6293)	0.0000 (0.0000)	-0.1189*** (0.0000)	0.0000 (0.0000)	0.1218*** (0.0000)	0.0000 (0.0000)	-0.0900*** (0.0000)
Year 2004	0.0458*** (0.0115)	-0.0926*** (0.0000)	-0.0096 (0.5979)	0.0000 (0.0000)	0.0119 (0.5132)	0.0000 (0.0000)	-0.0144 (0.4266)
Year 2005	0.0449*** (0.0132)	-0.0038 (0.8321)	-0.3430*** (0.0000)	0.0000 (0.0000)	0.3406*** (0.0000)	0.0000 (0.0000)	-0.0897*** (0.0000)
Year 2006	-0.1011*** (0.0000)	0.1730*** (0.0000)	-0.0761*** (0.0000)	0.0000 (0.0000)	0.0744*** (0.0000)	0.0000 (0.0000)	-0.0186 (0.3065)
Year 2007	0.0231 (0.2020)	0.0733* (0.0001)	-0.0665*** (0.0002)	0.0000 (0.0000)	0.0591*** (0.0011)	0.0000 (0.0000)	0.1052*** (0.0000)
Year 2008	0.0046 (0.8011)	-0.0772*** (0.0000)	-0.0102 (0.5737)	0.0000 (0.0000)	0.0037 (0.8405)	0.0000 (0.0000)	0.0168 (0.3550)
Year 2009	-0.0200 (0.2704)	0.0082 (0.6508)	0.0189 (0.2987)	0.0000 (0.0000)	-0.0186 (0.3040)	0.0000 (0.0000)	0.0661*** (0.0003)
	Equity Type of Islamic Debt	Firm Size	Year 2001	Year 2003	Year 2004	Year 2005	Year 2006
Equity Type of Islamic Debt	1.0000						
Firm Size	0.2151*** (0.0000)	1.0000					
Year 2001	-0.0426*** (0.0188)	0.0085 (0.6746)	1.0000				
Year 2003	-0.1022*** (0.0000)	0.0167 (0.4107)	-0.0287 (0.1131)	1.0000			
Year 2004	-0.1200*** (0.0000)	-0.1020*** (0.0000)	-0.0338* (0.0627)	-0.0810*** (0.0000)	1.0000		
Year 2005	-0.0618*** (0.0007)	-0.0172 (0.3959)	-0.0474*** (0.0089)	-0.1137*** (0.0000)	-0.1335*** (0.0000)	1.0000	
Year 2006	-0.1011*** (0.0000)	-0.0618*** (0.0023)	-0.0284 (0.1171)	-0.0682*** (0.0002)	-0.0801*** (0.0000)	-0.1124*** (0.0000)	1.0000
Year 2007	0.0781*** (0.0000)	0.0917*** (0.0000)	-0.0244 (0.1784)	-0.0585*** (0.0012)	-0.0688*** (0.0001)	-0.0966*** (0.0000)	-0.0579*** (0.0014)
Year 2008	0.2361*** (0.0000)	0.1215*** (0.0000)	-0.0150 (0.4085)	-0.0360** (0.0474)	-0.0422*** (0.0198)	-0.0593*** (0.0011)	-0.0356** (0.0499)
Year 2009	-0.0200 (0.2704)	0.0244 (0.2299)	-0.0056 (0.7566)	-0.0135 (0.4573)	-0.0158 (0.3826)	-0.0222 (0.2202)	-0.0133 (0.4623)

	Year 2007	Year 2008	Year 2009				
Year 2007	1.0000						
Year 2008	-0.0305* (0.0922)	1.0000					
Year 2009	-0.0115 (0.5278)	-0.0070 (0.6981)	1.0000				

*** Sig. at 1% significance level, **Sig. at 5% significance level, *Sig. at 10% significance level. Probability value is in parentheses

Table 5.7: Pairwise correlation matrix for explanatory variables group 2

Variables	Tobin's Q	ROA	ROE	Islamic Debt Proportion	Non-Islamic Debt Proportion	First Issuance	Second Issuance
Tobin's Q	1.0000						
ROA	0.0532 (0.2087)	1.0000					
ROE	0.0369 (0.3835)	0.7386*** (0.0000)	1.0000				
Islamic Debt Proportion	0.1210*** (0.0041)	0.0082 (0.8466)	0.0252 (0.5521)	1.0000			
Non-Islamic Debt Proportion	-0.1479*** (0.0004)	-0.0683 (0.1064)	-0.0579 (0.1710)	-0.1676*** (0.0001)	1.0000		
First Issuance	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	1.0000	
Second Issuance	-0.1802*** (0.0000)	-0.0197 (0.6411)	-0.0136 (0.7483)	-0.0133 (0.7532)	-0.2037*** (0.0000)	0.0000 (0.0000)	1.0000
Islamic Debt Below Average	-0.1524*** (0.0003)	-0.0278 (0.5120)	-0.0191 (0.6517)	-0.8622*** (0.0000)	0.1250*** (0.0031)	0.0000 (0.0000)	0.0263 (0.5342)
Islamic Debt Average	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)
Islamic Debt Above Average	-0.1524*** (0.0003)	-0.0278 (0.5120)	-0.0191 (0.6517)	0.8622*** (0.0000)	-0.1250*** (0.0031)	0.0000 (0.0000)	-0.0263 (0.5342)
Debt Type of Islamic Debt	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)
Asset Type of Islamic Debt	0.2437*** (0.0000)	0.0359 (0.3964)	-0.0694 (0.1010)	0.2388*** (0.0000)	-0.2280*** (0.0000)	0.0000 (0.0000)	0.1754*** (0.0000)
Equity Type of Islamic Debt	-0.2437*** (0.0000)	-0.0359 (0.3964)	0.0694 (0.1010)	-0.2388*** (0.0000)	0.2280*** (0.0000)	0.0000 (0.0000)	-0.1754*** (0.0000)
Firm Size	-0.5017*** (0.0000)	-0.0962** (0.0228)	0.0976** (0.0208)	-0.2646*** (0.0000)	0.3417*** (0.0000)	0.0000 (0.0000)	0.2374*** (0.0000)
Year 2003	-0.1114*** (0.0083)	0.0128 (0.7627)	-0.0088 (0.8349)	-0.1084*** (0.0103)	0.3205*** (0.0000)	0.0000 (0.0000)	-0.0636 (0.1326)
Year 2004	0.0917** (0.0301)	-0.0531 (0.2094)	0.0901** (0.0330)	0.5058*** (0.0000)	-0.025 (0.5545)	0.0000 (0.0000)	-0.1262*** (0.0028)
Year 2005	-0.1531*** (0.0003)	-0.0903** (0.0327)	-0.0168 (0.6923)	-0.0405 (0.3388)	-0.064 (0.1303)	0.0000 (0.0000)	-0.0769* (0.0689)
Year 2007	-0.0935** (0.0269)	0.0105 (0.8040)	-0.0072 (0.8642)	-0.0329 (0.4373)	-0.1757*** (0.0000)	0.0000 (0.0000)	-0.041 (0.3323)
Year 2008	-0.0870** (0.0395)	0.0175 (0.6786)	-0.0121 (0.7759)	0.1096*** (0.0094)	-0.0422 (0.3190)	0.0000 (0.0000)	0.1707*** (0.0000)
Year 2009	-0.0358 (0.3979)	0.0086 (0.8398)	-0.0052 (0.9030)	0.0151 (0.7212)	-0.0899** (0.0334)	0.0000 (0.0000)	-0.0334 (0.4304)

	Islamic Debt Below Average	Islamic Debt Average	Islamic Debt Above Average	Debt Type of Islamic Debt	Asset Type of Islamic Debt	Equity Type of Islamic Debt	Firm Size
Islamic Debt Below Average	1.0000						
Islamic Debt Average	0.0000 (0.0000)	1.0000					
Islamic Debt Above Average	-1.0000*** (0.0000)	0.0000 (0.0000)	1.0000				
Debt Type of Islamic Debt	0.0000 (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	1.0000			
Asset Type of Islamic Debt	-0.2234*** (0.0000)	0.0000 (0.0000)	0.2234*** (0.0000)	0.0000 (0.0000)	1.0000		
Equity Type of Islamic Debt	0.2234*** (0.0000)	0.0000 (0.0000)	-0.2234*** (0.0000)	0.0000 (0.0000)	-1.0000 (1.0000)	1.0000	
Firm Size	0.3357*** (0.0000)	0.0000 (0.0000)	-0.3357*** (0.0000)	0.0000 (0.0000)	-0.4419*** (0.0000)	0.4419*** (0.0000)	1.0000
Year 2003	0.0895** (0.0342)	0.0000 (0.0000)	-0.0895** (0.0342)	0.0000 (0.0000)	-0.3627*** (0.0000)	0.3627*** (0.0000)	0.4741*** (0.0000)
Year 2004	-0.3682*** (0.0000)	0.0000 (0.0000)	0.3682*** (0.0000)	0.0000 (0.0000)	0.0360 (0.3957)	-0.0360 (0.3957)	-0.0488 (0.2493)
Year 2005	0.1082*** (0.0104)	0.0000 (0.0000)	-0.1082*** (0.0104)	0.0000 (0.0000)	0.1754*** (0.0000)	-0.1754*** (0.0000)	0.1268*** (0.0026)
Year 2007	0.0577 (0.1724)	0.0000 (0.0000)	-0.0577 (0.1724)	0.0000 (0.0000)	-0.2340*** (0.0000)	0.2340*** (0.0000)	0.1213*** (0.0040)
Year 2008	-0.1311*** (0.0019)	0.0000 (0.0000)	0.1311*** (0.0019)	0.0000 (0.0000)	0.0195 (0.6458)	-0.0195 (0.6458)	0.1013*** (0.0164)
Year 2009	0.0025 (0.9522)	0.0000 (0.0000)	-0.0025 (0.9522)	0.0000 (0.0000)	0.0761* (0.0718)	-0.0761* (0.0718)	0.0711* (0.0929)
	Year 2003	Year 2004	Year 2005	Year 2007	Year 2008	Year 2009	
Year 2003	1.0000						
Year 2004	-0.1044*** (0.0135)	1.0000					
Year 2005	-0.0636 (0.1326)	-0.1262*** (0.0028)	1.0000				
Year 2007	-0.0339 (0.4227)	-0.0673 (0.1116)	-0.041 (0.3323)	1.0000			
Year 2008	-0.0565 (0.1820)	-0.1120*** (0.0080)	-0.0683 (0.1065)	-0.0364 (0.3895)	1.0000		
Year 2009	-0.0276 (0.5142)	-0.0548 (0.1957)	-0.0334 (0.4304)	-0.0178 (0.6740)	-0.0296 (0.4840)	1.0000	

*** Sig. at 1% significance level, **Sig. at 5% significance level, *Sig. at 10% significance level. Probability value is in parentheses

Similar to group 1 results, most of the correlation for group 2 is smaller than 0.5000. The highest correlation for group 2 is between the Islamic debt type and firm size, which counts almost 0.5000 (*p-value* 0.0000) and this value is significant. None of the remaining variables are correlated to an extent that merits noting. Further, low correlation among explanatory variables indicates no

dependency among them, thus indicating low likelihood of multicollinearity in the OLS regressions. In conclusion, the correlation matrix coefficients result for group 1 and group 2 supports the multicollinearity testing in part 5.1.

5.4 PANEL DATA ANALYSIS RESULTS

5.4.1 DYNAMIC PANEL GMM REGRESSION RESULTS FOR GROUP 1

Table 5.8, Table 5.9, Table, Table 5.10 and Table 5.11 present the dynamic GMM panel regression results. In addition, Table 5.12 is provided to summarise the regression results for four dependent variables, Tobin's Q, ROA, ROE and EVA. Using stepwise regression, this study observes the changes of the coefficients and the standard deviations. Table 5.8 presents the regression result for Tobin's Q. There are four regression equations, and there are four explanatory variable categories. The regression process is done using a step by step process (stepwise process), by including each explanatory variable category in each equation (REG,1, REG 2, REG 3, and REG 4). REG 1 is the first regression equation which regress only the debt structure of the firm. REG 2 is the second regression equation which regress the debt structure of the firm and the frequency of Islamic debt issuance. REG 3 is the third regression equation which regress the debt structure of the firm, the frequency of Islamic debt issuance and the proportion of Islamic debt issued. REG 4 is the fourth regression equation which regress all explanatory variables. That means, for the REG 2, REG 3 and REG 4, more explanatory variables are added into the regression equation to observe the changes of the coefficient and standard errors.

Table 5.8: Regression result for group 1

Variables	Dynamic GMM			
	REG_1	REG_2	REG_3	REG_4
L1	0.5968*** (0.0166)	0.5872*** (0.0167)	0.5839*** (0.0197)	0.5742*** (0.0174)
Constant	0.3049*** (0.0571)	0.2879*** (0.0778)	0.2764*** (0.0809)	0.3180*** (0.0988)
The debt structure of the firm				
Islamic Debt Proportion	0.8388*** (0.0215)	0.8598*** (0.0520)	0.8166*** (0.0530)	0.7441*** (0.0723)
Non-Islamic Debt Proportion	0.5060*** (0.0150)	0.5518*** (0.0143)	0.5489*** (0.0152)	0.5372*** (0.0159)
The frequency of Islamic debt issuance				
First Issuance	-	(Omitted)	(Omitted)	(Omitted)
Second Issuance	-	-0.1727** (0.0748)	-0.2631** (0.1222)	-0.0961* (0.0951)
More Than 2 Issuance	-	0.1612*** (0.0260)	0.1420*** (0.0227)	0.2090*** (0.0562)
The proportion of Islamic debt issued				
Islamic Debt Below Average	-	-	0.0191* (0.0111)	0.0006* (0.0129)
Islamic Debt Average	-	-	(Omitted)	(Omitted)
Islamic Debt Above Average	-	-	-0.0283*** (0.0109)	-0.0248** (0.0111)
The type of Islamic debt issued				
Debt Type of Islamic Debt	-	-	-	(Omitted)
Asset Type of Islamic Debt	-	-	-	0.0423 (0.1076)
Equity Type of Islamic Debt	-	-	-	0.1764* (0.1049)
Control Variables				
Size effect				
Firm Size	-0.0624*** (0.0098)	-0.0680*** (0.0119)	-0.0652*** (0.0125)	-0.0844*** (0.0142)
Year effect				
Year 2001	-0.4859 (0.6808)	-0.2470*** (0.0362)	-0.2400*** (0.0358)	-1.5848* (0.9510)
Year 2003	0.0148 (0.0128)	0.0377 (0.0409)	0.0496*** (0.0083)	0.0458*** (0.0098)
Year 2004	0.0105 (0.0116)	0.0083 (0.0099)	0.0070 (0.0111)	0.0130 (0.0109)
Year 2005	0.0232*** (0.0039)	0.0158*** (0.0051)	0.0130** (0.0060)	0.0171*** (0.0048)
Year 2006	-0.0340*** (0.0054)	-0.0360*** (0.0076)	-0.0408*** (0.0080)	-0.0346*** (0.0072)
Year 2007	0.1124*** (0.0071)	0.1146*** (0.0140)	0.1149*** (0.0160)	0.1160*** (0.0177)
Year 2008	0.0255 (0.0222)	0.0515* (0.0283)	0.0480* (0.0285)	0.0397* (0.0236)
Year 2009	0.0702*** (0.0263)	0.0521** (0.0276)	0.0547** (0.0274)	0.0587** (0.0294)
J-Statistics	9151.05	8095.91	18001.15	21514.85
Chi2	0.0000	0.0000	0.0000	0.0000

*** Sig. at 1% significance level, **Sig. at 5% significance level, *Sig. at 10% significance level. Standard error is in parentheses

1) The debt structure of the firm and Tobin's Q

As can be seen in the Table 5.8 column II (REG 1), the coefficient of Islamic debt and non-Islamic debt are a positive and significant, indicating that these two variables have a positive effect on a firm's financial performance. Both variables are statistically significant at a 1% level. This finding can be better explained by trade-off theory. According to prior literature, a firm has an optimal capital structure by offsetting the advantages of debt and the cost of debt (Modigliani & Miller, 1963; DeAngelo & Masulis, 1980; Jensen & Meckling, 1976; Haris & Raviv, 1990; Frank & Goyal, 2003), and this theory apparently can also be applied to Islamic debt. Trade-off theory refers to the idea that a company chooses how much debt finance and how much equity finance to use by balancing the costs and benefits. It states that there is an advantage to financing with debt and the tax benefits of debt, and fortunately Islamic debt is exempted from the taxes. Moreover, the use of leverage is one way to improve firm performance (Champion, 1999), and firms prefer debt financing because they anticipate a higher return (Hadlock & James, 2002). Furthermore, this finding is in line with Krishnan and Moyer (1997) and Abor (2005) who find a positive relationship between capital structure choice and firm financial performance in developing countries. In particular, Krishnan and Moyer (1997) include Malaysia as one of the sample in their study.

Although both debt types have a positive impact, the coefficient for Islamic debt is higher than the coefficient for non-Islamic debt, suggesting that the Islamic debt provides a higher contribution to the improvement of firms' financial performance compared to non-Islamic debt. It can be concluded that when Islamic debt is

chosen as a tool of firm financing, the markets react positively to firm performance, thus this positive reaction might lead to the stock becoming overvalued. There are a few reasons for the market to react positively to this Islamic debt issuance. First, Islamic debt is claimed and advertised as a secure investment due to its structure. Second, Islamic debt is given a special privilege such as stamp duty and exempted tax for both issuers and investors. Third, Islamic debt is guaranteed by the special purpose vehicle (SPV); in case of default the Islamic debt holders may recourse the assets underlying the Islamic debt. Fourth, though there were a few cases of default in Middle East, those cases have no impact on the investors' perspective, as some investors investing in Islamic debt only do so only to comply with the religious matter. Fifth, the majority of investors are non-Muslim, with an increasing presence of foreign investors (PricewaterhouseCoopers Malaysia, 2008). Sixth, the Islamic debt issuance contributes to an increase in the issuer's stock returns (Nagano, nd.).

The positive result for Islamic debt coefficient obtained supports the trade-off theory which derived from the models based on taxes and agency cost. From the point of view of internal management, having Islamic debt in their debt structure brings more pressure to the management as Islamic debt is more expensive compared to non-Islamic debt, hence, improving the firm's efficiency is important to maximise asset utilisation due to the Islamic debt obtained. At the end, this action leads to improvement in the firm performance. Moreover, debt may reduce agency costs by reducing cash flows available for expropriation and investments in negative net present value projects (Harris & Raviv, 1990; Jensen, 1986), as does Islamic debt. Furthermore, compared to equity issues, the issue of debt will not dilute

the managers' equity holdings as a proportion of total equity, but further enhance the alignment of interests (Fleming et al., 2005). In addition, though conventional debt and Islamic debt are fundamentally different, they perform similarly in a competitive market as these two instruments are affected by the same factors (Kraciska & Nowak, 2012).

2) The frequency of Islamic debt issuance and Tobin's Q

Column III (REG 2) provides the results for the second regression. When more variables are added to the regression equation, more coefficients are significant. The coefficients for Islamic debt and non-Islamic debt are a positive and significant at 1% level of significance, and this has been explained in section one above. The coefficient for first issuance of Islamic debt is a positive and significant at 1% level of significance, suggesting that the first issuance of Islamic debt affects higher firm performance. This also indicates that the markets react positively to the issuance of Islamic debt when it is first introduced to the market. Furthermore, one of the reasons for higher firm performance is that the managers of the firms are compelled to put more effort into generating more profits. Because some of Islamic debt is in the form of partnership (profit and loss sharing agreement), Islamic debt tends to place greater pressure on the managers to manage the firms effectively.

However, the coefficient for the second issuance of Islamic debt is a negative and significant at 5% level of significance, suggesting that the issuance of Islamic debt for a second time lowers firm performance. This negative finding is similar to the study by Godlewski et al. (2010), which suggest that Islamic debt expansion has a

detrimental effect on firm value. From the point of the internal management, this may indicate that either the management of the firms have loosened their control because of overconfidence from the first successful issuance of Islamic debt or that the management have expropriated the firms' previous profits. From the point of the markets, it may indicate that the markets have experienced, observed and learnt from the first Islamic debt issuance, leading under confidence in the markets over this second issuance, which in turn may affect the share price of those firms issuing Islamic debt. Furthermore, debt is also a source of information which indicates the firm's current condition that investors can use to monitor and evaluate major operating decisions of the firm in two ways. Firstly, the mere ability of the firm to make its contractual payments to debt-holders provides information. Secondly, in the event that the organisation fails to make the payments, their ways to resolve the matter either through informal negotiation or formal bankruptcy proceedings will disseminate considerable information to the investors (Harris & Raviv, 1990). In addition, the use of credit ratings in sukuk plays a vital role in the development of the Islamic debt market (Al Amine, 2008). Therefore, the negative relationship of the second issuance of Islamic debt and its firm's performance is probably either a result of the previous firm performance in meeting their obligation of payment or a result of inefficient utilisation of their firms's assets.

Fortunately, the coefficient for more than two issuance of Islamic debt is a positive and significant at 1% level of significance, suggesting the issuance of Islamic debt for more than two improves a firm's financial performance. This may indicate that after having a few experiences in issuing Islamic debt, the issuance of Islamic debt later on impacts positively on firm performance. This may be caused by the fact that the debt-holders of Islamic debt closely monitor the

management of the firm to ensure that the firm can generate profits and distribute a periodic stream of cash flow over time. Thus, Islamic debt also reduces the agency problem within the company and hence increases firm value. From the view point of markets, this may indicate that the markets have learnt through several issuances of Islamic debt and therefore they have greater confidence in subsequent issuances compared to the second issuance of Islamic debt. However, investors are irrational according to the behavioural finance theory. Their decision may be influenced by the magnitude issue, their bias selection and the lucky event issue.

3) The proportion of Islamic debt issued and Tobin's Q

Coloum IV (REG 3) provides the results for the third regression. For the third regression, the coefficients for Islamic debt and non-Islamic debt proportion are still a positive and significant. There are also no changes for the frequency of Islamic debt issuance coefficients as discussed in point two above (see the explanation on section one and two previously). The coefficients for the proportion of Islamic debt below the average and at the average are a positive and significant at 10% and 1% level of significance. These positive and significant results may be caused by internal and external factors. In terms of internal factors, the proportion of Islamic debt issued at a certain level stimulates the management to work effectively. For external factors, there are two views; first from the markets' view, second from the view of government support. From the markets' view, the proportion of a certain level of Islamic debt may be considered as tax exempted stimulation as the profits derived from Islamic debt are exempted from the taxes. Furthermore, the markets have confidence over the assets/projects

underlying the Islamic debt contract which may bring profits in future, therefore, this market confidence affects their stock price. With regards to government support, the Malaysian government has provided an interesting model to promote the co-existence of an ethical and societal-based finance through issuing a few regulations that appeal to Muslim and non-Muslim investors; hence these regulations issued can assure the credibility of this instrument. Furthermore, the regulating body has taken vital steps to develop a facilitative regulatory framework, to create a large pool of players, to introduce a comprehensive range of innovative and competitive Islamic financial product and services, and to ensure sufficient depth to facilitate liquidity management, hence creating market confidence.

Though debt reduces the agency costs of free cash flow by reducing the cash flow available for spending at the discretion of managers (Jensen, 1986), an increased leverage also has costs; as leverage increases the risk of default also increases. This theory supports the result for Islamic debt above the average which is a negative and significant at 1% level of significance. This finding suggests that the greater the proportion of Islamic debt issued, the lower the firm performance. This result is similar to the empirical result for non-Islamic debt, in that the proportion of debt at a certain level may hamper firm performance as an additional incurrence of debt gives no guarantee that firm performance will be higher. This is mainly because as the leverage increases, so does the risk of default, which provides a greater incentive for lenders to monitor the firm.

4) The type of Islamic debt and Tobin's Q

Column V (REG 4) provides the results for all explanatory variables for four categories and all control variables. There are no changes for the coefficients' significance and sign of the debt structure of the firm, the frequency of Islamic debt issued, the proportion of Islamic debt issued; there are only slightly changes on the coefficients value (see the explanation for section one, two and three above). The coefficients for the debt-type and equity-type are a positive and significant at 1% and 10% level of significance. This suggests that debt-types and equity-types affect higher firm performance. The result supports the notion that certain types of debts have a different impact on shareholders' wealth (Mikkelson & Partch, 1986); hence, this finding can also be applied to Islamic debt.

The coefficient for asset-types is a positive but not significant, which may suggest that the asset-type (ijarah sukuk) of Islamic debt can be used as an incentive in economic development and to stimulate productive industries (Kamali, 2007).

Furthermore, the finding can be explained by the different Islamic debt structure. This is important since the structure determines the obligation of the originator/issuers. There is typically a requirement that on maturity of the Islamic debt or upon an event of default, the originator has a purchase obligation to repurchase the assets which enables the Special Purpose Vehicle (SPV) to redeem the outstanding certificates and repay the sukuk holders. In this regard, the rights of sukuk holders in the event of default will vary depending on whether the sukuk structure is an asset-based or an asset-backed structure. The positive result for debt-based and equity-based sukuk may be caused by their structure. The

assumptions that may be raised is that debt-based and equity-based are in the structure of asset-backed sukuk, and asset-based is in the structure of asset-based sukuk. Thus, the rights of the sukuk-holders depend on the structure of Islamic debt. For example, in the case of sukuk ijarah, if the sukuk is asset-backed, this allows the holders to liquidate the underlying asset in the event of default to recover most of their investments. On the other hand, if the sukuk is asset-based, this only represents beneficial ownership on the underlying asset and it restricts the holders' rights in the event of a default.

The coefficient for firm size is a negative and significant for all four regression equations, suggesting that bigger firms which having Islamic debt in their debt structure have a lower firm performance. The negative result may be due to the fact that bigger firms are already well-stabilised in terms of cash flows and profits because of their well-stabilised capital structure; hence changing its capital structure with a new unproven instrument may endanger the firm's credibility and ability to maintain their stable cash flows and profits. This notion leads to the markets' perspective on the firms' capability in the future; the markets may have lower confidence and in turn, this affects the stock price of the firms.

Apart from year 2004, all the years reveal a significant result. All the years (2003, 2004, 2005, 2007, 2008, and 2009) have a positive coefficient except year 2001 and year 2006. Malaysia, with its economic strength, supportive government policies, educated workforce, developed infrastructure, vibrant business environment and quality of life, has always been an attractive market for foreign investors. Therefore, the coefficients for year 2003, 2004 and 2005 are supported.

Despite the challenging global economy, Malaysia has continued to pursue liberalisation, enhancing the entrepreneurial and investment environments. The economy scores above the world average in many of the ten economic freedoms (World Bank, 2011). The trade regime is relatively open despite lingering non-tariff barriers. However, corruption and a judicial system that remains vulnerable to political influence pose significant challenges to economic freedom. 2001 and 2006 were two years which yielded a negative and significant impact. The first, 2001, may be due to the global economic slowdown overall. Significantly, though, a general election was held in 2003 and again in 2008, revealing a pattern in which there is a two year gap between this political event and a year yielding a negative and significant impact. This may indicate that before the general election, the political situation in Malaysia heats up, which affects the market players.

The Malaysian economy has been surprisingly resilient in spite of the global slowdown in 2007. Malaysia has only felt a minor impact from the slowing US economy, but emerging challenges in the form of soaring food prices and the persistent rise in global oil prices are weighing down heavily on economic prospects. Furthermore, to avoid the fiscal deficit, the government announced a revamp in oil subsidies, pushing up the price of petrol diesel, which has adverse implications for inflation and economic growth. However, in 2008 and 2009, the business confidence index increased as it indicates by the rise of sales and production, higher export sales, higher capacity utilisation, higher domestic demands and higher capital investment. The gross domestic product growth was sustained at a certain targeted level. This growth was driven by high commodity prices, strong private consumption and steady investment, and supported by fiscal

spending. The business condition index would be a better indicator of current economic activity as it relies on firm-level information. Therefore, the positive and significant coefficients for year 2007, 2008 and 2009 are supported.

Table 5.9: Regression result for group 1

Variables	Dynamic GMM			
	REG_1	REG_2	REG_3	REG_4
L1	0.1611*** (0.0030)	0.1541*** (0.0032)	0.1128*** (0.0050)	0.1220*** (0.0041)
Constant	8.3687*** (0.0290)	8.3486*** (0.0310)	8.8399*** (0.0500)	8.7500*** (0.0410)
The debt structure of the firm				
Islamic Debt Proportion	0.0059*** (0.0015)	0.0068*** (0.0029)	0.0369*** (0.0031)	0.0159*** (0.0025)
Non-Islamic Debt Proportion	0.0137*** (0.0022)	0.0154*** (0.0027)	0.0235*** (0.0022)	0.0177*** (0.0015)
The frequency of Islamic debt issuance				
D1_First Issuance	-	(Omitted)	(Omitted)	(Omitted)
D2_Second Issuance	-	-0.0416*** (0.0101)	0-.0605*** (0.0137)	-0.0774*** (0.0140)
D3_More Than 2 Issuance	-	0.0278*** (0.0032)	0.0230*** (0.0030)	0.0323*** (0.0026)
The proportion of Islamic debt issued				
D1_ID Below Average	-	-	0.0185*** (0.0014)	0.0181*** (0.0010)
D2_ID Average	-	-	(Omitted)	(Omitted)
D3_ID Above Average	-	-	-0.0041*** (0.0010)	-0.0036*** (0.0010)
The type of Islamic debt issued				
D1_Debt Type of ID	-	-	-	(Omitted)
D2_Asset Type of ID	-	-	-	0.0250*** (0.0074)
D3_Equity Type of ID	-	-	-	0.0346*** (0.0027)
Control Variables				
Size effect				
Firm Size	-0.0028*** (0.0007)	-0.0035*** (0.0011)	-0.0011*** (0.0004)	-0.0040*** (0.0005)
Year effect				
Year 2001	-0.0009 (0.0033)	-0.0011 (0.0047)	-0.0038* (0.0079)	-0.0169* (0.0097)
Year 2003	0.0007 (0.0006)	0.0005 (0.0011)	0.0068*** (0.0019)	0.0092*** (0.0024)
Year 2004	0.0324*** (0.0021)	0.0214*** (0.0029)	0.0187*** (0.0021)	0.0173*** (0.0019)
Year 2005	0.0036*** (0.0009)	0.0045*** (0.0010)	0.0067*** (0.0011)	0.0058*** (0.0014)
Year 2006	-0.0023*** (0.0006)	-0.0013*** (0.0007)	-0.0014*** (0.0002)	-0.0018*** (0.0003)
Year 2007	0.0023*** (0.0004)	0.0052*** (0.0008)	0.0093*** (0.0018)	0.0080*** (0.0020)
Year 2008	0.0028 (0.0020)	0.0017 (0.0018)	0.0037*** (0.0010)	0.0017*** (0.0006)
Year 2009	0.0058*** (0.0013)	0.0037*** (0.0017)	0.0058*** (0.0021)	0.0048*** (0.0019)
J-Statistics	12220.05	12270.05	2941.60	78177.74
Chi2	0.0000	0.0000	0.0000	0.0000

*** Sig. at 1% significance level, **Sig. at 5% significance level, *Sig. at 10% significance level. Standard error is in parentheses

1) **The debt structure of the firm and ROA**

Column II (REG 1) provides the result for the first regression. The coefficients for Islamic debt and non-Islamic debt are positive and significant at a 1% level of significance, indicating that these two variables have a positive effect on a firm's financial performance. This finding suggests that Islamic debt not only improves the effectiveness of the firm's management s in managing their assets to generate profits, but it also improves the operating efficiency of the total business. Moreover, from the issuers' perspective, there are benefits issuing Islamic securities, in particular, Islamic debt. The key benefits are tax incentives, value proposition and regulatory process. First, for tax incentives, the issuers are exempted from stamp duty, tax deductible of issuance cost, and the special purpose vehicle (SPV) is exempted from tax, and tax neutrality. Second, for value proposition, there is a wider investors' base, Islamic debt is attractively priced due to the strong demand, there is strong structuring expertise in the Islamic finance industry, and Islamic debt enhances the issuers' profile. Third, in terms of regulatory process, the process facilitates the issuance process, the rating of Islamic debt is automatically approved for AAA-rated for Islamic debt issued in domestic (Malaysian) currency and A-rated Islamic debt issued in foreign currency, any amendment to terms of approved Islamic debt need only to inform the Securities Commission, and exchangeable Islamic debt is exempted from rating.

These key benefits encourage the management to efficiently manage the firm. Furthermore, the result supports the theory that the choice of capital structure may help mitigate agency costs (Jensen, 1976). According to the agency costs theory,

high leverage or a low equity/asset ratio reduces the agency costs of outside equity and increases firm value by constraining or encouraging managers to act more in the interests of shareholders. Moreover, corporate debt has a disciplining effect on management, since it serves to reduce the free cash flow and therefore minimises management's discretionary spending.

The coefficient for Islamic debt is slightly close to the coefficient for non-Islamic debt, suggesting that both debts contribute equally to the improvement of firms' financial performance in the context of accounting measures. This result is different to the result for the Tobin's Q, in which the coefficient for Islamic debt is higher than the coefficient for non-Islamic debt. This difference may be due to the different items used to calculate each metric whereas Tobin's Q emphasises the market valuation.

Overall, the finding for ROA is similar to Tobin's Q which also supports the trade-off theory (Modigliani & Miller, 1963; DeAngelo & Masulis, 1980; Jensen & Meckling, 1976; Haris & Raviv, 1990; Frank & Goyal, 2003), and this theory apparently can also be applied to Islamic debt.

2) The frequency of Islamic debt issuance and ROA

Column III (REG 2) provides the results for the second regression. The coefficients for Islamic debt and non-Islamic debt are a positive and significant at 1% level of significance (see explanation on section one above). The coefficient for Islamic debt first issuance is a positive and significant at 1% level of significance, suggesting that the first issuance of Islamic debt affects firm

performance (ROA). This may indicate that the firm effectively utilises its assets to generate profits, and additional debt, in particular Islamic debt, pushes the management to perform better. Furthermore, cost-competitiveness and efficiency are keys to success in a business, a principle which is also applicable to Islamic finance. Quality, cost-competitiveness and efficiency are important aspects to be observed and to support the demand from consumers. Thus, the long-term growth of firms therefore depend on how the needs of business (and business-minded) people are addressed, on top of being a platform for meeting compliance with Shariah. In this regard, the two important factors that promote cost-competitiveness and efficiency are infrastructure and capacity.

In the beginning of the Islamic finance initiation, Islamic debt offered those competitiveness features, particularly cost effectiveness, secureness and efficiency. As such, the market had high expectations of this new instrument, the upshot of which Islamic debt brought more pressure on managers to manage their firms effectively in order to meet market expectations. Furthermore, apart from being well-regulated by various standards and guidelines, Malaysia is also the only country that makes it compulsory for all tradable corporate debt securities to be rated to enhance investors' confidence and to assist in the investment decision-making process. Another distinguishing factor for the Malaysian Islamic debt market is the establishment of a centralised, national level Shariah supervisory board, which ensures that every Islamic debt issued in Malaysia, is in full compliance with the Shariah. All these factors provide sufficient protection to investors in the Islamic debt and conventional debt markets.

However, the coefficient for the second issuance of Islamic debt is a negative and significant at 5% level of significance, suggesting that the issuance of Islamic debt for the second time declines firm performance. This negative finding is similar to Godlewski et al. (2010), which suggests that Islamic debt expansion has a detrimental effect on firm value. This may indicate that firms issuing Islamic debt failed to meet the expectations of the market as explained above. In addition, the debt rating is a crucial factor; hence it can be suspected that firms failed to meet their high ratings. The Islamic debt rating is an indication of the issuers' credibility; high rating indicates high credibility/creditworthiness and vice versa. Hence, low credit rating is associated as high risk. The gap between the first and the second Islamic debt issuance ranges between two to six years. Presumably, in that time period, investors observed the firm's performance, their Islamic debt rating, the market conditions such as the frequency of default cases of Islamic debt. In Malaysia, cases of Islamic debt default were few and it is something that raises concern on the investors' protection because a default occurs due to the breach of any binding obligations under the original terms of the agreement between the issuer and the sukuk holders. Thus this factor may contribute to the negative result.

Fortunately, the coefficient for more than two issuances of Islamic debt is a positive and significant at 1% level, suggesting that the issuance of Islamic debt more than twice improves a firm's financial performance as measured by ROA. This also suggests that the management is more effective in utilising their assets to generate profits. Furthermore, this finding indicates that as the industry grows, it is more apparent that there is more demand by non-Muslim investors and issuers to play a role in the industry. Here in Malaysia, for instance, there is just as

strong a demand for Shariah compliant products among non-Muslims as there is among Muslims (PricewaterhouseCoopers Malaysia, 2008).

3) The proportion of Islamic debt issued and ROA

Coloum IV (REG 3) provides the results for the third regression. For the third regression, the coefficients for Islamic debt and non-Islamic debt proportion are still a positive and significant. There are also no changes for the frequency of Islamic debt issuance coefficients as discussed in point two above (see explanation in section one and two). The coefficient for the Islamic debt proportion below the average and at the average is a positive and significant at 10% and 1% level of significance, suggesting that the proportion of Islamic debt below and at the average affect positively on firm performance (ROA). This finding is in line with Harris and Raviv (1990), which implies that higher leverage can be expected to be associated with larger firm value, higher debt level relative to expected income, and lower probability of reorganization following default. Moreover, higher leverage can mitigate conflicts between shareholders and managers concerning the choice of investment (Myers, 1977), and a greater financial leverage may affect managers and reduce agency costs through the threat of liquidation, which causes personal losses to managers of salaries, reputation, perquisites, etc. (Grossman & Hart 1982, Williams, 1987).

However the coefficient for Islamic debt above the average is a negative and significant at 1% level of significance, suggesting that the greater the Islamic debt issued, the lower the firm performance. This may indicate that at a certain level, an additional debt gives no guarantee that the firm performance will be higher.

Though it is claimed that Islamic debt is more secure than the conventional debt, this result finds no support for that claim. On the contrary, this finding supports the notion that as the leverage increases, the probability of default also increases, and Islamic debt is no exception to this rule.

4) The type of Islamic debt and ROA

Column V (REG 4) provides the results for all four categories of explanatory variables and all control variables. There are no changes in terms of significance and sign of the coefficients for the debt structure of the firm, the frequency of Islamic debt issued, and the proportion of Islamic debt issued. The changes are only the value of coefficients, but it is a slight change (see explanation on section one, two and three above). The coefficients for debt-type, asset-type and equity-type are a positive and significant at 1% level of significance, suggesting that all debt types affect higher firm performance. Though the finding for ROA is slightly different than for Tobin's Q, this result does not impair on the Tobin's Q result, as it is common for different methods of calculation to give different results.

There is no change for the firm size coefficient, which is a negative and significant for all four regression equations, suggesting that bigger firms which have Islamic debt in their debt structure have a lower firm performance. The negative result may be due to the fact that bigger firms are already well-stabilised in terms of cash flows and profits because of their well-stabilised capital structure, hence changing its capital structure with a new unproven instrument may endanger the firm's credibility and ability to maintain their stable cash flows and profits. Furthermore, apart from year 2004, all the years reveal a significant result.

All the years (2003, 2004, 2005, 2007, 2008, and 2009) have a positive coefficient but year 2001 and year 2006 (see explanation for year effect for Tobin's Q).

Table 5.10: Regression result for group 1

Variables	Dynamic GMM			
	REG_1	REG_2	REG_3	REG_4
L1	0.1848*** (0.0005)	0.1690*** (0.0009)	0.1693*** (0.0009)	0.1547*** (0.0015)
Constant	1.9864*** (0.1067)	0.2088** (0.3597)	0.2583** (0.3574)	0.8463** (0.4264)
The debt structure of the firm				
Islamic Debt Proportion	0.5863*** (0.0398)	1.0279*** (0.0952)	0.8803*** (0.1508)	0.0276** (0.2540)
Non-Islamic Debt Proportion	0.1455*** (0.0150)	0.5133*** (0.0390)	0.5121*** (0.0506)	0.3357*** (0.0544)
The frequency of Islamic debt issuance				
D1_First Issuance	-	(Omitted)	(Omitted)	(Omitted)
D2_Second Issuance	-	-0.4039*** (0.1200)	-0.3710*** (0.1229)	-0.7018*** (0.2332)
D3_More Than 2 Issuance	-	1.3812*** (0.0721)	1.3690*** (0.0825)	1.2480*** (0.1135)
The proportion of Islamic debt issued				
D1_ID Below Average	-	-	0.0900*** (0.0103)	0.1319* (0.1146)
D2_ID Average	-	-	(Omitted)	(Omitted)
D3_ID Above Average	-	-	-0.0327*** (0.0076)	-0.0135** (0.1266)
The type of Islamic debt issued				
D1_Debt Type of ID	-	-	-	(Omitted)
D2_Asset Type of ID	-	-	-	0.3337 (0.2695)
D3_Equity Type of ID	-	-	-	1.0458*** (0.0532)
Control Variables				
Size effect				
Firm Size	-0.3470*** (0.0164)	-0.1373** (0.0619)	-0.1297** (0.0614)	-0.2354*** (0.0654)
Year effect				
Year 2001	-0.1313*** (0.0204)	-0.2070*** (0.0600)	-0.1655** (0.0760)	-0.5066*** (0.1019)
Year 2003	-0.6633*** (0.1134)	-0.2180*** (0.0836)	-0.1938** (0.0921)	-0.0786* (0.0433)
Year 2004	0.1487*** (0.0371)	0.1698*** (0.0528)	0.2040*** (0.0420)	0.3969*** (0.0657)
Year 2005	0.2590*** (0.0196)	0.1235*** (0.0135)	0.1272*** (0.0135)	0.0981*** (0.0159)
Year 2006	-0.0305*** (0.0044)	-0.1357*** (0.0182)	-0.1527*** (0.0184)	-0.0392*** (0.0078)
Year 2007	-0.2825*** (0.0241)	-0.0930*** (0.0225)	-0.1276*** (0.0315)	-0.0889*** (0.0298)
Year 2008	0.7144*** (0.0153)	0.9287*** (0.0660)	0.9454*** (0.0750)	0.8061*** (0.1146)
Year 2009	0.3970* (0.1233)	0.7791** (0.6834)	0.1835 (0.6973)	0.7980** (2.8289)
J-Statistics	5.05e+06	155326.13	601078.69	1.27e+06
Chi2	0.0000	0.0000	0.0000	0.0000

*** Sig. at 1% significance level, **Sig. at 5% significance level, *Sig. at 10% significance level. Standard error is in parentheses

1) The debt structure of the firm and ROE

Column II (REG 1) provides the result for the first regression. The coefficient of Islamic debt and non-Islamic debt are positive and significant at a 1% level of significance, indicating that these variables have a positive effect on the firm's financial performance. This finding suggests that firms are effective in managing their operation efficiency which in the end contributes to the owners' wealth because ROE measures the performance from the perspective of the equity-holders. From the point of view of shareholders, the usage of debt increases their wealth, and because of this, markets believe that Islamic debt positively contributes to the firm performance. Moreover, Islamic debt issuance contributes to an increase in the issuers' total factor productivity (Nagano, n.d.). Furthermore, the positive result may be due to the stabilised nature of the Malaysian financial system which has evolved in line with the changing structure of the economy. The changes in the economic structure and financial system in turn have had an important influence in shaping the increasing complexity and sophisticated nature of its capital market along with the implementation of regulations, and these changes support firms to operate more effectively and efficiently, increasing the confidence of markets. Moreover, a more diversified financial system, in particular, the rapid growth of the Malaysian Islamic Capital Market and the Malaysian debt market, has increased the alternative sources of financing available to corporations.

The coefficient for Islamic debt is higher than the coefficient for non-Islamic debt, suggesting that the Islamic debt contributes more to improve the financial performance of firms than non-Islamic debt. The result for ROE is in line with the

result for Tobin's Q. Overall, this finding also supports the trade-off theory (Modigliani & Miller, 1963; DeAngelo & Masulis, 1980; Jensen & Meckling, 1976; Haris & Raviv, 1990; Frank & Goyal, 2003).

2) The frequency of Islamic debt issuance and ROE

Column III (REG 2) provides the results for the second regression. There is no change for the result of Islamic debt and non-Islamic debt coefficients which are positive and significant at 1% level of significance (see explanation on section one). The coefficient for the first issuance of Islamic debt is a positive and significant at 1% level of significance, suggesting that the first issuance of Islamic debt affects firm performance (ROE). This also may indicate that managers are effective in utilising their resources to generate profits for the shareholders. There are several factors that might contribute to this positive finding. First, there is a broad based coordination of government policies which resulted in a comprehensive public policy that supports growth and innovation in the Islamic financial market, in particular, Islamic debt. Second, the importance of government intervention, such as tax incentives and required ratings improves issuers' and investors' confidence.

The rapid growth of Islamic finance signifies that Islamic debt has moved from the pioneering stage to being an established financing instrument that serves as a commercially viable and effective tool for mobilising investment assets to finance productive economic activities. However, the coefficient for the second issuance of Islamic debt is a negative and significant at 1% level of significance, suggesting that the issuance of Islamic debt for the second time declines firm

performance (ROE). This negative finding is similar to Godlewski et al. (2010) which suggests that Islamic debt expansion has a detrimental effect on firm value. As mentioned before, the time period between the first and the second Islamic debt issuance ranges between two to six years. During this time frame, there were a few cases of Islamic debt defaults, both global and domestic, which have put a damper on the issuance of new sukuk and decreased market confidence. In addition, the economic slowdown created unfavourable conditions for the firms, thus affecting firm performance.

Fortunately, the coefficient for more than two issuances of Islamic debt is a positive and significant at 1% level, suggesting that the issuance of Islamic debt more than twice improves a firm's financial performance, as measured by ROE. It indicates that at a certain level, experiences from past failure increases the pressure on managers to improve their performance to generate profits, which in turn may attract more investors and market confidence.

3) The proportion of Islamic debt issued and ROE

Coloum IV (REG 3) provides the results for the third regression. For the third regression, the coefficients for Islamic debt and non-Islamic debt proportion are still a positive and significant. There are also no changes for the frequency of Islamic debt issuance coefficients as discussed in point two above (see explanation on section one and two). The coefficients for the Islamic debt proportion below the average and at the average are a positive and significant at 1% level of significance. However, the greater the Islamic debt, the lower the firm performance, as can be seen from the coefficient for Islamic debt above the

average which is a negative and significant at 1% level of significance. This negative finding may be caused by the general structure of Islamic financing which requires sharing of risks and profits in some pre-agreed ratios. Therefore, the greater the Islamic debt proportion, the greater the chances of sharing the risks and profits. Overall, the result for Islamic debt proportion is similar to the Tobin's Q and ROA result; therefore, the reasons for this positive result will be similar to two previous metrics provided previously.

4) The type of Islamic debt and ROE

Column V (REG 4) provides the results for all four categories of explanatory variables and all control variables. There are no changes in terms of significance and sign for the debt structure of the firm, the frequency of Islamic debt issued, the proportion of Islamic debt issued, but only slight changes on the coefficients value (see explanation on section one, two and three above). The coefficients for debt-type and equity-type are a positive and significant at 1% level of significance, while the coefficient for asset-type is a positive but not significant, suggesting that debt-type and equity-type are more favourable than asset-type. This may indicate that debt-type and equity-type generates higher firm performance. This result is in line with the result for Tobin's Q.

The coefficient for firm size is a negative and significant for all four regression equations, suggesting that bigger firms which have Islamic debt in their debt structure have a lower firm performance. The negative result may be due to the fact that bigger firms are already well-stabilised in terms of cash flows and profits because of their well-stabilised capital structure, hence changing its capital

structure with a new unproven instrument may endanger the firm's credibility and ability to maintain their stable cash flows and profits.

Results for the year effect are slightly different than the results for Tobin's Q and ROA. All the coefficients are significant, however, the coefficients for year 2001, 2003, 2006 and 2007 are a negative, while for Tobin's Q and ROA, this is only true for year 2001 and 2006.

Table 5.11: Regression result for group 1

Variables	Dynamic GMM			
	REG_1	REG_2	REG_3	REG_4
L1	0.0514*** (0.0020)	0.0599*** (0.0030)	0.0623*** (0.0021)	0.0697*** (0.0030)
Constant	0.5476*** (0.0727)	0.7202*** (0.0750)	0.5483*** (0.1290)	1.0153*** (0.1389)
The debt structure of the firm				
Islamic Debt Proportion	0.5909*** (0.1465)	0.0725** (0.0600)	0.0939** (0.2331)	0.6051*** (0.2005)
Non-Islamic Debt Proportion	0.1233*** (0.0301)	0.1165*** (0.0305)	0.0905*** (0.0360)	0.0430** (0.0434)
The frequency of Islamic debt issuance				
D1_First Issuance	-	(Omitted)	(Omitted)	(Omitted)
D2_Second Issuance	-	-0.6563*** (0.0509)	-0.6411*** (0.0488)	-0.5815*** (0.0839)
D3_More Than 2 Issuance	-	0.0797*** (0.0268)	0.0655** (0.0332)	0.0914*** (0.0293)
The proportion of Islamic debt issued				
D1_ID Below Average	-	-	0.1530*** (0.0430)	0.1319*** (0.0344)
D2_ID Average	-	-	(Omitted)	(Omitted)
D3_ID Above Average	-	-	-0.1237*** (0.0298)	-0.1314*** (0.0167)
The type of Islamic debt issued				
D1_Debt Type of ID	-	-	-	(Omitted)
D2_Asset Type of ID	-	-	-	0.7865*** (0.0416)
D3_Equity Type of ID	-	-	-	0.2646*** (0.0580)
Control Variables				
Size effect				
Firm Size	-0.0408*** (0.0124)	-0.1028*** (0.0142)	-0.0979*** (0.0236)	-0.1896*** (0.0276)
Year effect				
Year 2001	0.3780*** (0.0641)	0.3483*** (0.0808)	0.3127*** (0.1088)	0.7437*** (0.1477)
Year 2003	-0.1654*** (0.0219)	-0.1098*** (0.0203)	-0.0859*** (0.0259)	-0.0424* (0.0797)
Year 2004	-0.1292*** (0.0149)	-0.1080*** (0.0147)	-0.1110*** (0.0143)	-0.0567*** (0.0136)
Year 2005	-0.0370*** (0.0109)	-0.0121*** (0.0050)	-0.0004 (0.0108)	-0.0422*** (0.0121)
Year 2006	-0.1236*** (0.0157)	-0.0738*** (0.0270)	-0.0542*** (0.0183)	-0.0485 (0.0796)
Year 2007	0.3288*** (0.0128)	0.3559*** (0.0231)	0.3513*** (0.0383)	0.2466*** (0.0340)
Year 2008	0.0386** (0.0141)	0.0140 (0.1201)	0.0829** (0.1352)	0.0109 (0.0102)
Year 2009	-0.2970* (0.1758)	-0.5345** (0.2513)	-0.6176*** (0.1880)	-0.5079*** (0.1208)
J-Statistics	24781.31	77498.33	60713.80	200949.84
Chi2	0.0000	0.0000	0.0000	0.0000

*** Sig. at 1% significance level, **Sig. at 5% significance level, *Sig. at 10% significance level. Standard error is in parentheses

1) The debt structure of the firm and EVA

Column II (REG 1) provides the regression result for the first regression. The coefficients for Islamic debt and non-Islamic debt are a positive and significant at 1% level of significance, indicating that these two variables have a positive effect on the firm's financial performance. EVA is performance evaluation measure and is calculated as being the net operating profit after taxes less the cost of the capital of both equity and debt employed to produce those profits. Since EVA is the excess money remaining after the cost of the capital (both equity and debt), a tax exemption of Islamic debt supports the higher EVA, since there is no tax deduction for the profit obtained from the Islamic debt project. One of the important sets of tax incentives in Malaysia is comprised of stamp duty waivers for Islamic securities, bonds and financings, and these waivers put the Islamic debt sector on an equal footing with the traditional debt sector, and may even create a marginal advantage. Thus, the positive result may indicate that Islamic debt, which is mostly based on the projects, creates value to the business, and in the end it adds value for shareholders. Furthermore, the positive result may be also helped by the government's supportive influence over the growth and integrity of the market in Malaysia. For example, all new securities are issued with a rating from an approved rating agency.

The coefficient for Islamic debt is higher than the coefficient for non-Islamic debt, suggesting that Islamic debt contributes more to the improvement of a firm's financial performance than non-Islamic debt. This finding is similar to the result for Tobin's Q, ROA and ROE. Overall, this finding for EVA also supports the

trade-off theory (Modigliani & Miller, 1963; DeAngelo & Masulis, 1980; Jensen & Meckling, 1976; Haris & Raviv, 1990; Frank & Goyal, 2003).

2) The frequency of Islamic debt issuance and EVA

Column III (REG 2) provides the results for the second regression. The coefficients for Islamic debt and non-Islamic debt are a positive and significant at 1% level of significance (see explanation from section one above). The coefficient for the first issuance of Islamic debt is a positive and significant at 1% level of significance, suggesting that the first issuance of Islamic debt affects higher firm performance. This may indicate that Islamic debt brings more economic profit to the company because the return on the firm's economic capital employed is greater than the cost of bearing Islamic debt. The credit rating of Islamic debt issued in Malaysia may also contribute to the positive finding in this study. Malaysia is one of the first few countries in the world to require the recognition of a credit rating agency for the purpose of rating a debt or Islamic debt issue. This is in recognition of their vital role in evaluating the probability of default of Islamic debt issue, and the importance investors place on ratings for their investment decisions. The credit rating agency is required to be recognised by the Securities Commission for the purpose of rating debt or Islamic debt issues in Malaysia, pursuant to the guidelines on recognition of credit rating agencies by the securities commission for the purpose of rating debt issues.

However, the coefficient for the issuance of Islamic debt for the second time is a negative and significant at 1% level of significance, suggesting the second issuance of Islamic debt decreases firm performance. This may indicate that the issuance of Islamic debt for the second time creates no value to the business, and

in the end it decreases the value for shareholders. This negative finding is similar to Godlewski et al. (2010) which suggests that Islamic debt expansion has a detrimental effect on firm value. As mentioned before, the gap between the first and the second issuance of Islamic debt ranges between two to six years. During this gap, the firm may experience lower firm performance due to factors such as an economic slowdown, asset price bubbles, inflation, etc. Those conditions may affect the firms' operating business and in the end affect the credit rating of Islamic debt because most of the Islamic debt is based on the project. Thus, a rating is not a recommendation to purchase, sell or hold a security's market price or its suitability for a particular investment. Fortunately, the coefficient for more than two issuances of Islamic debt is a positive and significant at 1% level, suggesting that more than two issuances of Islamic debt improved a firm's financial performance, as measured by EVA.

3) The proportion of Islamic debt issued and EVA

Coloum IV (REG 3) provides the results for the third regression. The coefficients for Islamic debt and non-Islamic debt proportion are still a positive and significant. There are also no changes for the frequency of Islamic debt issuance coefficients as discussed in point two above (see explanation on section one and two above). The coefficients for the Islamic debt proportion below the average and at the average are a positive and significant at 1% level of significance, suggesting that the proportion of Islamic debt below and at the average creates value to the business. However, the greater the Islamic debt, the lower the firm performance, as can be seen from the coefficient for Islamic debt proportion above the average, which is a negative and significant at 1% level of significance. This may indicate

that at a certain level, an additional debt gives no guarantee that the firm performance will be higher. Furthermore, EVA is calculated by subtracting the net profit with its cost of capital, which means the greater the debt proportion, the higher the cost of capital that has to be paid.

4) The type of Islamic debt and EVA

Column V (REG 4) provides the results for all four categories of explanatory variables and all control variables. There are no changes of the coefficients in terms of significance and sign for the debt structure of the firm, the frequency of Islamic debt issuance, the proportion of Islamic debt issued, but only slight changes on the coefficients value (see explanation on section one, two and three above). The coefficients for debt-type, asset-type and equity-type are a positive and significant at 1% level of significance, suggesting that all debt types affect higher firm performance.

The coefficient for firm size is a negative and significant for all four regression equations, suggesting that bigger firms which have Islamic debt in their debt structure have a lower firm performance. The negative result may be due to the fact that bigger firms are already well-stabilised in terms of cash flows and profits because of their well-stabilised capital structure, hence changing its capital structure with a new unproven instrument may endanger the firm's credibility and ability to maintain their stable cash flows and profits.

The results for the year effect are slightly different than the results for Tobin's Q, ROA and ROE. All the coefficients are significant, however, only the coefficients

for year 2004, 2005, 2006 and 2009 are a negative; meanwhile for Tobin's Q and ROA, only year 2001 and 2006 are negative and significant, and similarly, year 2001, 2003, 2006 and 2007 for ROE.

Table 5.12 provides the summary of the regression results for four dependent variables. For all four regression equations, there are only slightly differences in the coefficient value. Almost all the coefficient signs and significance values reveal the same direction and a similar significance value.

In sum, the findings for all four categories of explanatory variables along with their control variables for all metrics (Tobin's Q, ROA, ROE and EVA) are almost identical. The coefficients for Islamic debt is higher than the coefficient for non-Islamic debt and, overall, the findings for Tobin's Q, ROA, ROE and EVA support the trade-off theory (Modigliani & Miller, 1963; DeAngelo & Masulis, 1980; Jensen & Meckling, 1976; Haris & Raviv, 1990; Frank & Goyal, 2003) and this theory apparently can also be applied to Islamic debt.

Table 5.12: Summary of the regression result for group 1

Variables	Dynamic GMM			
	Tobin's Q	ROA	ROE	EVA
L1	0.5742*** (0.0174)	0.1220*** (0.0041)	0.1547*** (0.0015)	0.0697*** (0.0030)
Constant	0.3180*** (0.0988)	8.7500*** (0.0410)	0.8463** (0.4264)	1.0153*** (0.1389)
The debt structure of the firm				
Islamic Debt Proportion	0.7441*** (0.0723)	0.0159*** (0.0025)	0.0276** (0.2540)	0.6051*** (0.2005)
Non-Islamic Debt Proportion	0.5372*** (0.0159)	0.0177*** (0.0015)	0.3357*** (0.0544)	0.0430** (0.0434)
The frequency of Islamic debt issuance				
D1_First Issuance	(Omitted)	(Omitted)	(Omitted)	(Omitted)
D2_Second Issuance	-0.0961* (0.0951)	-0.0774*** (0.0140)	-0.7018*** (0.2332)	-0.5815*** (0.0839)
D3_More Than 2 Issuance	0.2090*** (0.0562)	0.0323*** (0.0026)	1.2480*** (0.1135)	0.0914*** (0.0293)
The proportion of Islamic debt issued				
D1_ID Below Average	0.0006* (0.0129)	0.0181*** (0.0010)	0.1319* (0.1146)	0.1319*** (0.0344)
D2_ID Average	(Omitted)	(Omitted)	(Omitted)	(Omitted)
D3_ID Above Average	-0.0248** (0.0111)	-0.0036*** (0.0010)	-0.0135** (0.1266)	-0.1314*** (0.0167)
The type of Islamic debt issued				
D1_Debt Type of ID	(Omitted)	(Omitted)	(Omitted)	(Omitted)
D2_Asset Type of ID	0.0423 (0.1076)	0.0250*** (0.0074)	0.3337 (0.2695)	0.7865*** (0.0416)
D3_Equity Type of ID	0.1764* (0.1049)	0.0346*** (0.0027)	1.0458*** (0.0532)	0.2646*** (0.0580)
Control Variables				
Size effect				
Firm Size	-0.0844*** (0.0142)	-0.0040*** (0.0005)	-0.2354*** (0.0654)	-0.1896*** (0.0276)
Year effect				
Year 2001	-1.5848* (0.9510)	-0.0169* (0.0097)	-0.5066*** (0.1019)	0.7437*** (0.1477)
Year 2003	0.0458*** (0.0098)	0.0092*** (0.0024)	-0.0786* (0.0433)	-0.0424* (0.0797)
Year 2004	0.0130 (0.0109)	0.0173*** (0.0019)	0.3969*** (0.0657)	-0.0567*** (0.0136)
Year 2005	0.0171*** (0.0048)	0.0058*** (0.0014)	0.0981*** (0.0159)	-0.0422*** (0.0121)
Year 2006	-0.0346*** (0.0072)	-0.0018*** (0.0003)	-0.0392*** (0.0078)	-0.0485 (0.0796)
Year 2007	0.1160*** (0.0177)	0.0080*** (0.0020)	-0.0889*** (0.0298)	0.2466*** (0.0340)
Year 2008	0.0397* (0.0236)	0.0017*** (0.0006)	0.8061*** (0.1146)	0.0109 (0.0102)
Year 2009	0.0587** (0.0294)	0.0048*** (0.0019)	0.7980** (2.8289)	-0.5079*** (0.1208)
J-Statistics	21514.85	78177.74	1.27e+06	200949.84
Chi2	0.0000	0.0000	0.0000	0.0000

*** Sig. at 1% significance level, **Sig. at 5% significance level, *Sig. at 10% significance level. Standard error is in parentheses

5.4.2 PANEL CORRECTED STANDARD ERROR REGRESSION RESULTS FOR GROUP 2

Table 5.13, Table 5.14 and Table 5.15 present the regression result. There are three dependent variables: Tobin's Q, ROA and ROE. Similar to the regression process for group 1, there are four regression equations. REG 1 is the first regression equation which regresses only the debt structure of the firm. REG 2 is the second regression equation which regresses the debt structure of the firm and the frequency of Islamic debt issuance. REG 3 is the third regression equation which regresses the debt structure of the firm, the frequency of Islamic debt issuance and the proportion of Islamic debt issued. REG 4 is the fourth regression equation which regresses all explanatory variables. That means for the REG 2, REG 3 and REG 4, more explanatory variables are added into the regression equation to observe the changes of the coefficient and standard errors.

There is no debt-type of Islamic debt for group 2. This is due to the fact that Indonesian Islamic scholars seem to be more prudent in implementing Islamic law principles into Islamic finance. Indonesian Islamic scholars tend to have similar views to Middle East scholars even though Indonesian scholars have the same school of thought as Malaysian scholars, which is the Syafi'i madzhab. Therefore, the debt-type contract is prohibited as this type of debt is considered a pure debt, which is similar to money. Consequently, this debt-type should not be used in structuring transactions.

Table 5.13: Regression result for group 2

Variables	PCSE			
	REG_1	REG_2	REG_3	REG_4
Constant	14.2852*** (0.9767)	13.8775*** (0.9536)	13.7643*** (0.9887)	12.1986*** (1.0423)
The debt structure of the firm				
Islamic Debt Proportion	22.1151** (10.9539)	20.2015** (10.6730)	7.8141* (21.3378)	13.0124* (21.6586)
Non-Islamic Debt Proportion	-0.2034 (0.5277)	-0.3449 (0.6206)	-0.3163 (0.6207)	-0.3963 (0.6349)
The frequency of Islamic debt issuance				
D1_First Issuance	-	(Omitted)	(Omitted)	(Omitted)
D2_Second Issuance	-	-0.2625* (0.2054)	-0.2569* (0.2035)	-0.5259** (0.2569)
The proportion of Islamic debt issued				
D1_ID Below Average	-	-	0.2619 (0.3565)	0.2260 (0.3578)
D2_ID Average	-	-	(Omitted)	(Omitted)
D3_ID Above Average	-	-	(Omitted)	(Omitted)
The type of Islamic debt issued				
D1_Debt Type of ID	-	-	-	-
D2_Asset Type of ID	-	-	-	(Omitted)
D3_Equity Type of ID	-	-	-	0.4784*** (0.1185)
Control Variables				
Size effect				
Firm Size	-2.0481*** (0.1422)	-1.9707*** (0.1532)	-1.9980*** (0.1513)	-1.7834*** (0.1692)
Year effect				
Year 2003	1.3892*** (0.2291)	1.3091*** (0.2254)	1.3308*** (0.2255)	1.4234*** (0.2180)
Year 2004	0.5260*** (0.1539)	0.4770*** (0.1728)	0.4607*** (0.1749)	0.4472*** (0.1756)
Year 2005	-0.4121*** (0.1030)	-0.4726*** (0.1407)	-0.4902*** (0.1443)	-0.7130*** (0.1881)
Year 2007	-0.2230 (0.2890)	-0.3200 (0.3403)	-0.3221 (0.3395)	-0.1215 (0.2882)
Year 2008	-0.0221 (0.1320)	-0.0208 (0.1299)	-0.0043 (0.1298)	-0.0266 (0.1298)
Year 2009	0.1998 (1.2422)	0.1183 (1.2511)	0.1170 (1.2488)	0.1231 (1.2680)
R-squared	0.2871	0.2881	0.2886	0.2973
Wald chi2, Prob.>chi2	0.0000	0.0000	0.0000	0.0000

*** Sig. at 1% significance level, **Sig. at 5% significance level, *Sig. at 10% significance level. Standard error is in parentheses

1) The debt structure of the firm and Tobin's Q

Column II (REG 1), the coefficient for Islamic debt, is a positive and significant at 5% level of significance, indicating that Islamic debt affects positively on firm

performance. Meanwhile the coefficient for non-Islamic debt is a negative but not significant. This positive and significant finding for Islamic debt supports the trade-off theory (Modigliani & Miller, 1963; DeAngelo & Masulis, 1980; Jensen & Meckling, 1976; Haris & Raviv, 1990; Frank & Goyal, 2003), but in contrast with the study by Ang, Fatemi and Tourani-Rad (1997) which finds weak support for the trade-off theory for Indonesia. Furthermore, this finding is consistent with previous studies in revealing that there is a positive relationship between capital structure and firm performance as measured (Champion, 1999; Gosh et al., 2000; Hadlock & James, 2002; Frank & Goyal, 2003; Berger & Bonnarccorsi di Patti, 2006) and this theory apparently can also be applied to Islamic debt. As a Muslim-majority country – about 85% of the 230 million are Muslim – Indonesia offers bright prospects for the development of the Islamic financial industry. After a huge hit to the economic and financial sector in 1997, much progress has been achieved in reconstructing the economy, including the stabilisation of the economic growth and inflation. This stabilised economic condition promises good prospects in the future for the industry in sustaining businesses through a lower cost of financing. When new Islamic instruments were offered, in particular Islamic debt, the markets perceived them positively. This demonstrates that the Indonesian corporate sector regards Islamic debt as a potential and feasible alternative for use in overall corporate asset and liabilities management. This finding is similar to the result for group 1. The result, however, for non-Islamic debt is different from group 1 in that the coefficient for non-Islamic debt is a negative but not significant, indicating that non-Islamic debt has no impact on firm performance. It can be concluded that Islamic debt has a significant impact compared to non-Islamic debt.

2) The frequency of Islamic debt issuance and Tobin's Q

Column III (REG 2) provides the results for the second regression. There is no change of the coefficient sign and coefficient significance for Islamic debt and non-Islamic debt (see explanation in section one above). The coefficient for the first issuance of Islamic debt is a positive and significant at 1% level of significance, suggesting that the first issuance of Islamic debt affects positively on firm performance. Apart from being a new debt instrument (typically, new instruments are well received initially), Islamic debt has been one of several investment instruments that individual/corporate investors find attractive, giving comparable, or sometimes higher, returns compared with bank deposits' average rates of between four and seven percent per year. Furthermore, the positive result may be due to the fact that Islamic debt pushes the managers of the firms to put more effort into generating more profits because the return for the investors depends on the profit generated from that asset/project. Therefore, it places more pressure on managers to manage their firms effectively, because of the return they have distributed to the investors. As discussed in chapter three, Islamic debt provides profit/return to the investors based on the pre-agreed ratio and profit-loss sharing arrangement. Therefore, losses mean that no returns will be distributed to the investors. If it is the case that the firm generates losses, there are at least two consequences that the firms must bear: first, the rating of the debt decreases, and second, the investors' confidence decreases regarding the firm's prospect. In the end, the investors will try to re-sell it before it matures, and this will impact on both the stock price and debt price of that firm.

However, the coefficient for the second issuance of Islamic debt is a negative and significant at 1% level of significance, suggesting that the second issuance of Islamic debt decreases firm performance. This may be due to the fact that Indonesia's Shariah capital market is not showing the same vigorous growth as the Shariah banking system in Indonesia. Furthermore, in terms of presence on the international Shariah capital market, Indonesia lags far behind Malaysia, another Muslim-majority country, although Indonesia potentially has a tremendous opportunity to build its share of that market. In addition, the obstacles and challenges confronting Indonesia in the development of the Shariah financial market are indeed formidable.

The issues involved are multi-faceted. Most important, however, is the inadequate legal framework, institutional structures, supervision, limitations in human resources, taxation problems, risk management and mitigation, a small market share compared to conventional financial products, and the lack of a secondary market. These issues may compel firms to perform well as the markets may doubt whether firms issuing Islamic debt are capable of overcoming those challenges and generating profits. Therefore, the further establishment of institutional infrastructure and standard-setting and regulatory bodies will be an important point. The aim should be to find ways to align standards in the conventional finance industry with those in the Islamic sector to create global finance offerings that meet Shariah requirements as well as the needs of all users of finance. In addition, more human resources will be required to meet the expertise, experience and talent-pool demands that will be faced by the industry to sustain anticipated

long-term growth. This means training programs for all players and increasing the number of effective shariah scholars.

3) The proportion of Islamic debt issued and Tobin's Q

Column IV (REG 3) provides the results for the third regression. The coefficients for Islamic debt and non-Islamic debt proportion are still a positive and significant. There are also no changes for the frequency of Islamic debt issuance coefficients (see explanation on section one and two). The coefficient for the Islamic debt proportion below the average is a positive but not significant, suggesting that a smaller amount of Islamic debt has no impact on firm performance. According to Indonesia Capital Market Law, there are four types of costs firms must bear when issuing both corporate debt and Islamic corporate debt: first, market costs such as stamp duty, and brokerage fee, second, registration costs, third, listing fees and fourth, other costs such as the cost of clearing depository fees. Moreover, unlike Malaysia that exempts both issuers and investors from taxes, Indonesia charges 15% to 20% tax on debt, in particular capital gain tax (CGT), therefore, issuing a small amount of debt brings more costs.

The coefficient for Islamic debt proportion at the average is a positive and significant at 1% level of significance. The result may indicate that the greater the Islamic debt, the higher the firm performance; as can be seen from the change in coefficient significance from no impact on firm performance when the Islamic debt issued was below the average to affecting higher firm performance when the Islamic debt issued was at the average. This finding can be better explained by asymmetric information theory (Ross, 1977). According to this theory, investors

consider larger debt levels as a signal of higher quality, because managers of low-quality firms do not imitate higher-quality firms by issuing more debt. Moreover, lower-quality firms have higher marginal expected bankruptcy costs for any level of debt. The result for Islamic debt above the average is omitted automatically due to collinearity.

4) The type of Islamic debt and Tobin's Q

Column V (REG 4) provides the results for all four categories of explanatory variables and all control variables. There are no changes in terms of significance and sign for the debt structure of the firm, the frequency of Islamic debt issued, the proportion of Islamic debt issued, but only slight changes on the coefficients value (see explanation on section one, two and three). For group 2, there are only two types of Islamic debt issued during the sample period: asset-type and equity-type, which count 71.43% and 28.57% respectively. The coefficient for asset-type and equity type is a positive and significant at 1% level of significance, suggesting that the asset-type and equity-type affect higher firm performance. The way that Islamic finance and, in particular, Islamic debits unique is the focus on linking financing to an underlying tangible asset. However, there is often a wide gap between this idea and the reality of what investors can expect during a bankruptcy. Most Islamic debts provide investors with the right to recourse only through an asset that is held in trust by the issuer's special purpose vehicle (SPV). This provides both benefits and costs for investors. On the one hand, there is an asset that can be sold by investors to recover some principal that is insulated from claims by the issuers' other creditors. On the other hand, most Islamic debts are structured so that investors do not have recourse to the issuers' other assets and

recovery of principal is solely determined by either a repurchase by the issuer or a sale of the underlying assets.

The coefficient for firm size is a negative and significant for all four regression equations, suggesting that bigger firms which have Islamic debt in their debt structure have a lower firm performance. The negative result may be due to the fact that bigger firms, for example Indosat, Bakrie, Berlian, Mayora Indah, Aneka Gas are the top and large firms in their respective sectors, are already highly stable in terms of cash flows and profits because of their well-stabilised capital structure. As such, changing their capital structure by introducing a new unproven instrument may risk the firm's credibility and ability to maintain their stable cash flows and profits.

Only the coefficients for year 2003, 2004 and 2005 are significant. However, only the coefficient for year 2005 is a negative. That means year 2007, 2008 and 2009 have no significant impact in affecting firm performance. The positive and significant result for year 2003 and 2004 might be due to the fact that there was an expansion or an increase in business activities in 2003 and 2004. A raised domestic demand has been an important cause factor of the expansion. On this particular survey period, the expansion was seemingly related to the seasonal factors as well. Moreover, in the agriculture sector, there was a good rice harvest in a wide spread of production areas as the longer rainy season had a positive impact to paddy field production. Other factors contributing to the expansion included the stable market situation, the calm social-political conditions, and the slow but steady increase of banking in the sub sector operation. Evaluated by

sector, all nine sectors experienced expansion, with the biggest contribution coming from the finance sector and services sector, followed by the agriculture sector and trade, hotel and restaurant sector. Indication of increases in business activities was also reflected by the improvement of the production capacity variable, the volume of domestic or foreign demand/order/contract, company financial condition, business situation, selling price/ tariff/ wholesale/interest rate, agricultural product supply and the usage of labour. For year 2005, though there was business activity expansion as shown by its positive business survey index, this was still slower than the previous year (Indonesian Bank, 2003, 2004 and 2005).

In conclusion, the more variables added to the regression equation, the more significant the results and the higher the coefficient.

Table 5.14: Regression result for group 2

Variables	PCSE			
	REG_1	REG_2	REG_3	REG_4
Constant	57.1750** (26.5882)	64.6327** (31.1487)	64.5055** (29.8314)	58.1687** (30.30046)
The debt structure of the firm				
Islamic Debt Proportion	33.0070* (297.7084)	22.2358* (298.7783)	11.6814* (649.9596)	9.3563* (616.498)
Non-Islamic Debt Proportion	-14.3916 (9.1553)	-11.7864 (8.9050)	-11.7543 (8.7100)	-12.0781 (9.4287)
The frequency of Islamic debt issuance				
D1_First Issuance	-	(Omitted)	(Omitted)	(Omitted)
D2_Second Issuance	-	-4.8354* (3.7852)	-4.8418* (5.7985)	-3.7532* (4.8020)
The proportion of Islamic debt issued				
D1_ID Below Average	-	-	0.2942 (8.0907)	0.1491 (7.8630)
D2_ID Average	-	-	(Omitted)	(Omitted)
D3_ID Above Average	-	-	(Omitted)	(Omitted)
The type of Islamic debt issued				
D1_Debt Type of ID	-	-	-	-
D2_Asset Type of ID	-	-	-	(Omitted)
D3_Equity Type of ID	-	-	-	1.9361 (5.6142)
Control Variables				
Size effect				
Firm Size	-8.7613** (4.2442)	-10.1870** (5.1640)	-10.2177* (2.5528)	-9.3496* (5.2432)
Year effect				
Year 2003	13.9040* (7.6121)	15.3780* (8.5667)	15.4021* (8.7997)	15.7773* (9.3636)
Year 2004	6.9886 (8.5381)	6.0872 (8.5231)	6.1057 (8.9045)	6.1600 (8.9862)
Year 2005	-13.5066 (11.5405)	-12.3930 (11.8400)	-12.4129 (11.6280)	-13.3142 (11.8880)
Year 2007	-2.5537 (2.8499)	-4.3424 (4.2000)	-4.3400 (4.2012)	-5.1519 (4.6370)
Year 2008	-3.1363 (2.8378)	-3.1104 (2.8162)	-3.1290 (2.6680)	-3.0388 (2.6630)
Year 2009	2.5602 (2.8712)	4.0611 (3.9698)	4.0596 (3.9743)	3.0880 (5.0709)
R-squared	0.2620	0.2680	0.2680	0.2700
Wald chi2, Prob.>chi2	0.0000	0.0000	0.0000	0.0000

*** Sig. at 1% significance level, **Sig. at 5% significance level, *Sig. at 10% significance level. Standard error is in parentheses

1) The debt structure of the firm and ROA

Column II (REG 1), the coefficient for Islamic debt is a positive and significant at 10% level of significance, indicating that Islamic debt affects positively on firm

performance. This finding supports the trade-off theory (Modigliani & Miller, 1963; DeAngelo & Masulis, 1980; Jensen & Meckling, 1976; Haris & Raviv, 1990; Frank & Goyal, 2003), but is in contrast to the study by Ang, Fatemi and Tourani-Rad (1997), which finds weak support for the trade-off theory for Indonesia. According to the Indonesia Capital Market Law, there are three corporate debts available in Indonesia; corporate debt, corporate Islamic debt and corporate convertible debt. Investors in the Indonesian debt market include corporate and individual bodies, mutual funds, Securities Companies, insurance companies, pension funds, financial institutions, foundations and others. Mutual funds, insurance companies, pension funds, and financial institutions are the largest investors for both conventional and Islamic debt in Indonesia. Corporate debt activities, including conventional and Islamic debt offerings, accelerated significantly at the beginning of 2003 and have maintained momentum since then. Islamic debts, which are based on Shariah principles, play a major role in Indonesian capital markets. This demonstrates that the Indonesian corporate sector regards Islamic debt as a potential and feasible alternative for use in overall corporate asset and liabilities management. This finding is similar to the result for group 1. The result for non-Islamic debt is different to group 1 where the coefficient for non-Islamic debt is a negative but not significant, indicating that non-Islamic debt has no impact on firm performance. This non-significant result for non-Islamic debt is in line with the study done by Adhari and Viverita (2012) which examines the effect of capital structure and ownership structure on firm performance in three ASEAN countries including Indonesia. They find that a firm's capital structure positively and significantly affects its performance in all countries but Indonesia.

2) The frequency of Islamic debt issuance and ROA

Column III (REG 2) provides the results for the second regression. There is no change of the coefficient sign and coefficient significance for Islamic debt and non-Islamic debt (see explanation on section one above). The coefficient for the first issuance of Islamic debt is a positive and significant at 10% level of significance, suggesting that the first issuance of Islamic debt has a positive effect on firm performance. This positive finding might be caused by the positive sentiment from the market toward this new instrument because, after the financial crisis, which hit ASEAN countries including Indonesia, the capital structure of the firms are dominated by short-term debt financing among Indonesian firms (Prasetyantoko, nd.). This might be due to the fact that firms in Asia became more fragile after the crisis. Before the crisis, the debt ratio had an upward trend in both book and market value, and Indonesia is one of the five highest leverage ratios together with South Korea, Thailand, India and Brazil (Prasetyantoko, nd.; Fan et al., 2004). Furthermore, Booth et al. (2001) assert that it is a common phenomenon for the book value of debt to increase during a recession and to decrease during an expansion period due to the business cycle effect.

Therefore, when a new instrument comes to the market, this might prove attractive to the market, and hence the firm issuing such debt has to prove that this new instrument stimulates the firm's performance. Thus, managers have to work harder in utilising the firms' assets to generate profits. Furthermore, the positive result may be due to the fact that Islamic debt pushes the managers of the firms to put more effort into generating more profits because the return for investors depends on the profit generated from that asset/project. As noted previously, this

places more pressure on managers to manage their firms effectively. Chapter three had also discussed how Islamic debt provides profit/returns to the investors based on the arrangement of a pre-agreed ratio and profit-loss sharing. The basic principle of profit and loss sharing is that, instead of lending money at a fixed rate of return, the banker forms a partnership with the borrower sharing in a venture's profits and losses. If the returns are good the profits are shared equitably and this is the case with losses as well. So the return to investors depends on the productivity of the investment, and nothing is pre-fixed.

The coefficient for the second issuance of Islamic debt is a negative and significant at 10% level of significance, suggesting that the issuance of Islamic debt for the second time lowers a firm's performance (see explanation on section two for Tobin's Q group 2).

3) The proportion of Islamic debt issued and ROA

Coloum IV (REG 3) provides the results for the third regression. For the third regression, the coefficients for Islamic debt and non-Islamic debt proportion are still a positive and significant. There are also no changes for the frequency of Islamic debt issuance coefficients (see explanation section one and two above). The coefficient for the Islamic debt proportion below the average is a positive but not significant, suggesting that a smaller amount of Islamic debt has no impact on firm performance. According to Indonesia Capital Market Law, there are four types of costs firms must bear when issuing both corporate debt and Islamic corporate debt: first, market costs such as stamp duty and brokerage fee, second, registration costs, third, listing fees, and fourth, other costs such as the cost of

clearing depository fees. Moreover, unlike Malaysia, which exempts both issuers and investors from taxes, Indonesia charges 15% to 20% tax on debt, in particular, capital gain tax (CGT). Therefore, issuing a small amount of debt incurs more costs. This finding is in contrast with group 1.

The coefficient for Islamic debt proportion at the average is a positive and significant at 5% level of significance. The result may indicate that the greater the Islamic debt, the higher the firm performance; as can be seen from the coefficient significance change from no impact on firm performance when the Islamic debt issued was below the average to generating the higher performance of firms when the Islamic debt issued is at the average. This finding can be better explained by asymmetric information theory (Ross, 1977). According to asymmetric information theory that investors consider larger debt levels as a signal of higher quality, because managers of low-quality firms do not imitate higher-quality firms by issuing more debt. Moreover, lower-quality firms have higher marginal expected bankruptcy costs for any level of debt. The result for Islamic debt above the average is omitted automatically due to collinearity.

4) The type of Islamic debt and ROA

Column V (REG 4) provides the results for all four categories of explanatory variables and all control variables. There are no changes in terms of significance and sign for the debt structure of the firm, the frequency of Islamic debt issued, the proportion of Islamic debt issued, but only slight changes on the coefficients value (see explanation on section one, two and three). In the sample, there are only two types of Islamic debt issued, asset-type and equity-type, which count

71.43% and 28.57% respectively. The coefficient for asset-type is a positive and significant at 5% level of significance, suggesting that asset-type has an impact on firm performance. Meanwhile, the coefficient for equity-type is a positive but not significant, suggesting that equity-type has no impact on firm performance. This finding is slightly different than the result for Tobin's Q, in which both Islamic debt types have a significant impact on firm performance.

The coefficient for firm size is a negative and significant for all four regression equations, suggesting that bigger firms which have Islamic debt in their debt structure have a lower firm performance. The negative result may be due to the fact that bigger firms, for example Indosat, Bakrie, Berlian, Mayora Indah, Aneka Gas, are the top firms in their respective sectors and are already well-stabilised in terms of cash flows and profits due to their well-stabilised capital structure. Hence, changing their capital structure by introducing a new unproven instrument may endanger their credibility and ability to maintain their stable cash flows and profits.

The result for the year effect is different than the result for Tobin's Q where only year 2003 is a significant and positive. The other years have no significant impact in affecting firm performance. The positive and significant result for year 2003 might be due to the fact that there was an expansion or an increase in business activities in 2003 (see explanation on section four for Tobin's Q).

Table 5.15: Regression result for group 2

Variables	PCSE			
	REG_1	REG_2	REG_3	REG_4
Constant	4.4693** (2.3590)	5.2056** (2.6980)	4.8454** (0.4985)	4.2698** (2.0060)
The debt structure of the firm				
Islamic Debt Proportion	25.4311* (24.8610)	27.9517* (24.3276)	61.3609* (47.2832)	59.4498* (44.7229)
Non-Islamic Debt Proportion	-0.5021 (0.7613)	-0.2450 (0.6890)	-0.1540 (0.6549)	-0.1835 (0.7250)
The frequency of Islamic debt issuance				
D1_First Issuance	-	(Omitted)	(Omitted)	(Omitted)
D2_Second Issuance	-	-0.4774** (0.2497)	-0.4955** (0.2615)	-0.6966* (0.2421)
The proportion of Islamic debt issued				
D1_ID Below Average	-	-	0.8332 (0.5432)	0.8200 (0.5260)
D2_ID Average	-	-	(Omitted)	(Omitted)
D3_ID Above Average	-	-	(Omitted)	(Omitted)
The type of Islamic debt issued				
D1_Debt Type of ID	-	-	-	-
D2_Asset Type of ID	-	-	-	(Omitted)
D3_Equity Type of ID	-	-	-	0.1759 (0.4690)
Control Variables				
Size effect				
Firm Size	-0.7225** (0.3723)	-0.8632** (0.4379)	-0.9500** (0.4909)	-0.8710** (0.4076)
Year effect				
Year 2003	1.0072 (0.6725)	1.1528 (0.7434)	1.2213 (0.7871)	1.2554 (0.8577)
Year 2004	0.8825 (0.7713)	0.7935 (0.7567)	0.8457 (0.7808)	0.8507 (0.7865)
Year 2005	-0.2924 (0.1844)	-0.4023* (0.2354)	-0.3461 (0.2183)	-0.2642 (0.1741)
Year 2007	-0.3195** (0.1659)	-0.4960** (0.2545)	-0.4893** (0.2568)	-0.5631* (0.3891)
Year 2008	-0.1530 (0.1774)	-0.1504 (0.1771)	-0.2029 (0.1852)	-0.1947 (0.1739)
Year 2009	0.2003 (0.1706)	0.3485 (0.2479)	0.3440 (0.2501)	0.2559 (0.2527)
R-squared	0.2590	0.2710	0.2910	0.2950
Wald chi2, Prob.>chi2	0.0000	0.0000	0.0000	0.0000

*** Sig. at 1% significance level, **Sig. at 5% significance level, *Sig. at 10% significance level. Standard error is in parentheses

1) The debt structure of the firm and ROE

Column II (REG 1), the coefficient of Islamic debt is a positive and significant at 10% level of significance, indicating that Islamic debt affects positively on firm

performance. This finding supports the trade-off theory (Modigliani & Miller, 1963; DeAngelo & Masulis, 1980; Jensen & Meckling, 1976; Haris & Raviv, 1990; Frank & Goyal, 2003), but is in contrast to the study by Ang, Fatemi and Tourani-Rad (1997), which finds weak support for the trade-off theory for Indonesia. Conversely, the coefficient for non-Islamic debt is a negative but not significant, suggesting that non-Islamic debt has no impact on firm performance. This finding is in line with the findings for Tobin's Q and ROA. Therefore it can be concluded that this finding also supports the trade-off theory. Although Islamic debt has its attractions –low yields, scarce supply, high demand and strong regional prospects are some examples – which may impact on firm performance, there are still concerns that corporate Islamic debt is not performing as well as government issues.

2) The frequency of Islamic debt issuance and ROE

Column III (REG 2) provides the results for the second regression. There is no change of the coefficient sign and coefficient significance for Islamic debt and non-Islamic debt as discussed in part one above. The coefficient for the first issuance of Islamic debt is a positive and significant at 10% level of significance, suggesting that the first issuance of Islamic debt affects positively on firm performance. This finding is also similar with the finding for Tobin's Q and ROA. The positive result might be due to Islamic debt being cheaper and less volatile than conventional issuances, therefore investors favour it. Moreover, Islamic debt gives issuers access to high liquidity and a wide investor base, and hence the management of the firm has a responsibility to boost their performance and generate profits.

The coefficient for the second issuance of Islamic debt is a negative and significant at 10% level of significance, suggesting that the second issuance of Islamic debt lowers firm performance. This finding is also similar with the finding for Tobin's Q and ROA.

3) The proportion of Islamic debt issued and ROE

Coloum IV (REG 3) provides the results for the third regression. The coefficients for Islamic debt and non-Islamic debt proportion are still a positive and significant. There are also no changes for the frequency of Islamic debt issuance coefficients as discussed in point two above. The coefficient for the Islamic debt proportion below the average is a positive but not significant, suggesting that smaller amounts of Islamic debt has no impact on firm performance. As discussed previously, there are considerable costs issuers have to pay in issuing debt and Islamic deb, and if the amounts issued are smaller, then they have to off-set the net benefit of having Islamic debt (see explanation in section three for Tobin's Q and ROA). This finding is in contrast with group 1.

The coefficient for Islamic debt proportion at the average is a positive and significant at 10% level of significance. The result may indicate that the greater the Islamic debt, the higher the firm performance; as can be seen from the coefficient significance change of no impact on firm performance when Islamic debt is issued below the average to generating higher performance in a firm when the Islamic debt is issued at the average. This finding can, again, be better explained by asymmetric information theory. According to asymmetric information theory that investors consider larger debt levels as a signal of higher

quality, because managers of low-quality firms do not imitate higher-quality firms by issuing more debt. Moreover, lower-quality firms have higher marginal expected bankruptcy costs for any level of debt. The result for Islamic debt proportion above the average is omitted automatically due to collinearity.

4) The type of Islamic debt and ROE

Column V (REG 4) provides the results for all four categories for explanatory variables and all control variables. There are no changes in terms of significance and sign for the debt structure of the firm, the frequency of Islamic debt issued, the proportion of Islamic debt issued, but only slight changes on the coefficients value (see explanation on section one, two and three above). In the sample, there are only two types of Islamic debt issued, asset-type and equity-type, which count 71.43% and 28.57% respectively. The coefficient of asset-type is a positive and significant at 5% level of significance, suggesting that asset-type creates higher firm performance. Meanwhile, the coefficient for equity-type is a positive but not significant, suggesting that equity-type has no impact on firm performance. This finding is slightly different than the finding for Tobin's Q.

The coefficient for firm size is a negative and significant for all four regression equations, suggesting that bigger firms which have Islamic debt in their debt structure have a lower firm performance. Again, the negative result may be due to the fact that bigger firms, are already well-stabilised in terms of cash flows and profits because of their well-stabilised capital structure and changing their capital structure with a new unproven instrument may endanger the firm's credibility and ability to maintain their stable cash flows and profits.

For the year effect, only the coefficient for year 2007 is a significant but negative. Although the index of business activities is a positive which indicates there was an expansion of economic activities during the year, the global financial crisis seems to have affected the Indonesian economy and business activities (Indonesian Bank, 2007).

Table 5.16 provides the summary of the regression results for three dependent variables. For all three regression equations, there are only slight differences in the coefficient value. All the coefficient signs and significance values reveal the same direction and slightly similar significance value. In sum, the findings for all three categories of explanatory variables along with their control variables for all metrics (Tobin's Q, ROA and ROE) are almost identical. The Islamic debt has a positive and significant impact on firm performance while non-Islamic debt has no significant impact on firm performance. Overall, the findings for Tobin's Q, ROA and ROE support the trade-off theory (Modigliani & Miller, 1963; DeAngelo & Masulis, 1980; Jensen & Meckling, 1976; Haris & Raviv, 1990; Frank & Goyal, 2003), but are in contrast to the study by Ang, Fatemi and Tourani-Rad (1997), which finds weak support for the trade-off theory for Indonesia. As such, it would appear that the trade-off theory can also be applied to Islamic debt.

Table 5.17 provides the regression summary for group 1 and group 2 using all four categories of explanatory variables and all control variables. The findings for all categories for group 1 are similar to findings for group 2. Moreover, the result for the effect of a firm's size effect is similar for both groups, but this is not the

case for the effect of the year. The different results between group 1 and group 2 for the year effect might be caused by the different policies implemented in each country, the different structure of the market in each nation and of course, the different events happening in each location.

Table 5.16: Summary of the panel corrected standard error regression result for group 2

Variables	PCSE		
	Tobin's Q	ROA	ROE
Constant	12.1986*** (1.0423)	58.1687** (30.30046)	4.2698** (2.0060)
The debt structure of the firm			
Islamic Debt Proportion	13.0124* (21.6586)	9.3563* (616.498)	59.4498* (44.7229)
Non-Islamic Debt Proportion	-0.3963 (0.6349)	-12.0781 (9.4287)	-0.1835 (0.7250)
The frequency of Islamic debt issuance			
D1_First Issuance	(Omitted)	(Omitted)	(Omitted)
D2_Second Issuance	-0.5259** (0.2569)	-3.7532* (4.8020)	-0.6966* (0.2421)
The proportion of Islamic debt issued			
D1_ID Below Average	0.2260 (0.3578)	0.1491 (7.8630)	0.8200 (0.5260)
D2_ID Average	(Omitted)	(Omitted)	(Omitted)
D3_ID Above Average	(Omitted)	(Omitted)	(Omitted)
The type of Islamic debt issued			
D1_Debt Type of ID	(Omitted)	(Omitted)	(Omitted)
D2_Asset Type of ID	(Omitted)	(Omitted)	(Omitted)
D3_Equity Type of ID	0.4784*** (0.1185)	1.9361 (5.6142)	0.1759 (0.4690)
Control Variables			
Size effect			
Firm Size	-1.7834*** (0.1692)	-9.3496* (5.2432)	-0.8710** (0.4076)
Year effect			
Year 2003	1.4234*** (0.2180)	15.7773* (9.3636)	1.2554 (0.8577)
Year 2004	0.4472*** (0.1756)	6.1600 (8.9862)	0.8507 (0.7865)
Year 2005	-0.7130*** (0.1881)	-13.3142 (11.8880)	-0.2642 (0.1741)
Year 2007	-0.1215 (0.2882)	-5.1519 (4.6370)	-0.5631* (0.3891)
Year 2008	-0.0266 (0.1298)	-3.0388 (2.6630)	-0.1947 (0.1739)
Year 2009	0.1231 (1.2680)	3.0880 (5.0709)	0.2559 (0.2527)
R-squared	0.2973	0.2700	0.2950
Wald chi2, Prob.>chi2	0.0000	0.0000	0.0000

*** Sig. at 1% significance level, **Sig. at 5% significance level, *Sig. at 10% significance level. Standard error is in parentheses

Table 5.17: Summary of the regression result for group 1 and group 2

Variables	Tobin's Q		ROA		ROE	
	Group 1	Group 2	Group 1	Group 2	Group 1	Group 2
L1	0.5742*** (0.0174)	-	0.1220*** (0.0041)	-	0.1547*** (0.0015)	-
Constant	0.3180*** (0.0988)	12.1986*** (1.0423)	8.7500*** (0.0410)	58.1687** (30.30046)	0.8463** (0.4264)	4.2698** (2.0060)
The debt structure of the firm						
Islamic Debt Proportion	0.7441*** (0.0723)	13.0124* (21.6586)	0.0159*** (0.0025)	9.3563* (616.498)	0.0276** (0.2540)	59.4498* (44.7229)
Non-Islamic Debt Proportion	0.5372*** (0.0159)	-0.3963 (0.6349)	0.0177*** (0.0015)	-12.0781 (9.4287)	0.3357*** (0.0544)	-0.1835 (0.7250)
The frequency of Islamic debt issuance						
D1_First Issuance	(Omitted)	(Omitted)	(Omitted)	(Omitted)	(Omitted)	(Omitted)
D2_Second Issuance	-0.0961* (0.0951)	-0.5259** (0.2569)	-0.0774*** (0.0140)	-3.7532 (4.8020)	-0.7018*** (0.2332)	-0.6966* (0.2421)
D3_More Than 2 Issuance	0.2090*** (0.0562)	-	0.0323*** (0.0026)	-	1.2480*** (0.1135)	-
The proportion of Islamic debt issued						
D1_ID Below Average	-0.0006 (0.0129)	0.2260 (0.3578)	0.0181*** (0.0010)	0.1491 (7.8630)	0.1319* (0.1146)	-0.8200 (0.5260)
D2_ID Average	(Omitted)	(Omitted)	(Omitted)	(Omitted)	(Omitted)	(Omitted)
D3_ID Above Average	-0.0248** (0.0111)	(Omitted)	-0.0036*** (0.0010)	(Omitted)	-0.0135** (0.1266)	(Omitted)
The type of Islamic debt issued						
D1_Debt Type of ID	(Omitted)	(Omitted)	(Omitted)	(Omitted)	(Omitted)	(Omitted)
D2_Asset Type of ID	0.0423 (0.1076)	(Omitted)	0.0250*** (0.0074)	(Omitted)	0.3337 (0.2695)	(Omitted)
D3_Equity Type of ID	0.1764* (0.1049)	0.4784*** (0.1185)	0.0346*** (0.0027)	1.9361 (5.6142)	1.0458*** (0.0532)	0.1759 (0.4690)
Control Variables						
Size effect						
Firm Size	-0.0844*** (0.0142)	-1.7834*** (0.1692)	-0.0040*** (0.0005)	-9.3496* (5.2432)	-0.2354*** (0.0654)	-0.8710** (0.4076)
Year effect						
Year 2001	-1.5848* (0.9510)	-	-0.0169* (0.0097)	-	-0.5066*** (0.1019)	-
Year 2003	0.0458*** (0.0098)	1.4234*** (0.2180)	0.0092*** (0.0024)	15.7773* (9.3636)	-0.0786* (0.0433)	1.2554 (0.8577)
Year 2004	0.0130 (0.0109)	0.4472*** (0.1756)	0.0173*** (0.0019)	6.1600 (8.9862)	0.3969*** (0.0657)	0.8507 (0.7865)
Year 2005	0.0171*** (0.0048)	-0.7130*** (0.1881)	0.0058*** (0.0014)	-13.3142 (11.8880)	0.0981*** (0.0159)	-0.2642 (0.1741)
Year 2006	-0.0346*** (0.0072)	-	-0.0018*** (0.0003)	-	-0.0392*** (0.0078)	-
Year 2007	0.1160*** (0.0177)	-0.1215 (0.2882)	0.0080*** (0.0020)	-5.1519 (4.6370)	-0.0889*** (0.0298)	-0.5631* (0.3891)
Year 2008	0.0397* (0.0236)	-0.0266 (0.1298)	0.0017*** (0.0006)	-3.0388 (2.6630)	0.8061*** (0.1146)	-0.1947 (0.1739)
Year 2009	0.0587** (0.0294)	-0.1231 (1.2680)	0.0048*** (0.0019)	3.0880 (5.0709)	0.7980** (2.8289)	0.2559 (0.2527)

*** Sig. at 1% significance level, **Sig. at 5% significance level, *Sig. at 10% significance level. Standard error is in parentheses

5.5 CONCLUSION

This chapter has analysed and explored the results of the impact of Islamic debt on firm performance using a panel data analysis. There are four categories of explanatory variables; first, the debt structure of the firm which is Islamic debt and non-Islamic debt; second, the frequency of Islamic debt issuance which is divided into the first issuance, the second issuance, and issuances that number more than twice; third, the proportion of Islamic debt which is below, at the average, and above the average; fourth, the type of Islamic debt issued which is debt-type, asset-type and equity-type. Tobin's Q, ROA, ROE and EVA were the dependent variables used. The two control variables employed were firm size effect and year effect.

Overall, this study finds that Islamic debt has a positive and significant impact on firm value and/or firm financial performance. This positive and significant finding for group 1 and group 2 supports the trade-off theory. In particular, the first issuance of Islamic debt and all types of Islamic debt have a positive and significant impact on firm value and/or firm financial performance. Moreover, the proportion of Islamic debt at the average represents the best likelihood of affecting higher firm value and/or firm financial performance.

Furthermore, compared to non-Islamic debt, Islamic debt has a greater impact on affecting the higher value of a firm and/or the firm financial performance for group 1. Meanwhile for group 2, only Islamic debt has a positive and significant impact in affecting the higher value of a firm and/or the firm's financial performance.

The next chapter reports the results for the event study analysis and discusses these results.

CHAPTER 6: THE IMPACT OF ISLAMIC DEBT ANNOUNCEMENT

6.0 INTRODUCTION

This chapter presents the empirical results of the market reaction toward the Islamic debt issue announcement for Malaysia and Indonesia. As previously noted, Malaysia is referred to as group 1 and Indonesia is referred to as group 2. This chapter has three sections: first, the result of the event study analysis; second, the result for the unit root test; third, a summary of the results. The first section is divided into two parts: first, the results for average abnormal return and cumulative abnormal return; and second, the t-test results for CAAR. The second section provides the results for the unit root test. After having examining the evidence of the existence of abnormal returns surrounding the announcement date and the event date, this study investigates whether the price movements are predictable or not.

6.1 EVENT STUDY ANALYSIS RESULTS

6.1.1 AVERAGE ABNORMAL RETURN AND CUMULATIVE AVERAGE ABNORMAL RETURN

6.1.1.1 AAR AND CAAR ON THE ANNOUNCEMENT DATE, ONE DAY PRIOR TO AND AFTER THE ANNOUNCEMENT DATE

Two different timeframes were used to observe the impact of the event date when firms announced their issuance of Islamic debt: the first is 3 days (-1 to +1), and the second is 31 days (-15 to +15). Table 6.1, Table 6.2, Table 6.3, Table 6.4,

Table 6.5 and Table 6.6 provide the result for the 3 day time span, and Table 6.7, Table 6.8, Table 6.9, Table 6.10, Table 6.11 and Table 6.12 provide the result for the 31 day time span. For each span, the results provided are for group 1 and group 2. Furthermore, for each group, there are three different results provided according to the abnormal return benchmarks used in this study (mean adjusted return, market adjusted return and market model return).

Table 6.1 shows the impact of the Islamic debt announcements using the mean adjusted return for group 1. The effect of the announcement is a negative and significant for both AAR and CAAR. Furthermore, the result for one day prior to the announcement is a positive but not significant, and one day after the announcement is a negative and significant.

Table 6.1: Mean adjusted return for group 1

Day	AAR	t-value	CAAR	t-value
-1	0.0009	0.9891	0.0009	0.9891
0	-0.0043	-5.9488	-0.0034	-4.7527
1	0.0016	1.7627	-0.0018	-1.9381

Table 6.2 shows the impact of the Islamic debt announcements using the market adjusted return for group 1. The effect of the announcement is a negative and significant for both AAR and CAAR. Furthermore, the result for one day prior to and one day after the announcement is a positive and significant.

Table 6.2: Market adjusted return for group 1

Day	AAR	t-value	CAAR	t-value
-1	0.0017	1.6779	0.0017	1.6779
0	-0.0024	-3.4968	-0.0006	-0.9381
1	0.0025	2.9363	0.0018	2.1708

Table 6.3 shows the impact of the Islamic debt announcements using the mean adjusted return for group 1. The effect of the announcement is a negative and significant for both AAR and CAAR. Furthermore, the result for one day prior to the announcement is a positive and significant, and one day after the announcement is a positive but not significant.

Table 6.3: Market model return for group 1

Day	AAR	t-value	CAAR	t-value
-1	0.0020	2.0198	0.0020	2.0198
0	-0.0023	-3.4123	-0.0003	-0.4974
1	0.0011	1.1575	0.0007	0.7899

Overall, a negative and significant finding obtained at the announcement date using three benchmarks return model for group 1 support the negative impact hypothesis, proposed by the likes of Miller and Rock (1985), Myers and Majluf (1984), and Covits and Harrison (1999). According to this theory, the announcement of risky debt should have a negative impact on a firm's market value. Islamic debt is claimed as more secure than conventional debt since most of the contract is based on the underlying assets or partnership; however, this gives no guarantee that the Islamic debt is free from the risk of being defaulted. Moreover, since Islamic debt is viewed as a new instrument, the markets have a lack of experience in utilising it and they therefore lack a strong belief that they will earn profits. Furthermore, there might be an adverse selection mechanism which favours the use of Islamic debt by lower-quality debtor companies (Godlewski et al., 2010).

In addition, this negative finding is similar to the study by Godlewski et al. (2010) which finds a negative and significant stock market reaction to the announcement

of Islamic debt issuance. In addition, Modirzadehbami and Mansourfar (2010 and 2011) also find that at the announcement date of Islamic debt issuance, the return is a negative; however, their result is not significant. Although this finding supports the negative impact hypothesis, this finding is in contrast with the finding find by Ashhari et al. (2009) which found that the Islamic debt announcement has a positive and significant impact on shareholders' wealth. In addition, Ibrahim and Minai (2009) also find a positive but not significant impact. The different results obtained may be due to the different periods of observation time employed and the different number of samples used.

Table 6.4 shows the impact of the Islamic debt announcements using the mean adjusted return for group 2. The effect of the announcement is a positive and significant for both AAR and CAAR. Furthermore, the result for one day prior to and one day after the announcement is a positive and significant. In addition, this finding for group 2 is in contrast with group 1 in that it yields a negative finding.

Table 6.4: Mean adjusted return for group 2

Day	AAR	t-value	CAAR	t-value
-1	-0.0068	-7.4828	-0.0068	-7.4828
0	0.0135	12.6455	0.0066	6.2256
1	0.0054	24.5262	0.0120	54.5466

Table 6.5 shows the impact of the Islamic debt announcements using the market adjusted return for group 2. The effect of the announcement is a positive and significant for both AAR and CAAR. Furthermore, the result for one day prior to and one day after the announcement is a positive and significant. In addition, this finding for group 2 is in contrast with group 1 in that it yields a negative finding.

Table 6.5: Market adjusted return for group 2

Day	AAR	t-value	CAAR	t-value
-1	0.0032	2.7924	0.0032	2.7924
0	0.0083	8.5134	0.0115	11.8625
1	0.0017	5.9595	0.0132	47.4296

Table 6.6 shows the impact of the Islamic debt announcements using the market model return for group 2. The effect of the announcement is a positive and significant for both AAR and CAAR. Furthermore, the result for one day prior to the announcement is a negative and significant, and one day after the announcement is a positive and significant. In addition, this finding for group 2 is in contrast with group 1 in that it yields a negative finding.

Table 6.6: Market model return for group 2

Day	AAR	t-value	CAAR	t-value
-1	-0.0055	-6.9447	-0.0055	-6.9447
0	0.0122	13.3129	0.0066	7.2478
1	0.0024	9.6192	0.0090	35.9052

Overall, a positive and significant finding obtained at the announcement date using three benchmarks return model for group 2 supports the positive impact hypothesis, proposed by the likes of Modigliani and Miller (1963), Kraus and Litzenberger (1973), Brennan and Schwartz (1978), DeAngelo and Masulis (1976), Myers (1977), Jensen and Meckling (1976), and Leland and Pyle (1977). According to this theory, the announcement of debt has a positive impact on a firm's market value. The positive impact might be (1) the result of a tax shield generated by debt that makes the value of the company increase with the proportion of debt over assets (Modigliani & Miller, 1963), (2) the trade-off between a tax advantage and a cost of financial distress (Kraus & Litzenberger, 1973; Brennan & Schwartz, 1978; DeAngelo & Masulis, 1980), (3) the trade-off

between a tax advantage of debt and agency costs and adverse managerial effects of debt (Myers, 1977), (4) the trade-off between agency costs of debt and agency costs of equity (Jensen & Meckling, 1976), (5) information asymmetries where managers have superior information relative to the investors (Leland & Pyle, 1977; Heinkel, 1982).

6.1.1.2 AAR AND CAAR ON 15 DAYS PRIOR TO AND 15 DAYS AFTER THE ANNOUNCEMENT DATE

This section discusses the impact of the announcement for the longer timeframe of 31 days (-15 to +15). Table 6.7 shows the impact of Islamic debt announcement using the mean adjusted return model. The effect of the announcement is a negative and significant for AAR and CAAR on the event day. As noted previously, the 31 day span of the event window ranges between -15 to +15, and during this time span, only -14 day and +12, +13, +15 day are not significant. One day before and after the announcement, the AAR is a positive and significant, but this is not the case for CAAR. However, the AAR is a negative start from the second day after the announcement until day five, and this may be caused by the pessimistic reaction of the market towards this new type of debt, hereafter the AAR fluctuates. The individual days prior to and following the announcement and their respective cumulative abnormal returns are significant from zero, therefore the null hypothesis can be rejected. The significant results of the CAAR over -15 to +15 may suggest that the issuance information was leaked to the market prior to the announcement on the stock exchange. The positive return prior the announcement date continues to record a positive return after the announcement date until day one.

Table 6.8 shows the impact of Islamic debt announcement using the market adjusted return model. The effect of the announcement is a negative and significant for AAR but a positive and significant for CAAR on the event day. The span of the event window ranges between -15 to +15, and during this span, only -11 day and +11 day are not significant. One day before and after the announcement, the AAR and CAAR is a positive and significant. However, the AAR is a negative start from the second day after the announcement until day five, and this may be caused by the pessimistic reaction of the market to this new type of debt, hereafter the AAR fluctuates. The individual days prior to and following the announcement and their respective cumulative abnormal returns are significant from zero, therefore the null hypothesis can be rejected. The significant results of the CAAR over -15 to +15 may suggest that the issuance information was leaked to the market prior to the announcement on the stock exchange. The positive return prior to the announcement date continues to record a positive return after the announcement date until day one.

Table 6.9 shows the impact of Islamic debt announcement using the market model return. The effect of the announcement is a negative and significant for AAR but a positive and significant for CAAR on the event day. The event window spans -15 to +15, and during this span, only +5 day is not significant. One day before and after the announcement, the AAR and CAAR is a positive and significant. However, the AAR is a negative start from the third day after the announcement until day five, and this again may be caused by the market's pessimistic reaction to this new type of debt, hereafter the AAR fluctuates. The individual days prior to and following the announcement and their respective cumulative abnormal

returns are significant from zero, therefore the null hypothesis can be rejected. The significant results of the CAAR over -15 to +15 may suggest that the issuance information was leaked to the market prior to the announcement on the stock exchange. The positive return prior the announcement date continues to record a positive return after the announcement date until day one.

Table 6.7: Mean adjusted return for group 1

Day	AAR	t-value	CAAR	t-value
-15	-0.0013	-2.5986	-0.0013	-2.5986
-14	0.0009	1.4829	-0.0004	-0.6036
-13	-0.0032	-6.2209	-0.0035	-6.9674
-12	-0.0028	-4.6714	-0.0063	-10.5512
-11	-0.0039	-5.6991	-0.0103	-14.9282
-10	0.0018	2.1083	-0.0085	-10.0456
-9	-0.0056	-15.1405	-0.0141	-38.2162
-8	0.0014	2.5342	-0.0127	-22.8285
-7	-0.0025	-3.0307	-0.0151	-18.5702
-6	-0.0006	-1.2477	-0.0158	-30.7434
-5	0.0005	0.6286	-0.0153	-19.8011
-4	0.0021	2.6586	-0.0132	-16.7137
-3	0.0018	1.3728	-0.0114	-8.7595
-2	-0.0012	-1.4043	-0.0126	-15.0344
-1	0.0009	0.9891	-0.0117	-13.4328
0	-0.0043	-5.9488	-0.0160	-22.1930
1	0.0016	1.7627	-0.0144	-15.5187
2	-0.0023	-1.9003	-0.0167	-13.7170
3	-0.0038	-6.9317	-0.0205	-37.0393
4	-0.0019	-1.9058	-0.0224	-22.4661
5	-0.0039	-5.3430	-0.0263	-36.0375
6	0.0016	2.3763	-0.0247	-36.0886
7	-0.0072	-11.8655	-0.0318	-52.7749
8	-0.0015	-1.9462	-0.0334	-42.0530
9	-0.0033	-5.6778	-0.0367	-62.9781
10	0.0027	2.3686	-0.0340	-29.6895
11	-0.0024	-2.3793	-0.0364	-35.8658
12	0.0554	0.2400	0.0190	0.0824
13	-0.0151	-1.2233	0.0040	0.3222
14	-0.0017	-1.7921	0.0023	2.3554
15	-0.0025	-2.1384	-0.0003	-0.2425

Table 6.8: Market adjusted return for group 1

Day	AAR	t-value	CAAR	t-value
-15	0.0009	2.4280	0.0009	2.4280
-14	0.0032	6.6218	0.0041	8.4016
-13	-0.0021	-5.1418	0.0020	4.9681
-12	-0.0006	-1.2318	0.0014	2.7539
-11	-0.0023	-2.7950	-0.0010	-1.1472
-10	0.0024	3.6430	0.0014	2.1621
-9	-0.0028	-6.5567	-0.0014	-3.2828
-8	0.0036	7.8610	0.0022	4.7963
-7	-0.0011	-1.7270	0.0011	1.6015
-6	0.0008	1.6079	0.0019	3.6908
-5	0.0035	4.3570	0.0054	6.6999
-4	0.0047	6.4922	0.0101	13.8303
-3	0.0029	2.4619	0.0130	11.0366
-2	-0.0015	-2.8002	0.0115	21.0900
-1	0.0017	1.6779	0.0132	12.7012
0	-0.0024	-3.4968	0.0108	15.8722
1	0.0025	2.9363	0.0133	15.8884
2	-0.0003	-0.3141	0.0130	14.7264
3	-0.0002	-0.3309	0.0128	23.8679
4	-0.0007	-0.6830	0.0121	11.8556
5	-0.0017	-1.9810	0.0105	12.4168
6	0.0032	5.8946	0.0137	25.2635
7	-0.0055	-11.8384	0.0082	17.6310
8	0.0013	1.9520	0.0095	13.9477
9	-0.0022	-4.1112	0.0073	13.4494
10	0.0051	5.0479	0.0124	12.2561
11	-0.0012	-1.5158	0.0111	13.7340
12	0.0574	0.2360	0.0685	0.2818
13	-0.0119	-1.1801	0.0567	5.6325
14	0.0004	0.4676	0.0570	69.9866
15	-0.0001	-0.0889	0.0569	45.6985

Table 6.9: Market model return for group 1

Day	AAR	t-value	CAAR	t-value
-15	-0.0007	-1.3365	-0.0007	-1.3365
-14	0.0031	6.1332	0.0024	4.7117
-13	-0.0018	-6.3987	0.0005	1.9148
-12	-0.0020	-5.1060	-0.0014	-3.6898
-11	-0.0026	-5.1155	-0.0040	-7.8974
-10	0.0030	4.5322	-0.0010	-1.5219
-9	-0.0045	-21.1072	-0.0056	-25.8294
-8	0.0022	6.1316	-0.0034	-9.6831
-7	-0.0017	-2.6093	-0.0051	-7.8602
-6	0.0009	2.7303	-0.0041	-11.9515
-5	0.0018	3.1372	-0.0024	-4.2337
-4	0.0038	6.6940	0.0014	2.4901
-3	0.0044	3.7620	0.0058	4.9785
-2	0.0000	0.0537	0.0058	12.2155
-1	0.0020	2.0198	0.0077	8.0013
0	-0.0023	-3.4123	0.0055	8.1354
1	0.0011	1.1575	0.0065	7.1694
2	0.0001	0.1324	0.0066	7.7680
3	-0.0035	-7.6934	0.0032	6.9916
4	-0.0001	-0.1602	0.0030	3.4686
5	-0.0026	-3.8471	0.0005	0.6904
6	0.0025	5.1911	0.0029	6.1479
7	-0.0087	-10.1003	-0.0058	-6.6895
8	-0.0001	-0.1060	-0.0058	-9.6688
9	-0.0016	-3.5896	-0.0074	-16.6547
10	0.0041	4.3621	-0.0033	-3.5616
11	-0.0008	-0.9776	-0.0041	-5.3240
12	-0.0037	-7.6604	-0.0078	-16.0688
13	-0.0009	-2.8282	-0.0088	-26.3189
14	-0.0013	-1.4660	-0.0101	-11.0447
15	-0.0009	-0.9040	-0.0111	-10.7580

Overall, a negative and significant finding obtained at the announcement date using three benchmarks return model for group 1 support the negative impact hypotheses proposed by scholars such as Miller and Rock (1985), Myers and Majluf (1984), and Covitz and Harrison (1999). The negative result is caused by the asymmetric information where uninformed investors will ask for a discount to

hedge against the risk of buying an overvalued security. However, CAAR is positive which may suggest the positive impact hypotheses at work. This theory suggests that an issuance of debt should generate a positive abnormal return.

The next table 6.10 shows the impact of Islamic debt announcement using the mean adjusted return for group 2. The effect of the announcement is a positive and significant for AAR but a negative and significant for CAAR on the event day. The event window spans -15 to +15, and during this span, only -10, -9, +2 and +5 are significant for AAR, while +12 and +15 were significant days for CAAR. One day before the announcement, the AAR is a negative and significant, while the day after the announcement, the AAR is a positive and significant. For CAAR, the day before and after the announcement, is a negative and significant. However, the AAR is a negative start from the third day until one day before the announcement, and this may be caused by the pessimistic market reaction to this new type of debt as two days after the announcement the AAR fluctuates. All the days for the CAAR is a negative and mostly significant except +12 and +15. The individual days before and after the announcement and their respective cumulative abnormal returns are significant from zero, therefore the null hypothesis can be rejected. The significant results of the CAAR over -15 to +15 may suggest that the issuance information was leaked to the market prior to the announcement on the stock exchange. The positive return prior to the announcement date continues to remain positive after the announcement date until day one.

Table 6.11 shows the impact of Islamic debt announcement using the market adjusted return for group 2. The effect of the announcement is a positive and

significant for AAR but a negative and significant for CAAR on the event day. The event window spans -15 to +15, and during this span, only days +12 and +14 are not significant for CAAR. One day before and after the announcement, the AAR is a positive and significant; one day before and after the announcement, the CAAR is a negative and significant. However, the AAR is a negative start from the third day until the second day before the announcement, and this may be caused by the market's pessimistic reaction to this new type of debt. Two days after the announcement day the AAR fluctuates. The majority of the CAAR is a negative and mostly significant except days +12 and +14. The individual days before and after the announcement and their respective cumulative abnormal returns are significant from zero, therefore the null hypothesis can be rejected. The significant results of the CAAR over -15 to +15 may suggest that the issuance information was leaked to the market prior to the announcement on the stock exchange. The positive return prior to the announcement date continues to record a positive return after the announcement date until day one.

Table 6.12 shows the impact of Islamic debt announcement using the market model return for group 2. The effect of the announcement is a positive and significant for AAR but a negative and significant for CAAR on the event day. The event window spans -15 to +15, and during this span, only days +12 and +15 are not significant for CAAR. One day before the announcement, the AAR is a negative and significant, while one day after the announcement, the AAR is a positive and significant. For CAAR, one day before and after the announcement, is a negative and significant. However, the AAR is a negative start from the seventh day until one day before the announcement, and this may be caused by

the market's pessimistic reaction to this new type of debt. Two days after the announcement the AAR fluctuates. With the exception of days +12 and +15, all the days for CAAR were a negative and significant. The individual days prior to and following the announcement and their respective cumulative abnormal returns are significant from zero, therefore the null hypothesis can be rejected. The significant results of the CAAR over -15 to +15 may suggest that the issuance information was leaked to the market prior to the announcement on the stock exchange. The positive return prior to the announcement date continues to record a positive return after the announcement date until day one.

Table 6.10: Mean adjusted return for group 2

Day	AAR	t-value	CAAR	t-value
-15	-0.0011	-7.8984	-0.0011	-7.8984
-14	-0.0036	-17.9264	-0.0047	-23.4273
-13	-0.0036	-11.4295	-0.0083	-26.5458
-12	-0.0084	-30.8031	-0.0167	-61.1024
-11	-0.0045	-6.8777	-0.0211	-32.3785
-10	-0.0004	-0.3213	-0.0215	-18.2492
-9	0.0018	1.3873	-0.0198	-15.4670
-8	0.0061	10.2206	-0.0136	-22.7040
-7	-0.0041	-5.1542	-0.0177	-22.3187
-6	-0.0039	-14.2592	-0.0216	-79.5517
-5	-0.0105	-33.3984	-0.0321	-102.2182
-4	0.0106	9.1860	-0.0215	-18.6523
-3	-0.0157	-32.1999	-0.0372	-76.1794
-2	-0.0046	-11.8627	-0.0418	-107.7259
-1	-0.0068	-7.4828	-0.0486	-53.2801
0	0.0135	12.6455	-0.0352	-33.0662
1	0.0054	24.5262	-0.0298	-134.9222
2	0.0005	0.4631	-0.0292	-25.5225
3	-0.0089	-30.9427	-0.0381	-132.4791
4	0.0134	18.4918	-0.0247	-34.0270
5	0.0004	0.8015	-0.0243	-52.5765
6	0.0071	8.3649	-0.0172	-20.1556
7	-0.0039	-4.2912	-0.0211	-23.4108
8	-0.0147	-9.6830	-0.0358	-23.5591
9	0.0058	6.5987	-0.0300	-34.3890
10	-0.0021	-5.4073	-0.0321	-83.0432
11	0.0051	10.3817	-0.0270	-54.7886
12	0.0292	3.5120	0.0022	0.2662
13	-0.0090	-8.1723	-0.0068	-6.1567
14	0.0139	5.3941	0.0072	2.7807
15	-0.0072	-13.4678	0.0000	0.0000

Table 6.11: Market adjusted return for group 2

Day	AAR	t-value	CAAR	t-value
-15	-0.0055	-10.3771	-0.0055	-10.3771
-14	0.0003	1.3251	-0.0052	-22.3575
-13	-0.0147	-27.2127	-0.0198	-36.7818
-12	-0.0073	-18.0700	-0.0271	-67.1483
-11	-0.0033	-4.2035	-0.0304	-38.8058
-10	-0.0005	-0.3838	-0.0309	-25.1677
-9	0.0055	3.6151	-0.0254	-16.6951
-8	0.0094	14.0991	-0.0160	-23.8819
-7	-0.0033	-4.0216	-0.0192	-23.7403
-6	-0.0082	-18.3435	-0.0274	-61.5921
-5	-0.0028	-7.7156	-0.0303	-81.8997
-4	0.0103	7.4827	-0.0199	-14.4850
-3	-0.0144	-41.5483	-0.0344	-98.9847
-2	-0.0002	-0.2846	-0.0346	-54.7967
-1	0.0032	2.7924	-0.0313	-26.9123
0	0.0083	8.5134	-0.0230	-23.7635
1	0.0017	5.9595	-0.0214	-77.1159
2	-0.0060	-10.3050	-0.0274	-46.8361
3	-0.0034	-11.0328	-0.0308	-100.5416
4	0.0131	10.4809	-0.0177	-14.1827
5	-0.0013	-1.7201	-0.0190	-24.9765
6	-0.0013	-1.6704	-0.0203	-26.2202
7	-0.0042	-8.0298	-0.0245	-46.8003
8	-0.0042	-2.1964	-0.0288	-14.9470
9	0.0000	-0.0185	-0.0288	-19.5341
10	-0.0032	-4.7707	-0.0320	-48.0150
11	0.0005	0.7145	-0.0314	-42.9878
12	0.0349	3.4521	0.0035	0.3414
13	-0.0046	-4.3272	-0.0012	-1.0915
14	0.0038	1.4062	0.0026	0.9703
15	-0.0066	-7.6545	-0.0041	-4.6718

Table 6.12: Market model return for group 2

Day	AAR	t-value	CAAR	t-value
-15	-0.0024	-18.5433	-0.0024	-18.5433
-14	-0.0012	-8.8654	-0.0036	-27.0442
-13	-0.0071	-17.7425	-0.0107	-26.7877
-12	-0.0095	-35.1621	-0.0202	-74.6269
-11	-0.0040	-7.0045	-0.0242	-42.3389
-10	0.0002	0.1382	-0.0241	-20.8462
-9	0.0037	2.8435	-0.0203	-15.5833
-8	0.0053	10.4503	-0.0150	-29.3657
-7	-0.0061	-6.1237	-0.0211	-21.1668
-6	-0.0018	-5.8329	-0.0229	-74.2082
-5	-0.0096	-29.3868	-0.0326	-99.1589
-4	0.0104	11.3986	-0.0221	-24.1578
-3	-0.0132	-29.8330	-0.0353	-79.9159
-2	-0.0036	-7.6108	-0.0389	-81.8804
-1	-0.0055	-6.9447	-0.0445	-55.7044
0	0.0122	13.3129	-0.0323	-35.3368
1	0.0024	9.6192	-0.0299	-118.5398
2	0.0023	2.2235	-0.0275	-26.1249
3	-0.0088	-32.2693	-0.0363	-133.1834
4	0.0130	18.0106	-0.0234	-32.4157
5	0.0037	9.0187	-0.0196	-47.1599
6	0.0053	5.3250	-0.0143	-14.4128
7	-0.0056	-6.8014	-0.0199	-24.2350
8	-0.0154	-10.9480	-0.0353	-25.1346
9	0.0058	6.9808	-0.0295	-35.8171
10	-0.0009	-1.7197	-0.0304	-60.3769
11	0.0036	6.0264	-0.0268	-45.0314
12	0.0287	3.9028	0.0019	0.2639
13	-0.0087	-5.7055	-0.0067	-4.4269
14	0.0114	4.6497	0.0047	1.9164
15	-0.0047	-8.3281	0.0000	0.0000

Overall, a positive and significant finding obtained at the announcement date using three benchmarks return model for group 2 supports the positive impact hypotheses (Modigliani & Miller, 1963; Kraus & Litzenberger, 1973; Brennan & Schwartz, 1978; DeAngelo & Masulis, 1980, Myers, 1977; Jensen & Meckling,

1976, Leland & Pyle, 1977). In addition, in Indonesia there is more demand than Islamic debt supply and this triggers the higher pricing. However, the CAAR is a negative, and this negative result might be caused by several factors. Firstly, the development of Islamic finance has received minimal commitment and support from the Indonesian government at all levels. Secondly, there is a lack of Islamic finance legal frameworks, therefore market players are hesitant and choose to wait and see until they are sure about the government's position. Thirdly, Islamic finance in Indonesia has no Islamic finance governance which regulates the policy and benchmark for the Islamic finance industry. Fourthly, asymmetric information encourages uninformed investors to ask for a discount in order to hedge against the risk of buying an overvalued security. Finally, the market players in Indonesia tend to use a buy and hold strategy because of the thin trading.

6.1.2 T-TEST FOR CAAR

Table 6.13 provides the t-test for CAAR. Using the 31 days, 21 days, 11 days, 7 days and 3 days event windows, every span, apart from the 21 day span, revealed that there is no wealth effect to the shareholders of firms offering Islamic debt. This result supports the unit root test result that the market is efficient. In contrast with group 1, every span apart from the 3 day span revealed that the announcement of Islamic debt had a significant impact. However, the effect is one that sees the reduction of the wealth of shareholders of firms offering Islamic debt. This result supports the unit root test result that the market is inefficient in the context of weak form.

Table 6.13: t-test for CAAR

Interval (days)	Group 1		Group 2	
	CAAR	p-value	CAAR	p-value
-15 to +15	-0.0041	0.2696	-0.0230	0.0000***
-10 to +10	-0.0133	0.0106***	-0.0034	0.0855*
-5 to +5	-0.0068	0.2959	-0.0089	0.0049***
-3 to +3	-0.0069	0.3481	-0.0139	0.0010***
-1 to +1	-0.0037	0.5144	0.0036	0.5327

6.2 UNIT ROOT TEST

After examining the impact of Islamic debt announcement on the event date, the next section investigated whether the price movements are solely random or predictable. Table 6.14 shows the Unit Root Test results for group 1 and group 2. For a longer horizon, which is 120 days prior to the announcement, the result for group 1 is a significant for lag 0 and lag 1, which means the null hypotheses can be rejected. The result for a shorter horizon is also similar to the longer horizon, which is a significant for lag 0 and lag 1. These two results indicate that the market is efficient in the context of weak form hypotheses, suggesting that the price movements are unpredictable (has no trend). In contrast to the result for group 1, the result for group 2 for longer and shorter horizons is not significant for lag 0 and lag 1, which means the null hypotheses cannot be rejected. This suggests that the market is inefficient the context of weak form hypotheses. Therefore, the price movements are predictable (has a trend). This predictability for group 2 may be due to several reasons such as group 2 having thin trading compared to group 1. Other reasons may also include insider trading and high levels of information asymmetries. In addition, group 2 has a small sample, although this finding is consistent with previous work done by Fitriya (2009) which examines the market

efficiency of Indonesian Stock Exchange in the context of weak form hypotheses.

This previous study had found that the Indonesian Stock Exchange is inefficient.

Table 6.14: The Unit Root Test results

	Group 1		Group 2	
	Lag 0	Lag 1	Lag 0	Lag 1
120 days	-10.9620***	-7.2720***	-0.0150	-0.0950
p-value	(0.0000)	(0.0000)	(0.9572)	(0.9499)
14 days	-3.6210***	-2.4650*	-0.0920	-0.5580
p-value	(0.0054)	(0.0924)	(0.9502)	(0.8801)

6.3 CONCLUSION

The market reaction to new issues of securities has been the focus of interest in the last few decades. The majority of empirical investigations find that the announcement of new equity issuance has a negative average effect while new debt issue announcements have a positive average effect on stock prices. However, this reaction can be generating throughout the market and the entire environment posed for every country may be different. While a number of studies have focussed on conventional debt issuance, this study takes a different direction by investigating the impact of Islamic debt issue on stock price. This chapter provides the findings pertaining to the announcement of Islamic debt issuance. The analysis part comprises two sections: within the analysis part: first, the impact of the announcement on the event date, and second, whether the price movements are predictable or unpredictable. The unit root test is employed to examine whether the price movement is predictable or not. This test is solely provided to support the event study analysis results. Furthermore, the unit root test tested both longer horizons and shorter horizons, which are respectively 120 days and 14 days prior to the announcement.

The findings for event study analysis using three benchmarks reveal that there is a negative and significant impact for both AAR and CAAR for group 1. This negative finding supports the negative impact hypothesis. However, the findings one day prior to and after the announcement date for three benchmarks are slightly different. For the mean adjusted return, the result for one day prior to the announcement is a positive but not significant, and one day after the announcement is a negative and significant. For the market adjusted return, the result for one day prior to and one day after the announcement is a positive and significant. For the market model return, the result for one day prior to the announcement is a positive and significant, and one day after the announcement is a positive but not significant. This difference might be due to the different method of calculation employed. The mean adjusted return emphasises the book value while the market adjusted return and market model return emphasise the market value.

In contrast to the findings for group 1, the impact of Islamic debt announcement using three benchmarks is a positive and significant for both AAR and CAAR for group 2. This positive finding supports the positive impact hypothesis. However, the findings one day prior to and after the announcement date for three benchmarks are slightly different. For the mean adjusted return, the result for one day prior to and one day after the announcement is a positive and significant. In addition, this finding for group 2 is in contrast with group 1 in that it yields a negative finding. For the market adjusted return, the result for one day prior to and one day after the announcement is a positive and significant. In addition, this finding for group 2 is in contrast with group 1 in that it yields a negative finding.

For the market model return, the result for one day prior to the announcement is a negative and significant, and one day after the announcement is a positive and significant. In addition, this finding for group 2 is in contrast with group 1 in that it yields a negative finding.

Furthermore, the impact of the announcement for the event window spanning 31 days (-15 to +15) is varied for the three benchmarks return used in this study. The results for this window span reveal that the majority of AAR and CAAR are a negative and significant. Furthermore, the results for AAR and CAAR in group 1 are almost similar to the results found in group 2.

The unit root test result for group 1 indicates that the market is efficient in the context of weak form efficiency, which suggests that the price movements are unpredictable. In contrast to group 1, the unit root test result for group 2 indicates that the market is inefficient in the context of weak form efficiency, which suggests that the price movements are predictable.

The next chapter reports the results of the multivariate regression analysis for event study and discusses the results found for both groups.

CHAPTER 7: THE IMPACT OF ISLAMIC DEBT CHARACTERISTICS, ISSUANCE FREQUENCY AND ISSUANCE TYPES, AND FIRM VALUE/FIRM FINANCIAL PERFORMANCE ON SHAREHOLDERS' WEALTH

7.0 INTRODUCTION

This chapter presents the empirical results for the impact of the Islamic debt characteristics, Islamic debt issuance frequency and Islamic debt type, and the firm value/firm performance on the cumulative average abnormal return (CAAR) surrounding the announcement date for Malaysia and Indonesia. The multivariate regression analysis for event study is employed. There are five CAAR spans used in this study; CAAR -1 to +1, CAAR -3 to +3, CAAR -5 to +5, CAAR -10 to +10 and CAAR -15 to +15. These five different CAAR spans are used as alternatives to observe the change of the impact. This study observes that the longer the span, the lower the strength of the result obtained, which may be due to some other factors affecting the stock price movements. As with earlier chapters, Malaysia is referred to as group 1 in this chapter and Indonesia is referred to as group 2. This chapter has four sections: first, specification testing results; second, a description of the sample; third, an analysis of the regression results; fourth, a summary of the results.

7.1 SPECIFICATION TESTING

Table 7.1 and Table 7.2 provide specification testing results for group 1 and group 2. All the values presented are their p-value. As can be seen in Table 7.1, there is a heteroskedasticity problem in all equations, as the p-value is lower than the level of significance range of 1% to 5%. Therefore, the regression method used for all equations have to grapple with this problem. For skewness and kurtosis, the value for all equations is greater than 10% level of significance, suggesting that all the equations have a normal distribution. The value for multicollinearity is less than ten, suggesting no multicollinearity among the independent variables. The value for linearity for all equations is greater than 10% level of significance. Thus, the null hypothesis of linearity cannot be rejected, therefore all the equations have a linear function. At last, there is no endogeneity problem found in all the equations models.

Table 7.1: Specification testing results for group 1

	CAAR -1 to +1	CAAR -3 to +3	CAAR -5 to +5	CAAR -10 to +10	CAAR -15 to +15
Heteroskedasticity	0.0158	0.0207	0.0211	0.0200	0.0184
Skewness	0.1034	0.1052	0.1048	0.1052	0.1064
Kurtosis	0.2915	0.2931	0.2932	0.2931	0.2889
Multicollinearity	1.3300	1.3300	1.3300	1.3300	1.3300
Linearity	0.7163	0.6809	0.5084	0.5032	0.9494
Endogeneity	No endogeneity exist				

*** Sig. at 1% significance level, **Sig. at 5% significance level, *Sig. at 10% significance level

Table 7.2 shows that there is no heteroskedasticity problem in all the equations, as the p-value is greater than the level of significance range from 10% level of significance. For skewness and kurtosis, the value for all equations is greater than 10% level of significance, suggesting that all the equations have a normal distribution. The value for multicollinearity is less than ten, suggesting no

multicollinearity among the independent variables. The value for linearity for all equations is greater than 10% level of significance. Thus, the null hypothesis of linearity cannot be rejected, with all the equations having a linear function. Finally, there is no endogeneity problem found in all the equations models.

Table 7.2: Specification testing results for group 2

	CAAR -1 to +1	CAAR -3 to +3	CAAR -5 to +5	CAAR -10 to +10
Heteroskedasticity	0.6150	0.6781	0.4345	0.3085
Skewness	0.4894	0.7949	0.2752	0.8736
Kurtosis	0.2310	0.2069	0.4880	0.6627
Multicollinearity	3.0500	3.0500	3.0500	3.0500
Linearity	0.9203	0.8003	0.2554	0.2358
Endogeneity	No endogeneity exist			

*** Sig. at 1% significance level, **Sig. at 5% significance level, *Sig. at 10% significance level

7.2 DESCRIPTIVE STATISTICS

Table 7.3 and Table 7.4 provide the descriptive statistics used in this study for group 1 and group 2. The sample consists of 80 listed firms issuing Islamic debt for the period of 2000 to 2009. Table 7.3 depicts the number of observations, the mean, the standard deviation, and the minimum and maximum value of each variable. The dependent variables are CAAR -1 to +1, CAAR -3 to +3, CAAR -5 to +5, CAAR -10 to +10, CAAR -15 to +15, and each dependent variable is regressed toward its explanatory variables. However, due to incomplete data for all the firms, CAAR -15 to +15 is omitted for group 2. Further, due to the fact that group 2 contains no instances of more than two issuances of Islamic debt and has no debt type, these categories are omitted accordingly. In addition, EVA for group 2 is omitted due to unavailable data. There are four categories for explanatory variables: Islamic debt characteristics, the frequency of Islamic debt issuance, the Islamic debt type issued, and firm performance. The year in which the Islamic debt is issued is used as the control variable.

Table 7.3: Descriptive statistics group 1

Variables	Obs.	Mean	Std. Dev	Min	Max
Dependent variables					
CAAR -1 to +1	80	-0.0137	0.1128	-0.8324	0.1443
CAAR -3 to +3	80	-0.0412	0.3705	-2.9170	0.1783
CAAR -5 to +5	80	-0.0386	0.3761	-2.9656	0.1951
CAAR -10 to +10	80	-0.0427	0.3988	-3.1576	0.1233
CAAR -15 to +15	80	0.0090	0.0668	-0.1377	0.5150
Islamic debt Characteristics					
Islamic Debt Offerings Size	80	0.0727	0.0813	0.0011	0.5561
Islamic Debt Maturity	80	7.9063	6.4727	1.0000	50.0000
Islamic Debt Maturity (Log)	80	0.8367	0.2190	0.3010	1.6990
Debt to Equity Ratio	80	0.2493	0.1626	0.0136	0.6378
Firm Size	80	6.0388	0.7254	4.6032	8.4924
Islamic debt Frequency					
First Issuance	80	0.0000	0.0000	0.0000	0.0000
Second Issuance	80	0.1316	0.3381	0.0000	1.0000
More Than Twice	80	0.4211	0.4938	0.0000	1.0000
Islamic Debt Type					
Debt Type	80	0.0000	0.0000	0.0000	0.0000
Asset Type	80	0.1053	0.3069	0.0000	1.0000
Equity Type	80	0.1316	0.3381	0.0000	1.0000
Firm Performance					
Tobin's Q	80	0.1679	0.2129	-1.6600	1.9938
ROA	80	0.0925	0.0004	0.0100	0.1526
ROE	80	0.0156	0.0352	0.0021	0.2292
EVA	80	0.3948	0.5871	-0.3946	3.0791
Control Variables					
Year 2000	80	0.0000	0.0000	0.0000	0.0000
Year 2001	80	0.0000	0.0000	0.0000	0.0000
Year 2002	80	0.0000	0.0000	0.0000	0.0000
Year 2003	80	0.0625	0.2440	0.0000	1.0000
Year 2004	80	0.1563	0.3660	0.0000	1.0000
Year 2005	80	0.3438	0.4787	0.0000	1.0000
Year 2006	80	0.1719	0.3803	0.0000	1.0000
Year 2007	80	0.1406	0.3504	0.0000	1.0000
Year 2008	80	0.0938	0.2938	0.0000	1.0000
Year 2009	80	0.0313	0.1754	0.0000	1.0000

For group 1:

1. **CAAR -1 to +1:** the mean value for the cumulative average abnormal return range from -1 to +1 is -0.0137 or -1.37% with a range from -83.24% to 14.43%.
2. **CAAR -3 to +3:** The mean value for the cumulative average abnormal return range from -3 to +3 is -0.0412 or 4.12% with a range from -29.17% to 17.83%.
3. **CAAR -5 to +5:** The mean value for the cumulative average abnormal return range from -5 to +5 is -0.0386 or -3.86 with a range from -29.65% to 19.51%.
4. **CAAR -10 to +10:** The mean value for the cumulative average abnormal return range from -10 to +10 is -0.0427 or -4.27% with a range from -31.57% to 12.33%.
5. **CAAR -15 to +15:** The mean value for the cumulative average abnormal return range from -15 to +15 is 0.0090 or 0.9% with a range from -13.77% to 51.50%.
6. **Islamic debt offering size:** The mean value for the size of the Islamic debt offering is 0.0727 with a range from 0.0011% to 0.5561%.
7. **Islamic debt maturity:** The mean value for the Islamic debt length of maturity is 7.9 years with a range from 1 to 50 years.
8. **Debt to equity ratio:** The mean value for the debt to equity ratio is 24.93% with a range from 1.36% to 63.78%.
9. **Firm size:** The mean value for the firm size is 6.0388 with a range of 4.6032 to 8.4924, suggesting that most of the firms are big firms.
10. **First issuance:** First issuance is used as a baseline category for the frequency of Islamic debt issuance, and it takes the value of zero.

11. **Second issuance:** The mean value for the second issuance of Islamic debt is 0.1316 with a range of 0.0000 to 1.0000, suggesting that only 13.16% of the firms issued Islamic debt for the second time.
12. **More than twice:** The mean value for more than two issuances is 0.4211 with a range of 0.0000 to 1.0000, suggesting that most of the firms issued Islamic debt more than twice.
13. **Debt type:** Debt type is used as a baseline category for the Islamic debt type, and it takes the value of zero.
14. **Asset type:** The mean value for the asset type of Islamic debt is 0.1053 with a range of 0.0000 to 1.0000.
15. **Equity type:** The mean value for the equity type of Islamic debt is 0.1316 with a range of 0.0000 to 1.0000.
16. **Tobin's Q:** The mean value for Tobin's Q is 0.1679 with a range of -1.6600 to 1.9938, suggesting that most of the firms experienced low firm performance based on the market measure.
17. **ROA:** The mean value for ROA is 0.0925 with a range of 0.0100 to 0.1526. Though the mean value of ROA is considerably small, this positive value indicates that the firms in the sample create shareholder value over the sampling period. This positive value also indicates an effective utilisation of firm assets in generating an operating surplus in the business.
18. **ROE:** The mean value for ROE is 0.0156 with a range from 0.0021 to 0.2292, suggesting that most of the firms experienced low firm performance based on accounting measures. However, the positive value indicates that the firms in the sample create shareholder value and operating efficiency is positively translated into benefits to the owners.

- 18) **EVA:** The mean value for EVA is 0.3948 with a range from -0.3946 to 3.0791, suggesting that most of the firms experienced low firm performance based on economic value measure. EVA tells corporate managers and investors if the value of a business has been created or destroyed. Since EVA is greater than zero, it indicates that the project will add value for shareholders.
- 19) **Control variables:** During the sampling period of 2000 to 2009, Islamic debt is only issued during these eight years (2001, 2003 to 2009). Islamic debt is mostly issued in 2005 which accounted for 34.38%. The mean value for 2001, 2003, 2004, 2005, 2006, 2007, 2008 and 2009 are 1.19%, 6.25%, 15.63%, 34.38%, 17.19%, 14.06%, 9.38% and 3.13% respectively from the total sample.

Table 7.4: Descriptive statistics group 2

Variables	Obs.	Mean	Std. Dev	Min	Max
Dependent variables					
CAAR -1 to +1	14	0.0062	0.0365	-0.0472	0.0674
CAAR -3 to +3	14	-0.0210	0.0449	-0.0958	0.0505
CAAR -5 to +5	14	0.0019	0.0684	-0.0700	0.1480
CAAR -10 to +10	14	-0.0145	0.0754	-0.1218	0.1200
Islamic debt Characteristics					
Islamic Debt Offerings Size	14	0.0106	0.0097	0.0017	0.0312
Islamic Debt Maturity	14	4.8571	0.5345	3.0000	5.0000
Islamic Debt Maturity (Log)	14	0.6831	0.0593	0.4771	0.6990
Debt to Equity Ratio	14	0.6122	0.1440	0.3627	0.8416
Firm Size	14	6.2201	0.5072	4.9997	7.6766
Islamic debt Frequency					
First Issuance	14	0.0000	0.0000	0.0000	0.0000
Second Issuance	14	0.0714	0.2578	0.0000	1.0000
More Than Twice	14	0.0000	0.0000	0.0000	0.0000
Islamic Debt Type					
Debt Type	14	0.0000	0.0000	0.0000	0.0000
Asset Type	14	0.7143	0.4522	0.0000	1.0000
Equity Type	14	0.2857	0.4522	0.0000	1.0000
Firm Performance					
Tobin's Q	14	11.4354	1.1089	10.4204	13.7915
ROA	14	0.0300	0.4244	-0.0070	0.1031
ROE	14	0.0320	0.0634	-0.0030	0.1489
Control Variables					
Year 2000	14	0.0000	0.0000	0.0000	0.0000
Year 2001	14	0.0000	0.0000	0.0000	0.0000
Year 2002	14	0.0000	0.0000	0.0000	0.0000
Year 2003	14	0.0714	0.2673	0.0000	1.0000
Year 2004	14	0.2857	0.4688	0.0000	1.0000
Year 2005	14	0.1429	0.3631	0.0000	1.0000
Year 2006	14	0.0000	0.0000	0.0000	1.0000
Year 2007	14	0.0714	0.2673	0.0000	1.0000
Year 2008	14	0.2857	0.4688	0.0000	1.0000
Year 2009	14	0.1429	0.3631	0.0000	1.0000

For group 2:

- 1) **CAAR -1 to +1**: the mean value for the cumulative average abnormal return range from -1 to +1 is 0.0062 or 0.6% with a range from -4.72% to 6.74%.

- 2) **CAAR -3 to +3:** The mean value for the cumulative average abnormal return range from -3 to +3 is -0.0210 or -2.10% with a range from -9.58% to 5.05%.
- 3) **CAAR -5 to +5:** The mean value for the cumulative average abnormal return range from -5 to +5 is 0.0019 or 0.19% with a range from -7%% to 14.80%.
CAAR -10 to +10: The mean value for cumulative average abnormal return range from -10 to +10 is -0.0145 or -1.45% with a range from -12.18% to 12.00%.
- 4) **Islamic debt offering size:** The mean value for the Islamic debt offering size is 0.0106 with a range from 0.0017 to 0.0312.
- 5) **Islamic debt maturity:** The mean value for the Islamic debt length of maturity is 4.9 years with a range from 3 to 5 years.
- 6) **Debt to equity ratio:** The mean value for the debt to equity ratio is 61.22% with a range from 36.27% to 84.16%.
- 7) **Firm size:** The mean value for the firm size is 6.2201 with a range of 4.9997 to 7.6766, suggesting that most of the firms are big firms.
- 8) **First issuance:** First issuance is used as a baseline category for the frequency of Islamic debt issuance, and it takes the value of zero.
- 9) **Second issuance:** The mean value for the second issuance of Islamic debt is 0.0714 with a range of 0.0000 to 1.0000, suggesting that only 7.14% of the firms issued Islamic debt for the second time.
- 10) **Debt type:** Debt type is used as a baseline category for the Islamic debt type, and it takes the value of zero.
- 11) **Asset type:** The mean value for the asset type of Islamic debt is 0.7143 with a range of 0.0000 to 1.0000.

- 12) **Equity type:** The mean value for the equity type of Islamic debt is 0.2857 with a range of 0.0000 to 1.0000.
- 13) **Tobin's Q:** The mean value for Tobin's Q is 1.5192 with a range of -0.2489 to 25.5134, suggesting that most of the firms experienced low firm performance based on the market measure.
- 14) **ROA:** The mean value for ROA is 0.0300 with a range of -7.6563 to 0.1031, suggesting that most of the firms experienced low firm performance based on accounting measures. Though the mean value of ROA is considerably small, this positive value indicates that the firms in the sample create shareholder value over the sampling period. This positive value also indicates an effective utilisation of firm assets in generating an operating surplus in the business.
- 15) **ROE:** The mean value for ROE is 0.0320 with a range of -0.0030 to 0.1489, suggesting that most of the firms experienced low firm performance based on accounting measures. However, the positive value indicates that the firms in the sample create shareholder value and operating efficiency is positively translated into benefits to the owners.
- 16) **Control variables:** During the sampling period 2000 to 2009, Islamic debt is only issued during these six years (2003 to 2005 and 2007 to 2009). Islamic debt is mostly issued in 2004 and 2008 which accounted for 28.57% for each year. The mean value for 2003, 2004, 2005, 2007, 2008 and 2009 are 7.14%, 28.57%, 14.29%, 7.14%, 28.57% and 14.29% respectively from the total sample.

7.3 MULTIVARIATE REGRESSION ANALYSIS FOR EVENT STUDY RESULTS

Table 7.5, Table 7.6, and Table 7.7 show the regression results for group 1. Table 7.8, Table 7.9 and Table 7.10 show the regression results for group 2. The dependent variable is CAAR -1 to +1, CAAR -3 to +3, CAAR -5 to +5, CAAR -10 to +10 and CAAR -15 to +15. Apart from CAAR -15 to +15, all the dependent variables used for group 1 are also employed for group 2. For each dependent variable, there are two regression results provided; firstly, regression without control variables and secondly, regression with control variables.

Table 7.5 presents the results for CAAR -1 to +1, CAAR -3 to +3, CAAR -5 to +5, CAAR -10 to +10 and CAAR -15 to +15. There are no differences for the coefficient for Islamic debt offerings size and Islamic debt maturity between all the different CAAR spans, which are a negative but not significant for Reg.1 and Reg.2. This negative finding is similar to the study by Ashhari et al. (2009) which finds that Islamic debt offering size and Islamic debt maturity are a negative, however, the significance result obtained is different as they find that Islamic debt offering size has a significant impact at 5% level of significance. In addition, Ibrahim and Minai (2009) also find that the Islamic debt offering size has a negative and significant impact on returns. This may suggest that the greater the debt amount, the lower the cumulative abnormal return, and the longer the maturity, the lower the cumulative abnormal return. These findings can be better explained by the negative slope demand theory and asymmetric information theory. First, the negative slope demand theory suggests that the greater the quantity offered, the lower the price. Second, the asymmetric information theory

(Myers & Majluf, 1984) implies that the announcement of debt issues should produce either no effect or a very small negative effect on stock price. Furthermore, a long maturity period is usually accompanied by higher interest, which is attractive to investors. Should the maturity and abnormal return go in the opposite direction then this may indicate that the market buys this security not for profit but mostly to invest in a secure investment.

Apart from the negative slope demand theory and asymmetric information theory, these negative results might also be caused by the risks posed by the Islamic debt instrument. Although it is claimed that Islamic debt is safer than conventional debt instruments, this does not mean that the former is entirely free of risks. Sovereign and corporate sukuk have similar financial risks as conventional debt instruments (Wilson, 2008). Participation is the way to encounter default risk. In line with that, Muslim scholars have generated much research and discussion to escalate product derivation in Islamic debt, in order to create more opportunities for both Muslim and non-Muslim investors to diversify their portfolio risks. There are some risks associated with the Islamic debt instrument including credit risks, operational risks, liquidity risks, exchange rate risks, economic and political risks.

Credit risks arising from adverse changes in the credit quality and recoverability of loans, advances and amounts due from counterparties are inherent in a wide range of Islamic debt issuers' businesses. Credit risks could arise from a deterioration in the credit quality of specific counterparties of the issuers, from a general deterioration in local or global economic conditions or from systemic risks with the financial systems, all of which could affect the recoverability and

value of issuers' assets and require an increase in issuers' provisions for the impairment of its assets and other credit exposures.

Operational risks and losses can result from a number of things including fraud, error by employees, failure to document transactions properly or to obtain proper internal authorisation, failure to comply with regulatory requirements and conduct of business rules, the failure of internal systems, equipment and external systems and the occurrence of natural disasters. For example, 1) Salam sukuk contracts are exposed to the risk that commodities will not be supplied on time or to the agreed quantity; 2) Istisna'a sukuk contracts involve performance risk in which the client of the bank may default on the conditions of the contract and the sub-contractor may fail to render the necessary services. Although the issuers have implemented risk controls, and loss mitigation strategies and substantial resources are devoted to developing efficient procedures, it is not possible to entirely eliminate any of the operational risks.

Liquidity risks could arise from the inability of the issuers to anticipate and provide for unforeseen decreases or changes in funding sources which could have adverse consequences on the ability of the issuers to meet their obligations when they are due. Asset redemption risk arises from the fact that the originator has to buy-back the underlying assets from the certificate holder, and the principal amount paid may not be equal to the Islamic debt issue amount, and as a result, there is a risk that the assets may not be fully redeemed. Therefore, the greater the amount of the debt, the higher the risk the investors have to bear.

Exchange rate risks could arise if investors issued in foreign currency, and thus the issuers have to maintain their accounts and report their results in their home currency. The home currency has to be pegged at a fixed exchange rate to the U.S. dollar. The issuers are exposed to the potential impact of any alteration to or abolition of this foreign exchange peg. Therefore, the longer the maturity, the higher the chance of being exposed to interest rate risk; as the interest rate rises, the present value of this instrument lowers as does the maturity. At the end, these factors affect the investors' perspective, and they are likely to become risk adverse investors.

Developing markets are subject to greater risks than developed markets, including in some cases significant legal, economic and political risks. Accordingly, investors should exercise particular care in evaluating the risks involved and they must decide for themselves whether, in the light of those risks, their investment is appropriate. Generally, investment is only suitable for sophisticated investors who fully appreciate the significance of the risk involved. In the end, all those factors affect the investors' perspective, and they are likely to become risk adverse investors.

Furthermore, there are no differences for the coefficient for debt to equity ratio among all CAAR spans which are a negative and significant for Reg.1 and Reg.2. This suggests that the higher the debt to equity ratio, the lower the abnormal return. This finding supports the notion that the debt level of a firm is taken into account by investors in order to determine stock prices (Giner & Reverte, 2001). Moreover, this finding is in contrast with Asharri et al. (2009) who find that debt

to equity ratio is a positive but not significant. This negative and significant result may indicate that the market believes the notion that at a certain level, the addition of debt may hamper the firm's performance as agency costs are higher with regard to profit-loss sharing arrangements.

There are no differences for the coefficient for firm size among all CAAR spans, which are a positive and significant for Reg.1 and Reg.2, suggesting that the bigger the firm size, the higher the abnormal return. This finding is similar with Ashhari et al. (2009) who find that firm size has a positive impact on return, however their finding is not significant. This may indicate that the markets have a higher level of confidence with these kinds of issuers as they are believed to have a stable cash flow and profits. Hence, the risk of a default is also believed to be minor. For the control variables, none of the years provide significant results.

Table 7.5: Regression result for group 1

Variables	CAAR -1to+1		CAAR -3to+3		CAAR -5to+5		CAAR -10to+10		CAAR -15to+15	
	Reg.1	Reg.2	Reg.1	Reg.2	Reg.1	Reg.2	Reg.1	Reg.2	Reg.1	Reg.2
Constant	-0.2250* (0.1330)	-0.1927 (0.1599)	-0.7435* (0.4385)	-0.6207 (0.5324)	-0.6351 (0.4510)	-0.6990 (0.5530)	-0.7655 (0.4747)	-0.8050 (0.5771)	0.1147 (0.0794)	0.1068 (0.0961)
Islamic Debt Offerings Size	-0.0703 (0.1870)	-0.1300 (0.1870)	-0.2627 (0.6170)	-0.4837 (0.6228)	-0.2156 (0.6345)	-0.4293 (0.6467)	-0.4265 (0.6679)	-0.6765 (0.6750)	0.0378 (0.1117)	0.0912 (0.1124)
Islamic Debt Maturity	-0.0036 (0.0660)	-0.0113 (0.0656)	-0.0092 (0.2179)	-0.0454 (0.2185)	-0.0198 (0.2241)	-0.0255 (0.2270)	-0.0353 (0.2359)	-0.0920 (0.2369)	-0.0071 (0.0394)	-0.0152 (0.0394)
Debt to Equity Ratio	-0.2194*** (0.0933)	-0.2264*** (0.0913)	-0.6759** (0.3077)	-0.6849** (0.3040)	-0.6084** (0.3165)	-0.6386** (0.3157)	-0.6297** (0.3331)	-0.6651** (0.3295)	-0.1293** (0.0557)	-0.1334*** (0.0549)
Firm Size	0.0450** (0.0229)	0.0426* (0.0238)	0.1448** (0.0753)	0.1290 (0.0793)	0.1280* (0.0775)	0.1210 (0.0823)	0.1446* (0.0816)	0.1326 (0.0860)	0.0221 (0.0136)	0.0183 (0.0143)
Year 2003		-0.0083 (0.0882)		0.0092 (0.2338)		0.1430 (0.3052)		0.1651 (0.3185)		-0.0239 (0.0530)
Year 2004		-0.0063 (0.0786)		0.0021 (0.2616)		0.1490 (0.2717)		0.1512 (0.2836)		-0.0169 (0.0472)
Year 2005		0.0010 (0.0759)		0.0449 (0.2526)		0.1684 (0.2623)		0.1772 (0.2738)		-0.0309 (0.0456)
Year 2006		-0.0898 (0.0782)		-0.2500 (0.2606)		-0.0916 (0.2707)		-0.1250 (0.2824)		0.0258 (0.0470)
Year 2007		-0.0118 (0.0803)		-0.0135 (0.2674)		0.1188 (0.2778)		0.1350 (0.2899)		-0.0170 (0.0482)
Year 2008		-0.0650 (0.0823)		-0.1122 (0.2743)		0.0089 (0.2849)		0.0004 (0.2973)		-0.0043 (0.0495)
Obs.	80	80	80	80	80	80	80	80	80	80
Wald chi2	7.87	16.51	7.29	14.29	5.47	10.84	6.50	13.25	6.65	14.00
Prob>Chi2	0.0965	0.0860	0.1212	0.1600	0.2428	0.3703	0.1647	0.2102	0.1556	0.1728
R-squared	0.1095	0.2050	0.1023	0.1826	0.0787	0.1448	0.0922	0.1715	0.0941	0.1795
Root MSE	0.1056	0.0998	0.3482	0.3323	0.3582	0.3451	0.3777	0.3601	0.0630	0.0600

*** Sig. at 1% significance level, **Sig. at 5% significance level, *Sig. at 10% significance level. Standard error is in parentheses

In conclusion, the results provided in Table 7.5 for the CAAR -3 to+3, CAAR -5 to+5, CAAR -10 to +10 and CAAR -15 to +15 reveal no differences from the result for the CAAR -1 to +1.

Table 7.6 presents the results for CAAR -1 to +1, CAAR -3 to +3, CAAR -5 to +5, CAAR -10 to +10 and CAAR -15 to +15. For Islamic debt frequency, only the coefficient for first issuance is a positive and significant at 5 % significance level. This positive reaction for the first issuance of Islamic debt indicates that the markets have confidence over the instrument and the issuers. Apart from that, the markets observe the support from Malaysian regulators and government in developing Islamic finance industry, including the Islamic debt market, hence this government's supports provide bright prospect of this Islamic debt market. The positive reaction also might be due to the fact that Islamic debt is considered as a cheaper financing cost. This cheaper cost of Islamic debt issuance is a result of higher liquidity and lower transaction cost of this instrument. Furthermore, investing in Islamic debt as one portfolio investment significantly reduces the value at risk (VAR) portfolio when compared to investing in all conventional instruments (Cakir & Raei, 2007). Therefore, market might also think that investment in Islamic debt reduces their risk as Islamic debt is claimed as a secure investment.

Furthermore, the non-significant impact for the second issuance and so on, implies that the market learnt from the previous experience. First, this may relate to the behavioural finance theory which once investors understand that their decisions are bad ones; they are likely to make much better decisions in future or

in other word it can be said as a learning process. However, according to behavioural finance theory investors are sometimes irrational in accessing and making decisions. The theory of behavioural finance was established by Kahneman and Tversky (1979) where they found the prospect theory. This theory implies that human apparently under uncertainty are not consistently risk averse but rather they are risk-averse in gains but risk-takers in losses.

Second, the success or failure from the previous issuance leads the investors' judgement. Third, there are some risks pose by the issuers, one of these risks is risks arising from changes in credit quality and the recoverability of amounts due from borrowers and counterparties are inherent in banking businesses (Wilson, 2008). Adverse changes in global economic conditions, or arising from systemic risks in the financial systems, could affect the recovery and value of issuers' assets and require an increase in issuers' provisions. Issuers use different hedging strategies to minimise risk, including securities, collaterals and insurance that reduce the credit risk level to be within the issuers' strategy and risk appetite. However, there can be no guarantee that such measures will eliminate or reduce such risks. Fourth, though Malaysia has enjoyed significant economic growth and relative political stability, there can be no assurance that such growth or stability will continue.

For Islamic debt type, the coefficient for debt type, asset type and equity type is a positive, however only debt type is significant at 5% significance level. This indicates that when the issuers issued the debt type of Islamic debt, the markets react positively toward this type of debt. Though, the two other types are not

significant, but it is also positive. The significant result for debt type might be due to the fact that there is no transfer of ownership; hence this type of Islamic debt is easier than the other two types. Due to the different law and regulations in every country, therefore, there are doubts whether, under Malaysian law, a co-ownership interest in certain assets/projects can be effectively transferred. Accordingly, no assurance is given that any co-ownership interest in the relevant co-ownership assets has been or will be transferred to the Issuer. Thus, investors in emerging markets should be aware that these markets are subject to greater risks than more developed markets, including, in some cases, significant legal, economic and political risks. Accordingly, investors should exercise particular care in evaluating the risks involved and must decide for themselves whether, in light of those risks, their investment is appropriate. Generally, investment in emerging markets is only suitable for sophisticated investors who fully appreciate the significance of the risk involved

Furthermore, for year effect, only year 2008 has a negative and significant effect on the abnormal return. The negative abnormal return may be caused by the global financial crisis effect. The results for CAAR -3 to +3 show no different than the result for CAAR -3 to +3, but only the year effect has a different. In the CAAR -3 to +3, apart from 2006, all year shows a negative and significant effect on the abnormal return. Furthermore, apart from CAAR -1 to +1 and CAAR -3 to +3, the rest of the CAAR provides insignificant results. This may indicate that the longer the span of the abnormal return, the more insignificant it becomes. This support the notion of the shorter span of the event window, the better the quality of the results to capture the effect of the event.

Table 7.6: Regression result for group 1

Variables	CAAR -1to+1		CAAR -3to+3		CAAR -5to+5		CAAR -10to+10		CAAR -15to+15	
	Reg.1	Reg.2	Reg.1	Reg.2	Reg.1	Reg.2	Reg.1	Reg.2	Reg.1	Reg.2
Constant	0.0041* (0.0090)	0.0378** (0.0195)	0.0155* (0.0206)	0.1083*** (0.0427)	0.0226 (0.0206)	0.0563 (0.0614)	0.0222 (0.0214)	0.0314 (0.0533)	0.0045 (0.0032)	0.0010 (0.0074)
Islamic debt Frequency										
First Issuance	(Omitted) -	(Omitted) -	(Omitted) -	(Omitted) -	(Omitted) -	(Omitted) -	(Omitted) -	(Omitted) -	(Omitted) -	(Omitted) -
Second Issuance	-0.0062 (0.0107)	-0.0037 (0.0132)	-0.0219 (0.0252)	-0.0111 (0.0326)	-0.0243 (0.0288)	-0.0082 (0.0343)	-0.0359 (0.0273)	-0.0030 (0.0350)	-0.0022 (0.0025)	-0.0040 (0.0052)
More Than Twice	-0.0332 (0.0287)	-0.0242 (0.0207)	-0.0864 (0.0941)	-0.0532 (0.0657)	-0.0719 (0.0955)	-0.0420 (0.0668)	-0.0900 (0.1012)	-0.0551 (0.0708)	-0.0129 (0.0170)	-0.0063 (0.0125)
Islamic Debt Type										
Debt Type	(Omitted) -	(Omitted) -	(Omitted) -	(Omitted) -	(Omitted) -	(Omitted) -	(Omitted) -	(Omitted) -	(Omitted) -	(Omitted) -
Asset Type	0.0455* (0.0275)	0.0350 (0.0282)	0.0728 (0.0752)	0.0405 (0.0693)	0.0890 (0.0751)	0.0833 (0.0648)	0.0976 (0.0788)	0.0828 (0.0704)	0.0042 (0.0133)	0.0019 (0.0123)
Equity Type	0.0017 (0.0185)	0.0051 (0.0141)	0.0297 (0.0525)	0.0021 (0.0212)	0.0350 (0.0538)	0.0346 (0.0219)	0.0437 (0.0594)	0.0362 (0.0338)	0.0058 (0.0088)	0.0016 (0.0047)
Year 2003		-0.0327 (0.0247)		-0.0947* (0.0508)		0.0720 (0.0670)		0.0763 (0.0631)		-0.0004 (0.0072)
Year 2004		-0.0280 (0.0199)		-0.0901*** (0.0382)		0.0839 (0.0600)		0.0607 (0.0502)		-0.0016 (0.0060)
Year 2005		-0.0254 (0.0224)		-0.0711* (0.0418)		0.0808 (0.0615)		0.0579 (0.0531)		-0.0081 (0.0091)
Year 2006		-0.1094 (0.0670)		-0.346 (0.2253)		-0.1620 (0.2341)		-0.2168 (0.2445)		0.0449 (0.0394)
Year 2007		-0.0309 (0.0202)		-0.0890** (0.0425)		0.0513 (0.0639)		0.0438 (0.0559)		-0.0001 (0.0063)
Year 2008		-0.0624*** (0.0234)		-0.1227*** (0.0398)		-0.0029 (0.0613)		-0.0232 (0.0569)		-0.0009 (0.0071)
Obs.	80	80	80	80	80	80	80	80	80	80
Wald chi2	4.05	17.32	1.81	18.93	2.80	14.43	3.47	8.70	3.14	3.84
Prob>Chi2	0.3998	0.0676	0.7702	0.0411	0.5912	0.1543	0.4824	0.5603	0.5340	0.9541
R-squared	0.0371	0.1145	0.0192	0.0906	0.0163	0.0702	0.0215	0.0846	0.0118	0.0850
Root MSE	0.1098	0.1053	0.364	0.3505	0.3701	0.3599	0.3914	0.3786	0.0659	0.0633

*** Sig. at 1% significance level, **Sig. at 5% significance level, *Sig. at 10% significance level. Standard error is in parentheses

Table 7.7 presents the results for CAAR -1 to +1, CAAR -3 to +3, CAAR -5 to +5, CAAR -10 to +10 and CAAR -15 to +15. All performance measures show a positive effect on return, however, only ROE and EVA are significant. The non-significant result for Tobin's Q is similar to Ibrahim and Minai (2009) which find a positive but not significant impact on return. The positive finding for firm performance may indicate that the market has more confidence in buying this security as they expect these firms will have more prospects in the future. Furthermore, all the issuers have to submit and publish their prospectus which includes not only their financial statement, but also their objectives and strategies, their competitive advantages and their risk managements. This includes a strong brand, experienced management, high growth and a high level of profit rate. When the issuers have all those clearly stated on their prospectus, the investors might have confidence in investing their money to this firm. Furthermore, CAAR -3 to +3, CAAR -5 to +5, CAAR -10 to +10 and CAAR -15 to +15 yield similar results as those for CAAR -1 to +1. Furthermore, all the control variables for all CAAR variations show no significant year effect.

Table 7.7: Regression result for group 1

Variables	CAAR -1to+1		CAAR -3to+3		CAAR -5to+5		CAAR -10to+10		CAAR -15to+15	
	Reg.1	Reg.2	Reg.1	Reg.2	Reg.1	Reg.2	Reg.1	Reg.2	Reg.1	Reg.2
Constant	0.0365 (0.0750)	0.3930 (0.7809)	2.4442 (2.3948)	2.6522 (2.4896)	1.7625 (2.4090)	2.2882 (2.5150)	2.7586 (2.5273)	3.3682 (2.6288)	0.2989 (0.4351)	0.3731 (0.4511)
Tobin's Q	0.0365 (0.0750)	0.0350 (0.0789)	0.2383 (0.2360)	0.2560 (0.2516)	0.1701 (0.2373)	0.2323 (0.2541)	0.2679 (0.2490)	0.3400 (0.2656)	0.0292 (0.0429)	0.0378 (0.0456)
Economic Value Added	0.0578** (0.0261)	0.0381 (0.0280)	0.2616*** (0.0822)	0.2192*** (0.0895)	0.2867*** (0.0827)	0.2634*** (0.0904)	0.3132*** (0.0867)	0.2793*** (0.0944)	0.0458*** (0.0150)	0.0381*** (0.0162)
Return on Asset	0.3835 (0.0372)	0.1958 (0.3853)	0.2186* (0.1170)	0.1834 (0.1228)	0.2220** (0.1176)	0.2036 (0.1241)	0.2308* (0.1234)	0.2022 (0.1297)	0.3605* (0.2125)	0.3004 (0.2226)
Return on Equity	0.1854 (0.4435)	0.2997 (0.4706)	0.6615 (0.1394)	0.9958 (0.1500)	0.7558 (0.1402)	1.1861 (1.5155)	0.6698 (1.4716)	1.1234 (1.5841)	0.1210 (0.2533)	0.1733 (0.2719)
Year 2003		-0.0326 (0.0940)		-0.0188 (0.2995)		0.1174 (0.3026)		0.1607 (0.3162)		-0.0125 (0.0542)
Year 2004		-0.0238 (0.0839)		-0.0038 (0.2672)		0.1490 (0.2700)		0.1642 (0.2822)		-0.0167 (0.0484)
Year 2005		-0.0288 (0.0818)		-0.0016 (0.2607)		0.1262 (0.2634)		0.1467 (0.2753)		-0.0202 (0.0472)
Year 2006		-0.0965 (0.0856)		-0.1670 (0.2729)		0.0207 (0.2757)		0.0060 (0.2881)		-0.0131 (0.0494)
Year 2007		-0.0338 (0.0866)		-0.0664 (0.2761)		0.0678 (0.2790)		0.0891 (0.2915)		-0.0014 (0.0500)
Year 2008		-0.0725 (0.0882)		-0.1190 (0.2814)		-0.0081 (0.2843)		-0.0031 (0.2971)		0.0011 (0.0510)
Obs.	80	80	80	80	80	80	80	80	80	80
Wald chi2	5.54	9.74	11.89	14.25	13.31	15.05	14.97	17.35	10.64	13.37
Prob>Chi2	0.3535	0.5543	0.0363	0.2192	0.0206	0.1802	0.0105	0.0980	0.0589	0.2699
R-squared	0.0797	0.1320	0.1567	0.1822	0.1722	0.1904	0.1895	0.2132	0.1426	0.1728
Root MSE	0.1073	0.1042	0.3375	0.3324	0.3395	0.3358	0.3562	0.3509	0.0613	0.0602

*** Sig. at 1% significance level, **Sig. at 5% significance level, *Sig. at 10% significance level. Standard error is in parentheses

Table 7.8, Table 7.9 and Table 7.10 present the regression results for group 2. As can be seen in Table 7.8, the coefficient for Islamic debt offering is a negative, suggesting that the greater the amount of the debt offered, the lower the abnormal return, however, the result is insignificant. Many emerging economies are still over-reliant on their respective banking sectors as financiers. In such instances, the regulators would not be remiss in extending their support by introducing fiscal incentives, such as exemption of tax and/or stamp duty, to stimulate the Islamic debt market. This would undoubtedly provide a boost in the arm for a fledgling Islamic debt market. Unlike Malaysia where Islamic debt is exempted from stamp duty, taxes and other costs associated with listing, Indonesia is not yet implementing such measures to boost this market. Therefore, the greater the amount of debt, the higher the cost firms have to bear, and at the end these costs have to be paid by the investors.

The coefficient for Islamic debt maturity is a negative and significant, suggesting that the longer the maturity, the lower the abnormal return. Generally, the longer the period of debt offered, the higher the rate offered, thus it may attract investors to buy this security. However as far as Islamic debt securities are concerned, it seems as if investor prefer to have shorter periods of maturity. The reason is that investors exercise caution when investing their money in a new instrument. Furthermore, since the maturity is short, the rate offered is lower than the long-term debt rate, but nevertheless investors expect to have a fixed stream of income. This negative result might also be caused by the unstable inflation rate and interest rates. The inflation rate in 2004, 2005, 2007 and 2008 is 6.40%, 17.11%, 6.59% and 11.06% respectively; the lending interest rate charged by the bank in

2004, 2005, 2007 and 2008 is 14.12%, 14.05%, 13.86% and 13.60% respectively; meanwhile the Indonesian Bank rate in 2004, 2005, 2007 and 2008 is 12.75%, 9.75% , 8% and 9.25% (Indonesian Bank Website, 2012).

The coefficient for debt to equity ratio is a positive and significant, suggesting that the higher the debt to equity ratio, the higher the abnormal return. The coefficient for firm size is a negative and insignificant, suggesting that firm size has no impact on the CAAR.

For year effect, year 2004 yields a negative and significant for all spans of CAAR, suggesting that this particular brought about a negative impact on investors' confidence towards the markets. The business survey index in 2004 was a positive index indicating economic expansion during that year (Indonesian Bank, 2004) and this may boost the confidence of investors. The Business Confidence Index is an indicator designed to measure the degree of optimism on the state of the economy that business owners are expressing through their activities of investing and spending. Decreasing business confidence often implies a slowing economic growth because business owners are likely to decrease their investments. The idea is that the more confident business owners and managers feel about the economy, their companies, their jobs and incomes, the more likely they are to make investments and purchases. When business confidence is measured on a scale between 0 and 100, an index level below 50 indicates that the number of business owners who are expecting their company's performance to be weaker in the next year outnumber those who are expecting stronger performances.

However, economic activity is not the sole factor in affecting the confidence of investors towards the market. The political climate can also be a factor and in 2004, a general election was held in Indonesia. The prospect of a new political party taking over and implementing new policies is inherent with an impending election and this may pose a concern to investors before, during and after the election that conditions may turn unstable.

The coefficient for 2005 and 2007 is a positive but not significant, suggesting that there is no significant impact on these years on investors' confidence. Although, it is not significant, the positive result is also supported by the positive index of business activities which indicates there was an expansion of economic activities during these two years. The expansion of economic activities is caused by the increase in domestic demands and stock availability. Moreover, this expansion is influenced by the pending orders in the manufacturing industry section, trades, the hotel and restaurant sector, new contracts, starting operations of projects, particularly big projects in the construction sector, the rupiah currency depreciation, an increase in marketing activities, and increases on operational and interest income in the finance, leasing and business services sectors. Furthermore, increasing business activities was also reflected by the increase in the demand/order volumes, selling prices/tariffs/interests, business situations and company financial conditions. Within the economic sector, all industries except mining and quarrying indicated expansion. The biggest contribution was from the manufacturing industry sector, followed by the finance sector. As for sub sectors, all sub sectors except the restaurant sub sector experienced expansion, with the biggest increase recorded in the trade sub sector. In the agriculture sector, most of

the sub sectors except the farm food crops sub sector experienced expansion. Within the manufacturing industry sector, all of the sub sectors experienced expansion or an increase in business activities (Bank Indonesia, 2004 and 2007).

The coefficient for year 2008 yields a negative and significant effect on the abnormal return. This negative effect is also supported by the negative index of business activities (Indonesian Bank, 2008). This suggests that there was a contraction of the business activities and economy for 2008. In addition, this negative result might be caused by the slump in domestic and international demand as the effect of the global economic crisis caused the contraction of business activities in 2008. Other additional factors that caused a contraction in business activities were: seasonal factors, competition between similar products, and an unfavourable market situation. Furthermore, manufacturing industry sector, followed by mining & quarrying sector, agriculture, livestock, forestry & fishery sector, and construction sector contributed the greatest to the economic's contraction. In the meantime, five other economic sectors continued to expand although the level of growth was slower than in the previous period. The biggest contribution was recorded by the financial, ownership & business services sector followed by the trade, hotel and restaurant sector, and finally, the transportation and communication sector (Indonesian Bank, 2008).

A further factor that may have played a role in the negative effect in year 2008 was the general election held in 2009. Generally, the period building up towards an election year affects the economic and capital market as the prospect of unstable political conditions or a change in government might affect the investors'

confidence over their investments. Debt markets need a stable macroeconomic and political environment to survive and grow. Without either of these two rudimentary features, investors, both local and foreign, would not be inclined to put their money into any capital markets at all, not just the debt market specifically. To engender an appropriate base of issuers and investors, economic expansion must be robust enough while inflation and interest rates cannot be too lofty or volatile. In addition, a country must also have high savings and investment rates, as well as a high per-capita income, to support its developing debt market.

Table 7.8: Regression result for group 2

Variables	CAAR -1to+1		CAAR -3to+3		CAAR -5to+5		CAAR -10to+10	
	Reg.1	Reg.2	Reg.1	Reg.2	Reg.1	Reg.2	Reg.1	Reg.2
Constant	0.1059 (0.3235)	0.3553 (0.3054)	0.3078 (0.3540)	0.1947 (0.3674)	0.4338 (0.7892)	0.0282 (0.7461)	0.3800 (0.4364)	0.8683 (0.5540)
Islamic Debt Offerings Size	-1.1492 (2.0719)	-2.5174 (1.5751)	-1.7567 (2.3442)	-0.8776 (1.8945)	-1.1714 (3.0729)	-0.9622 (3.8470)	-0.1638 (3.0147)	-1.4631 (2.8565)
Islamic Debt Maturity	-0.2050** (0.1086)	-0.1231 (0.1440)	-0.1478 (0.1558)	-0.0370 (0.1732)	-0.1255 (0.2961)	-0.1660 (0.3518)	-0.7332*** (0.2113)	-0.3255 (0.2612)
Debt to Equity Ratio	0.1183* (0.0630)	0.0687 (0.0587)	0.1655** (0.0806)	0.0850 (0.0706)	0.2436*** (0.0990)	0.1129 (0.1433)	0.2215** (0.1099)	0.0434 (0.1064)
Firm Size	-0.0031 (0.0420)	-0.0419 (0.0382)	-0.0429 (0.0452)	-0.0323 (0.0460)	-0.0576 (0.0975)	-0.0011 (0.0934)	-0.0044 (0.0570)	-0.0932 (0.0693)
Year 2004		-0.0402** (0.0208)		-0.0730*** (0.0250)		-0.0009* (0.0509)		-0.1531*** (0.0378)
Year 2005		0.0209 (0.0240)		0.0198 (0.0289)		0.0372 (0.0586)		0.0782* (0.0435)
Year 2007		0.0043 (0.0290)		0.0126 (0.0350)		0.1180* (0.0710)		0.0205 (0.0527)
Year 2008		-0.0352* (0.0199)		-0.0421* (0.0240)		-0.0267* (0.0488)		-0.1247*** (0.0362)
Obs.	14	14	14	14	14	14	14	14
Wald chi2	12.44	24.40	5.40	26.26	8.76	8.69	49.65	35.92
Prob>Chi2	0.0144	0.0020	0.2485	0.009	0.0674	0.3693	0.0000	0.0000
R-squared	0.3015	0.6354	0.2333	0.6523	0.2503	0.3829	0.2644	0.7196
Root MSE	0.0293	0.0212	0.0379	0.0255	0.0571	0.0518	0.0623	0.0385

*** Sig. at 1% significance level, **Sig. at 5% significance level, *Sig. at 10% significance level. Standard error is in parentheses

Table 7.9 provides the regression result for the second equation. The coefficient for the first issuance of Islamic debt is a positive and significant, suggesting that the market reacts favourably towards this security. This positive market reaction might be caused by the fact that most investors want to diversify their portfolio to minimise risk. However, the second issuance of Islamic debt reveals a negative and significant coefficient and there are reasons for this. Firstly, the market has already experienced Islamic debt before and this security becomes less attractive for the second time. Moreover, the learning process that occurred during the first issuance enables the market to realise the risks and returns they can gain when they invest in this security. Secondly, there tends to be less transparency and implementation of corporate governance conducts. Domestic debt markets also fortify the financial industry, by promoting a climate of greater transparency and corporate governance. Just like in equities markets, entities which issue debts to the public are required to make disclosures regarding their operations, financial and management strategies. At the same time, such practices also enhance investor education, thereby facilitating more informed investment decisions in the market. Therefore, transparency and good corporate governance play a significant role in affecting investors' judgement. Although the financial and non-financial activities of firms, including their corporate governance conduct, are supposed to be disclosed and thus subject to regulation, a few firms in Indonesia have not fully complied. Some of these cases include the Duta Bank case, the Bapindo case, the Kimia Farma case, the Lippo Bank case, Century Bank, Bakrie Group and other cases. Most of these firms are well-known and well established; hence the impact of their fraud is significant in causing the market to lose confidence. In effect, such cases of financial fraud also raise serious questions about the efficacy

of corporate governance function, which leads to market distrust. Thirdly, the legal environment remains uncertain and largely untested by actual cases, and there are concerns about the legal transfer of title and foreclosure in case of default (Standard & Poor's RatingsDirect, 2008). Moreover, the legal uncertainties, essential policy and regulatory divergences are critical in affecting the market favour and the market growth (Andreas, Peter, Paul & Amadou, 2008). Fourthly, it is complicated to structure the required underlying assets. Fifth, tax uncertainty is another factor as there are no explicit regulations that ensure that Islamic debt receives similar tax treatment to conventional debt.

The coefficient for asset type is a positive and significant, suggesting that the market considers this security a secure instrument on the basis of its claimant priority over conventional debt and stock. However, when this Islamic debt instrument assumes the form of equity type, the coefficient is a negative and significant, suggesting that the market reacts less favourably towards this type of Islamic debt. For the year effect, only 2004 and 2008 yield a negative and significant effect on abnormal returns.

Table 7.9: Regression result for group 2

Variables	CAAR -1to+1		CAAR -3to+3		CAAR -5to+5		CAAR -10to+10	
	Reg.1	Reg.2	Reg.1	Reg.2	Reg.1	Reg.2	Reg.1	Reg.2
Constant	0.0097 (0.0150)	0.0304*** (0.0093)	0.0170 (0.0179)	0.0021 (0.0169)	0.0030 (0.0377)	0.0433 (0.0282)	0.0227 (0.0431)	0.0923*** (0.0256)
<u>Islamic debt Frequency</u>								
First Issuance	(Omitted) -	(Omitted) -	(Omitted) -	(Omitted) -	(Omitted) -	(Omitted) -	(Omitted) -	(Omitted) -
Second Issuance	-0.0240* (0.0127)	-0.0011 (0.0225)	-0.0340** (0.0157)	-0.0270 (0.0219)	-0.0793*** (0.0200)	-0.1153*** (0.0463)	0.0433** (0.0207)	0.0983*** (0.0226)
<u>Islamic Debt Type</u>								
Asset Type	(Omitted) -	(Omitted) -	(Omitted) -	(Omitted) -	(Omitted) -	(Omitted) -	(Omitted) -	(Omitted) -
Equity Type	-0.0025 (0.0196)	-0.0012 (0.0132)	-0.0022 (0.0238)	-0.0019 (0.0199)	-0.0064 (0.0427)	-0.0515* (0.0300)	-0.0564 (0.0479)	-0.0394 (0.0268)
Year 2004		-0.0446*** (0.0144)		-0.0612*** (0.0198)		-0.0238 (0.0264)		-0.1284*** (0.0328)
Year 2005		0.0040 (0.0230)		0.0307* (0.0173)		0.0041 (0.0272)		0.0559** (0.0260)
Year 2007		0.0090 (0.0093)		0.0109 (0.0169)		0.1720*** (0.0282)		0.0085 (0.0257)
Year 2008		-0.0473*** (0.0199)		-0.0266* (0.0231)		-0.0372** (0.0448)		-0.1418*** (0.0322)
Obs.	14	14	14	14	14	14	14	14
Wald chi2	6.68	29.27	8.81	24.01	19.45	162.06	4.49	380.68
Prob>Chi2	0.0355	0.0001	0.0122	0.0005	0.0001	0.0000	0.1059	0.0000
R-squared	0.0338	0.4783	0.0431	0.5854	0.0932	0.5433	0.1280	0.7431
Root MSE	0.0345	0.0254	0.0423	0.0279	0.0628	0.0445	0.0679	0.0368

*** Sig. at 1% significance level, **Sig. at 5% significance level, *Sig. at 10% significance level. Standard error is in parentheses

Table 7.10 provides the regression result for the third equation. Only CAAR -3 to +3 and CAAR -5 to +5 yield a positive and significant coefficient. The significant result suggests that investors highly regard firms that have previously issued Islamic debt. Moreover, the positive index of business activities indicates that there was business expansion during the year. As mentioned earlier, this business expansion was caused by an increase in domestic demand, the earnings increase of credit interest (in finance, leasing and business services sectors), and conducive weather patterns that brought about a good agricultural harvest. Indications of increasing business activities were also reflected in the better performance of macro indicators such as labour utilisation, company financial conditions, production capacities, access to credit, and selling prices. Furthermore, in the economic sector, almost every sector except the mining and quarrying sector experienced expansion. The biggest contribution to this expansion came from the trade, hotel and restaurant sector followed by the services sector, the finance sector, the leasing and business services sector, and finally, the transportation and communication sector (Business Survey Indonesian Bank, 2012).

As far as the year effect is concerned, only 2004 has a significant impact, however, the effect is a negative. As discussed above, many factors affect the stock price movement, including political conditions, and not coincidentally, 2004 was the year of the general election, which consequently had a direct impact on the capital market.

Table 7.10: Regression result for group 2

Variables	CAAR -1to+1		CAAR -3to+3		CAAR -5to+5		CAAR -10to+10	
	Reg.1	Reg.2	Reg.1	Reg.2	Reg.1	Reg.2	Reg.1	Reg.2
Constant	0.1620 (0.1053)	0.0861 (0.1396)	0.2493*** (0.0729)	0.2596* (0.1523)	0.7633*** (0.1586)	0.7490*** (0.2167)	0.0701 (0.2626)	0.1205 (0.2963)
Tobin's Q	0.0120 (0.0080)	0.0103 (0.0108)	0.0152*** (0.0060)	0.0199** (0.0122)	0.0570*** (0.0125)	0.0593*** (0.0171)	0.0003 (0.0198)	0.0067 (0.0231)
Return on Asset	0.1545 (0.1586)	0.0751 (0.1632)	0.2687** (0.1324)	0.1691* (0.1522)	0.7377*** (0.2450)	0.4775** (0.2210)	0.2929 (0.02965)	0.4189 (0.2936)
Return on Equity	0.3156 (0.3211)	0.1537 (0.3309)	0.5487** (0.2683)	0.3444* (0.3087)	0.1495*** (0.4961)	0.9665** (0.4480)	0.5982 (0.6000)	0.7932 (0.5951)
Year 2004		-0.0537*** (0.0127)		-0.0617*** (0.0229)		-0.0515*** (0.0210)		-0.1000** (0.0438)
Year 2005		0.0002 (0.0223)		0.0092 (0.0139)		0.0177 (0.0216)		0.1229*** (0.0050)
Year 2007		0.0150 (0.0167)		0.0126 (0.0170)		0.1130*** (0.0220)		0.0460 (0.0400)
Year 2008		-0.0456*** (0.0137)		-0.0210 (0.0151)		-0.0202 (0.0317)		-0.0940*** (0.0344)
Obs.	14	14	14	14	14	14	14	14
Wald chi2	9.16	90002.14	39.38	90320.18	31.60	56.90	7.53	15.63
Prob>Chi2	0.0272	0.0000	0.0000	0.0000	0.0000	0.0000	0.0568	0.0000
R-squared	0.2502	0.5482	0.4494	0.6702	0.3655	0.6528	0.2560	0.6882
Root MSE	0.0304	0.0236	0.0321	0.0249	0.0525	0.0389	0.0627	0.0406

*** Sig. at 1% significance level, **Sig. at 5% significance level, *Sig. at 10% significance level. Standard error is in parentheses

7.4 CONCLUSION

This chapter presented the empirical results of the relationship between: (1) Islamic debt characteristics, (2) Islamic debt issuance frequency and Islamic debt types issued, (3) firm value and/or firm financial performance, and shareholders' wealth. The multivariate regression analysis for event study was employed.

The results for group 1 reveal that (1) the Islamic debt characteristics, which are debt to equity ratio and firm size, have a positive and significant impact on shareholders' wealth, while the Islamic debt offering size and maturity have no significant impact on shareholders' wealth. (2) With regards to the frequency and types of Islamic debt issued, only the first issuance of Islamic debt and Islamic debt-types have a positive and significant impact on shareholders' wealth. (3) In terms of the firm's value and/or firm's financial performance, only EVA and ROA have a positive and significant impact on shareholders' wealth. Overall, the debt to equity ratio, the firm size, the first issuance of Islamic debt, the debt-type of Islamic debt, and the firm's performance have a positive and significant impact on shareholders' wealth. These positive and significant impacts are supported by some key advantages of the Malaysian market. Firstly, Malaysia has a comprehensive regulatory and supervisory framework. Secondly, Malaysia has a wide investor's base through which the issuers look to Islamic debt as an alternative way to tap into cash-rich investors from the Middle East. Thirdly, Malaysia has a liberal policy regarding foreign exchange rules. Fourthly, Malaysia has a wide base of expertise and talents in the Islamic finance industry. Fifthly, Malaysia provides tax incentives for Islamic finance instruments, particularly Islamic debt. Last but not least, Malaysia is committed towards a continuous

product development of Islamic financial instruments as debates continue among Islamic scholars about how Islamic debt complies with Islamic law. Such debates provide a platform for the on-going innovation of Islamic finance instruments and compel Malaysia to serve as a catalyst for future Islamic debt forms.

The results for group 2 reveal that (1) the Islamic debt characteristics, which are Islamic debt maturity and debt to equity ratio, have a positive and significant impact on shareholders' wealth while Islamic debt offering size and firm size have no significant impact on shareholders' wealth. This result is slightly different to the result obtained for group 1, in which only debt equity ratio and firm size have positive and significant impacts. (2) As for the frequency and type of Islamic debt issued, only the first issuance of Islamic debt and Islamic asset-types have a positive and significant impact on shareholders' wealth. This result is similar to the result obtained for group 2, however, there is, of course, no debt-type for group 2. (3) In terms of the firm's value and/or firm's financial performance; Tobin's Q, ROA and ROE have a positive and significant impact on shareholders' wealth. This result is slightly different than the result obtained for group 1, barring the Tobin's Q result and the lack of an EVA variable for group 2. Overall, the Islamic debt maturity, the debt to equity ratio, the first issuance of Islamic debt, the asset-type of Islamic debt, and the firm's performance are factors that have a positive and significant impact on shareholders' wealth. Unlike Malaysia, which has a number of advantages to support their Islamic capital market, particularly the Islamic debt market, Indonesia has few advantages. However, the positive results obtained of there being significant impacts are likely to do with the fact that Indonesia, with a population twelve times greater than Malaysia, has greater

opportunities in terms of size and growth in the future. Therefore, there is greater scope to develop this Islamic finance industry as one of main sources of corporate financing.

The next chapter recaps on the thesis objectives, and provides a summary of the hypothesis and results. It discusses the contribution of this thesis to existing literature, the implications of its findings, and future research directions to which this study points.

CHAPTER 8: CONCLUSION AND IMPLICATION

8.0 INTRODUCTION

This chapter summarises the discussion about Islamic debt, firm performance, and event study for group 1 and group 2. The structure to be followed starts with section 8.1 summarising the thesis objectives. Section 8.2 provides a summary of the hypothesis and empirical results. Section 8.3 outlines the contribution of this thesis to existing literature. Section 8.4 discusses the implications of this thesis' findings. Section 8.5 provides future directions for research given the limitations of this study. And finally, section 8.6 provides the chapter conclusion.

8.1 SUMMARY OF THESIS OBJECTIVES

The study of Islamic debt has become an important aspect of Islamic finance as there has been growing interest in Islamic financial instruments both from Muslim and non-Muslim investors/countries. The growing interest in Islamic financial instruments, particularly Islamic debt, is driven by some factors. These factors include global competition, the need for cheaper financing, and the market expansion as new target markets are identified and tapped into, leading to the enhancement of the market structure and market size. However, some challenges and obstacles need to be met along the way.

This study attempts to provide evidence of how the Islamic debt impacts on firm value and/or firm financial performance. In particular, this study first investigates whether there is a difference in company value/and financial performance attributable to the proportion of Islamic debt and non-Islamic debt. Additional

explanatory variables associated with Islamic debt characteristics affecting firm value and/or firm financial performance is also considered. Second, the market reaction to a firm announcing an issue of Islamic debt is provided, and a test examining whether the price movements during the Islamic debt announcement is also conducted to support the previous result. Third, how Islamic debt characteristics, the frequency of Islamic debt issuance, the Islamic debt type being issued, and the firm's performance have an impact on shareholders' wealth is considered. Furthermore, the differences between group 1 and group 2 samples are discussed.

This study concentrates on secondary data collected from the IFIS database. The sampling period is 2000 to 2009 with quarterly data observation. During the sample period, there are 106 firms issuing Islamic debt for group 1 (Malaysia) and 23 firms issuing Islamic debt for group 2 (Indonesia). However, due to incomplete data, only 80 firms are used as the sample for group 1, and 14 firms are used as the sample for group 2. Since there are three specific objectives for this study, different econometrics methods are employed according to specification testing results, endogeneity test results and linearity test results. A linear dynamic panel GMM and a linear panel correcting standard errors are employed to examine the impact of Islamic debt for group 1 and group 2 respectively. An event study analysis and a unit root test are employed to examine the stock market reaction on announcements of Islamic debt issuances. A Feasible Generalised Least Square and An Ordinary Least Square are employed to examine the impact of Islamic debt characteristics, Islamic debt issuance frequency and Islamic debt types, and firm performance on shareholders' wealth for group 1 and group 2 respectively.

8.2 SUMMARY OF THE HYPOTHESIS AND RESULTS

Table 8.1 provides a summary of the hypotheses tested regarding Islamic debt impact on firm value and/or firm financial performance. Table 8.2 provides a summary of the hypotheses tested regarding the impact of announcements of Islamic debt issuances on stock returns and the test of price movements. Table 8.3 provides a summary of the hypotheses tested regarding the impact of Islamic debt characteristics, Islamic debt issuance frequency and Islamic debt types, and firm performance on shareholders' wealth.

Table 8.1: Summary of hypotheses results regarding Islamic debt impact on firm value and/or firm financial performance

Variables	Group 1	Group 2
The debt structure of the firm <ul style="list-style-type: none"> Islamic debt 	Reject $H_{1.1o}$ Suggesting that Islamic debt is positively associated with firm value/firm financial performance	Reject $H_{1.1o}$ Suggesting that Islamic debt is positively associated with firm value/firm financial performance
The frequency of Islamic debt issued <ul style="list-style-type: none"> First issuance 	Reject $H_{1.2o}$ Suggesting that the first issuance of Islamic debt is positively associated with firm value/firm financial performance	Reject $H_{1.2o}$ Suggesting that the first issuance of Islamic debt is positively associated with firm value/firm financial performance
<ul style="list-style-type: none"> Second issuance 	Cannot reject $H_{1.2o}$ Suggesting that the second issuance of Islamic debt is negatively associated with firm value/firm financial performance	Cannot reject $H_{1.2o}$ Suggesting that the second issuance of Islamic debt is negatively associated with firm value/firm financial performance
<ul style="list-style-type: none"> More than twice issuance 	Reject $H_{1.2o}$ Suggesting that more than two issuances of Islamic debt is positively associated with firm value/firm financial performance	-
The proportion of Islamic debt issued <ul style="list-style-type: none"> Below the average 	Reject $H_{1.3o}$ Suggesting that the proportion of Islamic debt below the average is positively associated with firm value/firm financial performance	Cannot reject or can reject $H_{1.4o}$ Due to the non-significant result of the coefficient, it can be concluded that there is no significant relationship between the proportion of

		Islamic debt below the average with firm value/firm financial performance
• At the average	Reject $H_{1.30}$ Suggesting that the proportion of Islamic debt at the average is positively associated with firm value/firm financial performance	Reject $H_{1.30}$ Suggesting that the proportion of Islamic debt at the average is positively associated with firm value/firm financial performance
• Above the average	Cannot reject $H_{1.30}$ Suggesting that the proportion of Islamic debt above the average is negatively associated with firm value/firm financial performance	Cannot reject $H_{1.30}$ Suggesting that the proportion of Islamic debt above the average is negatively associated with firm value/firm financial performance
The type of Islamic debt issued		
• Debt-type	Reject $H_{1.40}$ Suggesting that the debt-type of Islamic debt is positively associated with firm value/firm financial performance	-
• Asset-type	Cannot reject or can reject $H_{1.40}$ Due to the non-significant result of the coefficient, it can be concluded that there is no significant relationship between asset-type of Islamic debt with firm value/firm financial performance	Reject $H_{1.40}$ Suggesting that the asset-type of Islamic debt is positively associated with firm value/firm financial performance
• Equity-type	Reject $H_{1.40}$ Suggesting that the equity-type of Islamic debt is positively associated with firm value/firm financial performance	Reject $H_{1.40}$ Suggesting that the equity-type of Islamic debt is positively associated with firm value/firm financial performance

Table 8.2: Summary of hypotheses results regarding the impact of Islamic debt issues announcement on stock return and its test of price movements

Variables	Group 1	Group 2
The impact of Islamic debt issuance on stock return	Cannot reject $H_{2.10}$ Suggesting that the market reacts negatively to the issuance of Islamic debt	Reject $H_{2.10}$ Suggesting that the market reacts positively to the issuance of Islamic debt
Price movements/weak form market efficiency	Reject $H_{2.20}$ Suggesting that the price movements surrounding the announcement of Islamic debt is random/unpredictable	Reject $H_{2.20}$ Suggesting that the price movements surrounding the announcement of Islamic debt is not random/predictable

Table 8.3: Summary of hypotheses results regarding the impact of Islamic debt characteristics, Islamic debt issuance frequency and Islamic debt types, and firm performance on shareholders' wealth

Variables	Group 1	Group 2
The Islamic debt characteristics <ul style="list-style-type: none"> Islamic debt offering size 	Cannot reject or can reject $H_{3.10}$ Due to the non-significant result of the coefficient, it can be concluded that there is no significant impact of Islamic debt offering size on shareholders' wealth	Cannot reject or can reject $H_{3.10}$ Due to the non-significant result of the coefficient, it can be concluded that there is no significant impact of Islamic debt offering size on shareholders' wealth
<ul style="list-style-type: none"> Islamic debt maturity 	Cannot reject or can reject $H_{3.10}$ Due to the non-significant result of the coefficient, it can be concluded that there is no significant impact of Islamic debt maturity on shareholders' wealth	Cannot reject $H_{3.10}$ Suggesting that Islamic debt maturity has a negative impact on shareholders' wealth
<ul style="list-style-type: none"> Debt to equity ratio 	Cannot reject $H_{3.10}$ Suggesting that debt to equity ratio has a negative impact on shareholders' wealth	Reject $H_{3.10}$ Suggesting that debt to equity ratio has a positive impact on shareholders' wealth
<ul style="list-style-type: none"> Firm size 	Reject $H_{3.10}$ Suggesting that firm size has a positive impact on shareholders' wealth	Cannot reject or can reject $H_{3.10}$ Due to the non-significant result of the coefficient, it can be concluded that there is no significant impact of firm size on shareholders' wealth
Islamic debt issuance frequency and Islamic debt type <ul style="list-style-type: none"> First issuance 	Reject $H_{3.2.10}$ Suggesting that the first issuance of Islamic debt has a positive impact on shareholders' wealth	Reject $H_{3.2.10}$ Suggesting that the first issuance of Islamic debt has a positive impact on shareholders' wealth
<ul style="list-style-type: none"> Second issuance 	Cannot reject or can reject $H_{3.2.10}$ Due to the non-significant result of the coefficient, it can be concluded that the second issuance of Islamic debt has no significant impact on shareholders' wealth	Cannot reject or can reject $H_{3.2.10}$ Due to the non-significant result of the coefficient, it can be concluded that the second issuance of Islamic debt has no significant impact on shareholders' wealth
<ul style="list-style-type: none"> More than twice issuance 	Cannot reject or can reject $H_{3.2.10}$ Due to the non-significant result of the coefficient, it can be concluded that more than two issuances of Islamic debt has no significant impact on shareholders' wealth	-
<ul style="list-style-type: none"> Debt-type 	Reject $H_{3.2.20}$	-

	Suggesting that debt-type of Islamic debt has a positive impact on shareholders' wealth	
• Asset-type	Reject H _{3.2.2o} Suggesting that asset-type of Islamic debt has a positive impact on shareholders' wealth	Reject H _{3.2.2o} Suggesting that the asset-type of Islamic debt has a positive impact on shareholders' wealth
• Equity-type	Cannot reject or can reject H _{3.2.1o} Due to the non-significant result of the coefficient, it can be concluded that the equity-type of Islamic debt has no significant impact on shareholders' wealth	Cannot reject or can reject H _{3.2.1o} Due to the non-significant result of the coefficient, it can be concluded that the equity-type of Islamic debt has no significant impact on shareholders' wealth
Firm performance	Reject H _{3.3o} Suggesting that firm performance (in particular, EVA) has a positive impact on shareholders' wealth	Reject H _{3.3o} Suggesting that firm performance has a positive impact on shareholders' wealth

8.3 CONTRIBUTION TO THE LITERATURE

The main objective of this study, as outlined in the first chapter, is to investigate the impact of Islamic debt on firm value and/or firm financial performance. This study contributes towards:

- A better understanding of the impact of Islamic debt on firm value, and how the markets react to Islamic debt issuances.
- In contrast to existing studies on Islamic debt, which primarily focused on legal aspects, this study concentrates on the finance aspects of Islamic debt, and hence the empirical evidence obtained may encourage future research with this study as a starting point.
- This study has also shown how the markets react to the announcement of Islamic debt issuances and the results indicate that there is a significant reaction from the market. The few previous studies that examined this instrument in terms of its event study analysis fail to recognise the

contribution of this instrument or explain the market reaction towards issuances of this instrument.

- This study demonstrates how this instrument affects shareholders' wealth, and it finds that the impact is significant.
- The robust econometric models employed are also a key contribution of this study. Given that studies on Islamic debt have never employed the econometric models used in this thesis; this project represents a pioneering piece of research in the sphere of Islamic debt.

8.4 IMPLICATIONS

The Islamic finance industry began with the Islamic banking establishment. As time passed, Islamic banking became widely accepted not only by Muslim customers but also non-Muslim customers. Furthermore, the development of Islamic banking pioneered the establishment of other sectors; Islamic insurance, Islamic debt and Islamic securities along with the establishment of Islamic capital markets. Moreover, the appetite among market players to invest their funds in the shariah-compliant instruments increased. As the Islamic debt market developed, the industry witnessed a wide range of products being engineered to meet the requirements of investors and borrowers. Therefore, the importance of applying finance analysis to Islamic finance instruments is vivid because this instrument also reacts in the same fashion as non-Islamic instruments. This implies that this instrument initially created to meet the needs of particular corporate and individual investors, has proven that it can be used by broader investors.

Furthermore, the significant findings in this study that Islamic debt contributes to higher firm value and firm financial performance lead to several practical implications for issuers, investors and regulators:

- A better understanding of the impact of Islamic debt on firm value, and how the markets react to Islamic debt issuances.
- This study has also shown how the markets react to the announcement of Islamic debt issuances and the reactions are significant. This conflicts with the few prior studies that have examined Islamic debt in terms of its event study analysis. The current work uses more robust empirical methods and a larger data set, suggesting the findings are more reliable.
- The demand for Islamic debt which was driven by high levels of surplus savings and reserves in Asia and the Gulf Cooperation Council (GCC) looking for Shariah-compliant instruments was further enhanced by greater understanding of Islamic debt instruments and the clarity of the documentation, as well as credit ratings from international agencies. The results of this thesis research, providing clearer evidence concerning returns and risk, may encourage more firms to issue this instrument and may encourage more investors to invest in Islamic debt in the future. In particular, this instrument may attract more conventional investors for diversification purposes.
- The study may change how people think and view Islamic debt, which is currently viewed as sacred or exclusive to specific groups and, therefore, Islamic debt should be appropriately utilised. The rising popularity of Islamic debt indicates that this instrument is viewed as prospective instrument in funding and investing.

- The study also shows Islamic debt is not just a matter of a name or that this instrument is simply changing “*the bottle with the same water*”. The fundamental principle of this instrument, which differs from conventional debt instruments, is the will/motive/intention of the parties involved in the debt contract. Though the will is unspeakable, however, the contract is indirectly legitimate/valid/legal in terms of shariah.
- Noting that a few countries have issued some legislation relating to Islamic instruments, such as the UK, Hong Kong and Singapore, this legislation is aimed at regulating Islamic instruments’ issuance, especially to enable Islamic debt issuance. Moreover, the rising popularity of Islamic debt should encourage the market regulators to efficiently establish rules and regulations for Islamic debt issuance and trading, and therefore Islamic debt can boost the market efficiency through information transparency.
- Since this instrument has obvious benefits both for issuers and investors, this study may enable Islamic debt to be more widely recognised as a viable and profitable instrument for would-be investors and issuers.

8.5 FUTURE RESEARCH

This section provides several recommendations for future research and it acknowledges the limitations of the current study.

- For a start, the data used for this study were derived from 2000 to 2009; obviously, future studies can expand the length of the observation period and expand the data set. The explanatory variables used are limited to the availability of the data during the sample, therefore, there is a chance to explore more explanatory variables in the future and control variables used.

In addition, due to the small sample used for group 2, this study was unable to compare group 1 and group 2 results. However, the results for both groups may be seen as preliminary steps for future studies. Finally, the existing research questions might be expanded for future research

- While this study has provided useful insight into capital structure and firm value in Islamic debt, the findings are based on research in two markets, Malaysia and Indonesia. Future research could test this capital structure impact beyond these two markets.
- This study considered only the corporate finance aspect; future research needs to consider corporate governance conduct of Shariah-compliant firms, and whether shariah compliant firms have different corporate governance. If there is a difference, then what is the contribution of shariah-compliance corporate governance on firm value or firm financial performance?
- Future research needs to thoroughly examine the behaviour of the financial analysts/officers and the fund managers of shariah-compliant firms. This analysis may initiate a discussion or in depth interview with the financial officer and the fund manager for prospective studies. Considering how businesses choose an investment strategy, such as a short term momentum strategy that complies with the Islamic law, may be a potential research area.
- Furthermore, whether a risk return model can be applied to Islamic instruments is a question that needs to be answered. In addition, net present value of cost of equity and cost of debt issue, and Islamic instruments' IPOs are still potential opportunities for further research.

8.6 CONCLUSION

This chapter has provided a summary of this research objective and the hypotheses results and it has also discussed the contribution of this thesis to current scholarship in this area as well as outlining future areas of investigation. The findings of this thesis support the notion that (1) there is a significant positive relationship between Islamic debt and firm value/firm financial performance. This result also supports trade-off theory which suggests that leverage has a positive impact on firm value. Moreover, the investigation of the market's reaction towards announcements of Islamic debt issuances supports the notion that (2) different types of debt have different impacts on market value. Furthermore, the examination of the impact of Islamic debt on the creation of shareholders' wealth supports the notion that (3) different types of debt have different impacts on the creation of shareholders' wealth.

Finally, this study contributes to the existing literature in several ways. This is the first study to investigate the impact of Islamic debt on firm value and/or firm financial performance. This study also fills a gap left by the few existing studies on Islamic debt: namely, how the announcement of Islamic debt issuances impacts stock returns and how the Islamic debt contributes to the creation of shareholders' wealth. The larger samples, longer periods of observation, and robust econometric models employed in this study also distinguish it from previous studies in this area.

Currently, little is known about market pricing of Islamic stock. This research clears up issues concerning (1) (2) and (3). There is much more that can be done,

as noted in the future research comment above. As the increasing globalisation of markets continues, more effort to analyse the Islamic security return and risk attributes will be undertaken by future researchers.

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APPENDIX

Appendix 1: List of the sukuk issuers from Malaysian listed firms

No.	Issuers	No.	Issuers
1	ABS Logistics	41	KMCOB Capital
2	ABS Plantation Assets	42	KNM
3	ACP Industries	43	Kuala Lumpur Kepong
4	AEON Credit Services	44	Kumpulan Guthrie
5	Alam Maritim	45	Lafarge Malayan Cement
6	Aman Sukuk	46	Leader Universal Holdings
7	AmIslamic	47	Lingkar Trans Kota Holdings
8	Ample Zone	48	Malayan Banking
9	Atlan Holdings	49	Malaysia Debt Ventures
10	Axiata Group	50	Malaysian AE Models Holdings
11	Bank Muamalat Syariah	51	Malaysian Industrial Development
12	Bank Pembangunan Malaysia	52	Malaysian Merchant Marine
13	Bina Darulaman	53	Maxtral Industries
14	Boon Koon	54	MBB Sukuk
15	BSA International	55	Merbok Hilir
16	Bumiputera-Commerce Holdings	56	Mieco Chipboard
17	Cagamas	57	Minetech Resources
18	Chemical Company of Malaysia	58	MISC
19	CIMB Islamic	59	MNRB Holdings
20	Delloyd Ventures	60	MRCB Southern Link
21	DRB-HICOM	61	MTD InfraPerdana
22	Emas Kiara Industries	62	Muhibbah Engineering
23	Englotechs Holding	63	Mulpha International
24	Esso Malaysia	64	Naim Cendera Holdings
25	Evermaster	65	Nam Fatt Corporation
26	Formis Resources	66	Nucleus Avenue
27	Gamuda	67	OCBC Al-Amin Bank
28	Glomac	68	OCBC Bank
29	Golden Crop Returns	69	Oilcorp
30	Goodway Integrated Industries	70	OSK Property Holdings Berhard (OSKP)
31	Guthrie Property Development	71	Padiberas Nasional
32	Hijrah Pertama	72	PG Municipal Assets
33	Hongleong	73	Pharmaniaga
34	Hualon Corporation	74	PLUS Expressway
35	Hubline	75	PLUS SPV
36	Hytex Integrated	76	Poh Kong Holdings
37	Ingress Sukuk	77	Premium Nutrients
38	John Master Industries	78	Priceworth Wood Products
39	Kencana Petroleum	79	Prinsiptek
40	Kinsteel	80	Projek Lebuhraya Utara-Selatan

No.	Issuers	No.	Issuers
81	Sarawak Corporate Sukuk	94	TH Group
82	SCB Develepments	95	Time Engineering (Musyarakah One Capital Bhd)
83	Serrisa Sinar	96	Tomei Consolidated
84	Sime Darby	97	Top Glove Corporation
85	Special Power Vehicle	98	Tracoma Holdings
86	Standard Chartered	99	Tradewins Plantation
87	Sunrise	100	TSH Resources
88	Sunway City	101	TTM Sukuk
89	Symphony House	102	UEM Builders
90	Tadamun Services	103	UMW Holdings
91	Talam Corporation	104	Wah Seong Corporation
92	Tanjung Offshore	105	WCT Engineering
93	Tenaga Nasional	106	Weida

Appendix 2: List of the Sukuk Issuers from Indonesia listed firms

No.	Issuers	No.	Issuers
1	Adhi Karya	14	Indorent
2	Aneka Gas Industry	15	Matahari Putra Prima
3	Apexindo Pratama Duta	16	Mayora Indah
4	Bakrieland Development	17	Metrodata Electronics
5	Bank Bukopin	18	Mitra Adiperkasa
6	Bank Muamalat	19	Multi Nitrotama Kimia
7	Bank Syariah Mandiri	20	Perusahaan Listrik Negara
8	Berlian Laju Tanker	21	PTPN IV
9	Berlina	22	Ricky Putra Globalindo
10	Ciliandra Perkasa	23	Salim Ivomas Pratama
11	Ciptadana Sekuritas	24	Sona Topas Tourism Industry
12	Citra Sari Makmur	25	Summarecon Agung
13	HITS	26	Titan Petrokimia