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Do Sukuk Issuances' Characteristics have a Relation to Yields and Weighted Average Cost of Capital in Malaysian Capital Market?

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ABSTRACT

The growing awareness of the need to invest in accordance to Islamic principles in achieving *maqasid Al-shariah (shariah objectives)* for here and hereafter *Al –Falah (success)*has created a flourishing global Islamic capital market. The increasing wealth held by Muslims worldwide has greatly enhanced the demand to these financial products. World Population Statistics website revealed there is approximately 1.6 billion Muslims worldwide which is representing 24% of the total world population. Furthermore, according to Grail Research, 13% of the total Muslim population is from Malaysia (16 millions) and Indonesia (195 millions). Although Indonesia has relatively a larger, Muslim population, Malaysia remains the leader in the global sukuk market whereby the market share held by Malaysia was 76.2% in June 2007. Consider in these issues, the study is motivated to investigate and validate the relationship between characteristics of sukuk issuances to sukuk yield (internal rate of return) and weighted average cost of capital (WACC) that has been established as a new model after zakah deduction which is represent risk. This study focused on the sample of 104 listed issuance firms from the Rating Agency Malaysia (RAM)newsletters and Bank Negara Malaysia (BNM) bond info's Hub from 2002 to 2012 to validate the relationships.The multivariate regression and Pearson correlation methods employed in order to test the hypotheses. Results revealed that,there are significant relationships between sukuk characteristics towards their yields and risks.

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INTRODUCTION

The growing awareness of demand for investing in accordance to Islamic principles on a global scale has created a flourishing Islamic capital market, more so today due to increasing wealth held by Muslims worldwide who are actively involved in business and industry activities. Muslim population of the world today is estimated at about 1.6 billion, representing 24% of the total world population of 6.3 billion. Latent Islamic funds in global financial institutions is said to be at US$1.3 trillion while the Islamic financial market is estimated to be US$230 billion, with an annual growth rate of 12% to 15%. Over 250 Islamic financial institutions currently operated in about 75 countries worldwide, with more than 100 Islamic equity funds managing assets in excess of US$5.0 billion.

Islamic financial market has gathered momentum with the formation of various international Islamic recognized brand names including the Islamic Financial Services Board (IFSB), the International Islamic Financial Market (IIFM) and the Accounting & Auditing Organisation for Islamic Financial Institutions (AAOIFI). First, IFSB is based in Kuala Lumpur and was officially inaugurated on 3rd November 2002 and started operations on 10 March 2003. It serves as an international standard- setting body of regulatory and supervisory agencies that have vested interest in ensuring the soundness and stability of the Islamic financial services industry such as banking, capital market and insurance. Second, AAOIFI is an international autonomous non-profit organization which prepares accounting, auditing, governance, ethics and shariah standards for Islamic financial institutions. It was established in accordance with the agreement of association which was signed by a number of Islamic financial institutions in February 1990, in Algiers. Afterward, it was registered in March 1991 in the state of Bahrain. Issuance and trading of Islamic Bonds was regulated under Standard 17 of the AAOIFI shariah standards. Third, IIFM was established with the collective efforts of the central banks and monetary agencies of Bahrain, Brunei, Indonesia, Malaysia, Sudan and the Islamic

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Development Bank based in Saudi Arabia, as an infrastructure institution with mandate to take part in the establishment, development, self-regulation and promotion of Islamic capital and money market.

Today, the Islamic capital market runs parallel with the conventional capital market and provides investors with an investment options the market is gaining wide acceptance. The Islamic capital market that is open to all Muslims and otherwise has creates boundless advantage to the depth and breadth of this market. Presently, Malaysia far surpasses other Muslim countries in terms of market infrastructure with persistent support by the government providing the impetus for growth of the local Islamic capital market. Malaysian government has launched the Malaysian Islamic Financial Centre (MIFC) in August 2006 to maintain the country's edge in the area of Islamic finance. It aims to bring the nation to the next level of Islamic financial development, fortifying Malaysia's position as a preferred global centre for issuing, trading and investing in Islamic securities. The success of Islamic Bonds issuance in the Malaysian market and worldwide testifies to the viability and future success of the Islamic capital market. Indeed, Malaysia has proven itself as a centre of choice for foreign corporations to issue Islamic Bonds as well as to invest in these areas, as it offers one of the most diverse (in terms of types of securities, tenures, asset classes, structures, issuers and risk profiles), innovative and sophisticated array of investment choices in the world. Malaysia has, irrefutably, taken the lead in developing and innovating new Islamic securities structures.

The remainder of the paper is structured as follows. Section 2.0 includes a literature review and hypotheses development. Then, section 3.0 introduces the operational definition used and describes the data and variables for the study. The proposed methodology is applied in this section where the statistic is derived in this section to test the model hypotheses testing. Further, the results are discussed to show how the model can be put to use by listed firms in section 4.0. Finally, section 5.0 summarizes some conclusions and recommendations.

2.0 Literature Reviewand Hypotheses Development:

Fulfillment the requirement of *maqasid* is expected to be difficult for any new financial product in the capital market. Furthermore the market itself is predominated by conventional financial product such bond, derivatives, debenture, stock and others (Ab. Aziz *et al*., 2013). Most of the studies done in conventional perspective as regards to the yields and WACC. However, this study also review the study on conventional bonds in developing the hypothesis since there are quite limited of study done on Islamic bonds or sukuk. Not only the characteristics but also how the sukuk trading is similar except for sukuk followed a shariah rulings in trading mechanism. For instance,several characteristics of Islamic bond are similar to that of traditional conventional bonds (Ayub, 2007) and Mosaid & Boutti (2014) claimed thatsukuk perform as bonds given the positive correlation between these two financial instruments.

In addition to that, Zaidi (2007), CEO, Islamic International Rating Agency (IIRA), Bahrain was mentioned Islamic bonds or 'sukuk' have generated considerable interest in international capital markets. Sukuk are a type of financial certificate, comparable to conventional asset-backed securities that provide investors with ownership in a specified underlying real asset found on the balance sheet of the issuing company. Further, he was explained that the sukuk model is effectively a derivation of the conventional securitization process, where a special purpose vehicle acquires control of the originator's real assets and issues financial claims on the associated cash flows.

In contrast, Ariff *et al*. (2013a) argued that a new type of debt securities called sukuk certificates have grown to US$ 840 billion in 11 financial markets as of 2011. These Islamic debt instruments share some features similar to conventional bonds, so market operators treat both as bonds. Whether it is appropriate to treat sukuk certificates as conventional bonds is empirically tested in this paper. If the yields of sukuk are the same as those of conventional bonds, Granger causality tests could confirm their equivalence. Practically the tests show otherwise. Also, the yields of sukuk instruments are significantly higher than yields of conventional bonds even after controlling issuers, rating quality and tenure in matched samples tests. Finally, sukuk issuance affects the issuing firm"s beta risk significantly, which is consistent with capital structure theory. These new findings on the 10-year old Islamic debt market have regulatory and market making policy implications as to whether sukuk instruments should be classed as a new class of financial instruments, and not as bonds. However, mixed finding revealed by Alam *et al*. (2013) by using event studied whereby an announcement effect of sukuk is negative for most of the periods. So, in the short run perspective the effect of announcement of Sukuk on firm value is negative while the effect of announcement of conventional bond is positive for all periods except for post-crisis period. They suggest that for raising fund through sukuk, the long term outcome of issuing sukuk needs to be considered. Supported by Ariff *et al*. (2013b) identified some significant differences between the yield curves of sukuk securities and those of conventional bonds of the same issuers for the same term and rating. Results show significant differences between the average yields of sukuk and those of conventional bonds with the same quality and term issued by the same issuers from 2005 to 2012. Granger causality tests confirm that the yields of bonds do not Granger-cause the yields of sukuk, verifying no causality between the two. There is strong empirical evidence that the two types of debt instruments are not the same.

In different setting by considering bank as a study sample, Helberg & Lindset (2014) argued that optimal bank capital and bond risk are influenced by asset encumbrance, depositor preference, and bail-in resolution frameworks. Due to changes in optimal capital structure, the net effect on bond debt risk and valuation is small. The effects on shareholder value and public sector liability value are significant. Supported by Gotti & Mastrolia (2014) exhibited that a high cost of equity capital persists after controlling for earnings quality.

Most recent study done by Klein & Stellner (2014) examined if sovereign risk matters for corporate bonds in developed economies. Using a unique panel data sample of 897 corporate bonds from eleven countries within the Economic and Monetary Union (EMU), they investigated sovereign and corporate ratings as well as zero-volatility spreads (z-spreads). In the time period from March 2006 to June 2012, they found that sovereign risk to be a significant driver of corporate risk. The effect is stronger for companies with domestic revenue structure, for companies that are (partly) owned by the government, and companies active in the utility and transportation sector. Interestingly, the impact of sovereign risk on corporate risk during the acute European sovereign debt crisis period decreases if ratings are examined, but increases if z-spreads are utilized. Another study by Afonso*et al*. (2014) also measured the bond risk represented by its volatility. The reaction of EU bond and equity market volatilities to sovereign rating announcements (Standard & Poor's, Moody's, and Fitch) is investigated using a panel of daily stock market and sovereign bond returns. The parametric volatilities are defined using EGARCH specifications. The estimation results show that upgrades do not have significant effects on volatility, but downgrades increase stock and bond market volatility. Sovereign rating announcements create interdependence among European financial markets with upgrades (downgrades) in one country leading to a decrease (increase) in volatility in other countries. The empirical results show also a financial gain and risk (value-at-risk) reduction for portfolio returns when taking into account sovereign credit ratings' information for volatility modelling, with financial gains decreasing with higher risk aversion.

Indonesian researcher, Setyani Dwi Lestasi & Endri (2013) explained the role and important of rating for market participation or players. For investors, bond rating provides information on the capacity and capability to fulfill his pledge to pay interests or coupons on a regular basis and return the whole principal at its maturity. If there is information that a company will be in repayment default, the ratings of these companies will drop coupled with the drop of the bond prices. Therefore, the rating of the bonds to investors demonstrates both the potential risks involved and the possible expected results. For companies, bond ratings reflect how well the company performs. As in conventional bonds, an investor intending to invest in sukuk must also consider the ranking of the sukuk. Sukuk rating was also carried out by an institution or a bond rating agencies. The institution conducts its recent analysis of the sukuk performance on the basis of relatively independent assumptions. Each newly issued financial statements or the emergence of important happening concerning to the company that materially affects the ability to pay its debt obligations, it will change the position of sukuk ranking results, and vice versa. Sukuk that has high ratings will be marked by financial fundamentals and strong business, as well as having a good image in public. Therefore, it can be said that the sukuk ratings greatly influenced by the financial performance of the companies issuing the sukuk.

Shahrim, (2006) and Amine (2001) focused on leverage and risk when issuing bonds. They mentioned that bonds issued by high leverage companies are considered risky for Muslims, as they might contain elements of gharar and may lead to maysir. In conventional bonds there is exploitation of interest rate movement, and the bond risk is assessed not by the bondholder, but by a third party rating agency. Therefore, it can be said that the bondholder's only concern to the return, without any consideration of the use of the proceeds.

Besides the return, size of sukuk issuance need to be considered when making a decision in creating structure of capital by firms. Analysis of volume trading allows the listed firms to understand the risk involved through the liquidity of debt issues (Alexander*et al*., 2000). Usually, the money raised from sukuk issuance is used for investment purposed (Clifford,2008; Manaf, 2007; Shahrim, 2006). In addition, the issuance of Sukuk has undergone rapid increase; for example, London based financial institutions had arranged more than a dozen Sukuk issuances on behalf of Middle Eastern clients in 2006, while in 2008 Indonesia will increase the sale of both conventional and sukuk in order to generate a domestic source of finance to mitigate its financial deficit (Emergingmarketsmonitors.com, 2007; Alvi,2006, 2007). Based on the Rating Agency Malaysia Berhad (RAM) report in 2004, the Malaysian corporate sukuk market continued to expand and mature in 2004, affirming the role that Islamic finance plays in mobilizing the capital needed by corporate. The entry of 51 corporates sukuk issues, with an aggregate value of RM15.03 billion. These represented 55% of total ringgit denominated corporate bonds issued which grossed RM27.37 billion. To the credit of the industry, these well-received sukuk issuances underscore the growing appetite for shariah-compliant instruments and strong investor confidence in the prospects of such instrument. Meaning that, from this report the size of sukuk issuance was tremendously increasing among public and private sector in generating profit.

Furthermore, Aziz (2007) a governor of Bank Negara Malaysia said that the growing role of Islamic finance in mobilising and channeling funds to productive investment activities across borders contributes to more efficient allocation of funds across borders and facilitates international trade and investment. The more recent developments in Islamic finance are the growing significance of the sukuk market to become an increasingly

important component of the development of the global sukuk market. Today, the global sukuk market, denominated in international currencies, is estimated to exceed USD50 billion. Although the size of the market is modest by global standards, the sukuk market is experiencing remarkable growth, increasing at an average rate of growth of forty per cent per annum. In her other articles, She also focus on the vast potential of the Islamic bond market in the economic development process, in its role in ensuring financial stability and its role in promoting greater financial integration in the global financial system. Similar with the Thomas (2007) also stress on the important of the sukuk market. He argue that the application of the forward lease is an innovation developed elsewhere, but made possible in the sukuk space thanks to Malaysia's progressive steps to define the broad sukukspace, and grow it with new concepts. Alshowaikh (2008) also mentioned thatMalaysia has been developing a more extensive capital market after the Asian financial crisis to ensure a more resilient financial system. He also said that Malaysia is a matured market as indicated not only by the market share but also by the number of issuances.

In addition, the Malaysian ringgit remains the most common currency for sukuk issuance, followed by the dollar. Jobst (2008) said that the issuance of sukukby corporates and public sector entities amid growing demand for alternative investments. As the sukukmarket continues to develop, new challenges and opportunities for sovereign debt managers and capital market development arise. Ismail(2002) said that the growth of Islamic Private Bond("IPDS") in Malaysia has been very encouraging since the first issue in 1990. In 2001, the issuance of IPDS constituted 43% of total PDS issued compared to 34% in 2000. With its continued strong presence, we can expect IPDS to take up a larger share than conventional PDS in 2002. The Islamic bonds issued in 2001 were mainly to finance large privatized projects such as water and power projects which require higher capital outlays. The Al-Bai Bithaman Ajil ("ABBA") structure has been the preferred choice to finance such projects with long gestation periods. Besides ABBA, another popular IPDS tool is the Murabahah concept which caters for short- to medium-term requirements. Here with, this study was developing the first and second hypotheses to outfit for the pooling regression model as below:

H1: There is a significant relationship between sizes of issuances with the sukuk yield and risk.
H2: There is a significant relationship between coupon rates with the sukuk yield and risk.

Jones*et al*. (1998) examined the reaction of daily Treasury bond prices to the release of U.S. macroeconomic news. These news releases (of employment and producer price index data) are of interest because they are released on periodic, preannounced dates and because they are associated with substantial bond market volatility. They found that announcement-day volatility does not persist at all, consistent with the immediate incorporation of information into prices including a risk premium. Later, Tariq (2004) mentioned in his study the success and popularity of the sukuk framework as an alternative asset management platform will invariably require inbuilt mechanisms which can be instrumental in mitigating risks that exist in the structures due to the benchmarking of sukuk with market references such as London Inter-bank Offer Rate (LIBOR). Rodney (2008) provides an analysis of different sukuk structures from a financial perspective. This examination includes murabahah and ijara-based sukuk, the former offering a fixed return, and the latter, the most popular form of sukuk, a variable return. The potential for other more novel sukuk structures based on musharakah partnership contracts is also examined, and sukuk pricing issues are explored using alternative benchmarks to LIBOR. The paper finds that special purpose vehicles are a prerequisite for the successful issuance and management of sukuk. Rosly & Sanusi (2008) argue that financial contracts involving use of bay' al-inah and bay' al-dayn have been extensively used in design of Malaysian Islamic bonds. This paper argues that both these mechanisms have been found unacceptable by the majority of Islamic scholars and proposes the use of financing based on Muqarada and Musharakah principles as genuine alternatives to Interest-bearing financial instruments. Based on this four articles review, this study was comes out with third hypothesis as below:

H3: There is a significance relationship between sukuk prices with the sukuk yield and risk.

From view of conventional bonds, Modigliani & Miller (1958) argue that the presence of perfect capital markets, all financial decisions including debt maturity do not matter. Stiglitz (1974) has formalized and extended Modigliani and Miller's propositions to demonstrate that the debt maturity structure is irrelevant for firm value under perfect market assumptions. However, market imperfections, which are later introduced primarily based on the role of agency cost, signaling and asymmetric information, liquidation risk or taxes, have led to theories supporting the choice of debt maturity mix either short or long term debt. Though, from the view of sukuk, Zaidi (2007) claimed that varied sukuk maturities should interest corporate issuers and financial institutions which will utilize sukuk-financing for asset and liability management purposes in order to avoid funding mismatches. Enclosed, the study was concluding the fourth hypotheses as below:

H4: There is a significance relationship between maturity of bond or tenure with the sukuk yield and risk.

Klein & Stellner (2014) examined if sovereign risk matters for corporate bonds in developed economies. Using a unique panel data sample of 897 corporate bonds from eleven countries within the Economic and Monetary Union (EMU), they investigated sovereign and corporate ratings as well as zero-volatility spreads (z-spreads). In the time period from March 2006 to June 2012, they found that sovereign risk to be a significant driver of corporate risk. The effect is stronger for companies with domestic revenue structure, for companies

that are (partly) owned by the government, and companies active in the utility and transportation sector. Interestingly, the impact of sovereign risk on corporate risk during the acute European sovereign debt crisis period decreases if ratings are examined, but increases if z-spreads are utilized. Another study by Afonso*et al*. (2014) also measured the bond risk represented by its volatility. The reaction of EU bond and equity market volatilities to sovereign rating announcements (Standard & Poor's, Moody's, and Fitch) is investigated using a panel of daily stock market and sovereign bond returns. The parametric volatilities are defined using EGARCH specifications. The estimation results show that upgrades do not have significant effects on volatility, but downgrades increase stock and bond market volatility. Sovereign rating announcements create interdependence among European financial markets with upgrades (downgrades) in one country leading to a decrease (increase) in volatility in other countries. The empirical results show also a financial gain and risk (value-at-risk) reduction for portfolio returns when taking into account sovereign credit ratings' information for volatility modelling, with financial gains decreasing with higher risk aversion. Enclosed, the study was concluding the fifth hypotheses as below:

H5: There is a significance relationship between sukuk ratings with the sukuk yield and risk.

Jaramillo & Weber (2013) in their study claimed that bond yields are mainly influenced by inflation and real gross domestic product (GDP) growth projections, showing markets' greater concern with risk stemming from sensitivity to macroeconomic shocks. However, when global risk aversion is high, market participants pay more attention to country-specific fiscal fundamentals, revealing greater alertness about default risk. Prior to that, by using similar variables, Ahmad*et al*. (2012) investigated macroeconomic influences on sukuk issuance in Malaysia for the period 1996-2011 at the aggregate level. The results indicated that sukuk Granger-cause GDP while GDP Granger-causes both producer price index (PPI) and consumer price index (CPI). Enclosed, the study was concluding the sixth hypotheses as below:

H6: There is a significance relationship between producer price index (PPI) with the sukuk yield and risk.

3.0 Data and Methodology:

This study focused on a sample of 104 listed issuance firms selected from the BNM bond info's website in Malaysia for eleven conservative year's period from 2002 to 2012.For the purpose of collecting information on the sukuk characteristics, this study obtained data from the RAM where there are sufficient for gathering such data considering Islamic perspectives. Thompson's DataStream and Bloomberg were used to employ the data on sukuk; i.e. yield and risk.

The determination of the dependent variables mostly depends on these recent surges of studies done by Cantor & Packer (1995) on rated or non-rated securities affect default risk; Kaminsky &Schmukler (2002) on types of rating affect other asset and Gande & Parsley (2003) also on rating or bond grade effects yield or returns; Karmillaet.al (2009) on various types of returns links to sukuk pricing and in details was mentioned sukuk issuer may devise sukuk pricing in setting returns to the holders in many ways. For example, sukuk issuer may introduce a variable returns to the holders of the certificates. A contrast to return factor which is focus on risk done by Khan & Ahmad (2001) identify various unique credit risks that are particular to Islamic finance. Sukuk issuances maneuver for the large fraction in emerging bond markets where possess less sophisticated risk management mechanisms counterparty. The rescheduling and rearrangement of bond issuances at higher markup rate is not permissible due to the prohibition of excessive interest rate charging or *riba*. Thus, counterparties would be more inclined to default on their commitments to other parties. In fact, agency costs are higher with regard to equity arrangements.

Next, the proxies, variables description and data sources of dependent and independent for this study as shown in table 1 below:

Then, the relationship between the sukuk characteristics with sukuk yields and risks will be estimating by using the following multiple regression equations:

$$Yieldi_i = \alpha + \beta_1(T_1) + \beta_2(P_2) + \beta_3(C_3) + \beta_4(Pstyle_4) + \beta_5(R_5) + \beta_6(LnS_6) + \beta_7(PPI_7) + \beta_8(AssetsG_8) + \beta_9(SalesG_9) + \varepsilon_i$$

$$WACCi_i = \alpha + \beta_1(T_1) + \beta_2(P_2) + \beta_3(C_3) + \beta_4(Pstyle_4) + \beta_5(R_5) + \beta_6(LnS_6) + \beta_7(PPI_7) + \beta_8(AssetsG_8) + \beta_9(SalesG_9) + \varepsilon_i$$

Where;

α = the constant term,

T_i = the tenure of the sukuk issuance,

P_i = the price of the sukuk issuance,

C_i = the coupon rate types of the sukuk issuance,

$Pstyle_i$ = the payment styles of the sukuk issuance,

R_i = the rating of the sukuk issuance,

LnS_i = the log size of issuance,

PPI_i = the issuer's price producer index,

$AssetsG_i$ = the size of issuer of the issuance

$SalesG_i$ = the size of issuer of the issuance

ε_i = the standard error of the ith sukuk.

RESULTS AND DISCUSSION

4.1 Results of Descriptive Statistics and Pearson Correlations:

Table 2 revealed results of descriptive statistics for minimum, maximum, mean and standard deviation of sukuk characteristics performance and economic indicators. Amidst the period of studied (2002-2012), the minimum value of listed firm's performance and economic indicators as proxy by producer price index (PPI) are shown bad sign representing statistically negative value to all variables for instance PPI (-7.1%), sales growth (-32.77%) and assets growth (-40.58%) except for WACC (3.17%). Otherwise, the maximum value indicates positive value to all proxies with great different as compared to minimum value, e.g PPI (10.3%), sales growth (331.76%), assets growth (84.23%) and WACC (15.17%). Notably, for the WACC, higher percentage or value implying that the level of risk is high. Nonetheless, the means value didn't show encouraging figure since the value of these performance close to minimum value not to maximum value even though the value are positive. Minimum value for coupon rate and payment styles indicate 0.000 because of dummy variables where by 0.000 for instance, coupon because the issuance is zero coupon rate and payment styles because of dichotomous variable, 1 if fixed rate payment and 0 if zero coupon payment.

Table 1: The proxies for dependent and independent variables.

Variables	*Proxies*	*Description*	*Data Sources*
Dependent	1. Sukuk Yield (Yield) **2.** Sukuk Risk (*WACCi*)	Yield to maturity on sukuk based on year of issued until maturity period. Weighted Average Cost of Capital for each company selected	Bank Negara Malaysia BondInfo Hub Bloomberg Bursa Malaysia
Independent	1. Size of Issuance (in RM mil) 2. Coupon rate 3. Tenure 4. Rating 5. Payment mode	Log size of sukuk issuances in Malaysian Ringgit (MYR). Refers to the profit rate offer by sukuk. Number of years trading from the date of issue until maturity date. RAM Rating Services subscription data Dichotomous variable. 1 if fixed rate payment and 0 if zero coupon payment.	Bank Negara Malaysia BondInfo Hub and Securities Commission Malaysia. RAM Rating Services subscription data RAM Rating Services subscription data Rating Agency Malaysia (RAM) ratings Bank Negara Malaysia BondInfo Hub
Control	1. AssetsGrowth 2. Sales Growth	Total assets growth of the company for each year. Sales growth of the company for each year.	Thompson's DataStream and Bloomberg Bursa Malaysia Thompson's DataStream and Bloomberg Bursa Malaysia

As regards to sukuk characteristics, the mean statistics was shown all proxies indicated a stable performance at tenure (7.173 years), price (RM99.689), yield (4.387%), coupon (3.490%), payment style (0.710), rating (6.5) and log size of issuances (1.455). Explaining that, most of the listed firms in Malaysia were issued long term sukuk rated in between AA1 to AA2 (mean = 6.5) with maturity period more than 7 years and price at par (RM100) will generate a rate of return for 4.387% at coupon rate about 3.5% through fixed payment mode. This stable portfolio investment performance (standard deviation = 2.465) give a mutual benefit in securing return and mitigating risk to listed firms and sukukholders in Malaysia.

Furthermore, the Pearson correlations results reported all p-value of correlation except for coupon rate with payment style (0.877) are relatively low justifiable that no multicollinearity problems exist as mentioned by Gujarati (1995), where when the correlations value exceeded 0.80 mean there have a multicollinearity problems among variables. As a dependent variables in this study, yield correlation shown a positive significant with producer price index (p value=0.248) but negative significant to payment style (p value=-0.228) and rating (p value=-0.230) at 5 percent respectively. On the other hand, second dependent proxy by WACC have shown a positive significant with log size of issuance (p value=0.244) at 5 percent but negative significant to coupon rate (p value=-0.449) and payment style (p value=-0.386) at 1 percent and sales growth (p value=-0.212) at 5 percent. Sukuk tenure shown a positive significant correlated at 1 percent with yield (p value=0.280) and log size of issuances (p value=0.638) only and not to the other sukuk characteristics. Producer price index and issuer performance either sales or assets growth also does not correlated with tenure. Surprisingly, there are no variables shown significant correlated with sukuk price. The other characteristics such coupon rate, payment style and rating shown a mixed result of correlations.

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4.2 Regression Results for sukuk Yield and Weighted Average Cost of Capital:

$$Yield_i = \alpha + \beta_1(T_1) + \beta_2(P_2) + \beta_3(C_3) + \beta_4(Pstyle_4) + \beta_5(R_5) + \beta_6(LnS_6) + \beta_7(PPI_7) + \beta_8(AssetsG_8) + \beta_9(SalesG_9) + \varepsilon_i$$

...eq.1

Yield = 4.499 + 0.080T - 0.001P + 0.175C -1.542Pstyle - 0.032R - 0.054LnS + 0.073PPI - 0.002AssetsG + 0.006SalesG + 1.124

t =	4.002	2.716	-0.087	1.810	-2.975	-0.659	-0.513	2.601	-0.356	1.875
p =	0.000	0.008	0.930	0.073	0.004	0.511	0.609	0.011	0.722	0.064

R^2 = 28.7%

F = 4.205, sig =0.000

Regression result of model equation 1 shows that the estimated coefficient for tenure and payment style has statistically significant relationship with yield at the 1% significance level (as p value = 0.008 and 0.004 respectively). There are another three variables, i.e, producer price index, coupon and sales growth has a positive significant relationship at 5% and 10% confident level. Implying that, the higher index price, rate of coupon and growth enhancement in sales lead to higher rate of return stimulated from issuances. However, the estimated coefficient for price, size of the bond issues and its rating are not significant statistically (as p value > 0.01, 0.05 or 0.1) towards yield performance. Similar to performance of assets growth by listed firms also doesn't give any impact to up and down of sukuk yield.

The determinate coefficient as represented by R^2, is indicating that 28.7% of the variance of yield is explained by the variances of the independent variables. The F-test statistics is substantiating at the 1% significant level implying that the null hypotheses that the regression coefficient are all zeros can be rejected at the 1% level of significance. Thus, the estimated regression is efficient for the prediction of yield. This result was supported by studies done Kaminsky & Schmukler (2002) and Gande & Parsley (2003) indicate that bond grade and coupon rate effects yield or returns of the firms. Therefore, an investor or issuer should be evaluating these sukuk characteristics in predicting their expected rate of return or yield acquired.

$$WACCi_i = \alpha + \beta_1(T_1) + \beta_2(P_2) + \beta_3(C_3) + \beta_4(Pstyle_4) + \beta_5(R_5) + \beta_6(LnS_6) + \beta_7(PPI_7) + \beta_8(AssetsG_8) + \beta_9(SalesG_9) + \varepsilon_i$$

..eq.2

WACC =1.55 -0.116T+0.031P -0.449C + 0.403Pstyle + 0.069R + 0.794LnS + 0.110PPI + 0.029AssetsG - 0.010SalesG + 2.156

t =	0.719	-2.059	1.820	-2.417	0.405	0.737	3.913	2.041	2.280	-1.628
p =	0.474	0.042	0.072	0.018	0.686	0.463	0.000	0.044	0.025	0.107

R^2 = 37.2%

F = 6.181, sig =0.000

While model equation 2 shows that there are six (tenure, price, coupon, producer price index, assets growth and log size of issuances) out of nine variables revealed their estimated coefficient has statistically significant relationship with WACC at 1%, 5% and 10% significance level (as p value < 0.01, 0.05 and 0.1). However, the estimated coefficients for payment style, rating and sales growth are insignificant at 1% significance level (as p-value > 0.1) with WACC. In addition, the determination coefficient of this model (R^2 = 37.2%) is quite low and indicating that the 37.2% of the variance of WACC is explained by the variances of the independent variables. Thus, this entails that the null hypotheses of the regression coefficients are all zero and can be rejected at the 1% level of significant. The F-test statistics for this model is substantiated at the 1% significant level implying that the null hypotheses that the regression coefficient are all zeros can be rejected at the 1% level of significant. Once again, the estimated regression for WACC is efficient for prediction.

Conclusion and Recommendations:

In this study, multivariate regressions method is applied in investigation on the relationship between sukuk issuances' characteristics and (i) yields and (ii) listed issuer' WACC in Malaysia. The results show a significant relationship for both dependent in different independent variables. For instances, yields have a relation up to 10% confident level with five out of nine variables; tenure, coupon rates, payment styles, producer price index and sales growth. However, WACC indicate more variables (six) were significant also at 10% confident level; tenure, coupon rate, log size of issuances, producer price index and assets growth. From these result revealed that only three independent variables shown significant relation for both dependent such tenure, coupon and producer price index. Indicating that, these three factors or characteristics are important to the issuer and sukukholder to look into details whenever making capital financing decision. The longer the tenure or maturity date for such issuances will be exposed to the fluctuation in yields and incurred high risks due to volatilities in coupon rates and producer price index. It was also found that there is a relationship between the variables despite the fact that the relationship was not a strong relationship as the value of R is below 60% (between 28.7% and 37.2%), consistent with suggestion made by Gompers *et al*. (2003).Nevertheless, the F-test statistics for these model are substantiated at the 1% significant level implying that the null hypotheses that the regression coefficient are all zeros can be rejected at the 1% level of significant. Conclude that, the estimated regression for yield and WACC are efficient for prediction.

Table 2: Results of Descriptive Statistics and Pearson Correlations.

	Min	Max	Mean	Std. Dev	Tenure	Price	Yield	coupon	Pstyle	Rating	Wacc	PPI	Sales G	AssetsG	Ln Size
Tenure	1.000	25.000	7.173	4.765	1										
Price	63.31	135.970	99.689	11.837	-0.019	1									
Yield	2.00	8.470	4.387	1.175	.280**	-0.059	1								
Coupon	0.000	7.900	3.490	2.391	0.114	0.039	-0.088	1							
Pstyle	0.000	1.000	0.710	0.455	0.046	0.030	-.228*	.877**	1						
Rating	1.000	9.000	6.500	2.465	0.018	-0.048	-.230*	0.007	0.147	1					
Wacc	3.170	15.170	8.129	2.402	0.000	0.104	0.077	-.449**	-.386**	0.107	1				
PPI	-7.100	10.300	4.559	3.939	-0.057	-0.094	.248*	-0.031	-0.007	-.255**	0.093	1			
SalesG	-32.770	331.760	14.650	37.885	-0.007	-0.139	0.129	.257**	.249*	-0.060	-.212*	-0.001	1		
AssetsG	-40.580	84.230	15.650	19.205	-0.082	-0.051	0.066	0.021	0.078	-.198*	0.040	0.180	.471**	1	
LnSize	2.300	10.060	5.491	1.455	.638**	-0.057	0.113	-0.014	-0.107	.253**	.244*	-.254**	-0.082	-.287**	1

*Notes: In all cases of Pearson correlation the symbols * indicates correlation is significant at the ≤ 5 percent level while ** indicates correlation is significant at the ≤ 1 percent level (2-tailed).*

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