

Ownership Monitoring Mechanism over Sukuk Credit Rating

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Abstract

This study examines the effect of ownership structure as one of the corporate governance monitoring mechanism to Sukuk rating. Sukuk rating represents the credit risk assessment made by local rating agencies, RAM and MARC. This study is based in Malaysia for the period of 2008-2013. Two proxy for ownership variables chosen were institutional and insider investors. The results of this study showed that institutional investors have a non-significant effect to Sukuk rating with a mix positive and negative directions. When this variable was tested alone together with the control variables of financial characteristics —leverage, profit and size, the results showed a positive and non-significant effect to Sukuk rating. However, the direction changed when the variable was tested with the appearance of insider investors to proxy ownership and the non-significant effect remains. Insider investors showed a significant and negative effect to Sukuk rating across tested models.

Keywords: Ownership, Sukuk, Credit Rating

1. Introduction

Sukuk play significant roles in contemporary capital market as one of the Islamic capital tools. According to Standard and Poor (2006), Sukuk or Islamic notes is an Islamic law compliant activity mostly delivered by sovereign, supranational, regional, or in other circumstances, government-backed entities or, a type of obligations delivered for Shariah-compliant activity. Although Islamic law has been in existence for more than 1,400 years, (Ismail & Tohirin, 2010) the implementation of Islamic debt instruments began to be accepted steadily across the globe. Sukuk have become attractive investment instruments for Islamic banks, takaful Islamic insurance companies and shariah managed funds (Wilson, 2008).

Similar to conventional bond, Sukuk has to go through rating process to determine the issuer creditworthiness. Credit rating agencies have their own methodology in assessing debt issues. However, the higher portion of leverage would reflect a higher risk of debt default—one of the most crucial determinant in rating process. This is also known as credit risk, which derived from the capital structure of the firm.

However, empirical evidence concerning the effect of Islamic financial growth for economic expansion has yet to be analysed in detail and comprehensive covering all necessary elements due to data limitations (Johnson, 2013). This problem apparently led by limitation of data for banking transactions analysis for unremitting economic growth and development of Islamic financial institutions.

Besides data limitation, the financial performance of the Islamic capitalist (i.e Sukuk issuer financial performance) is still dubious. This issue is crucial as it may highly affects the final rating on the Sukuk itself (Zakaria, Md. Isa & Zainal Abidin., 2012). Sukuk rating by the rating agencies could rely the governance aspects of the issuer as well as other characteristics that would include capital structure, leverage (as this could also reflect the default risk), issuer size, profit and other corporate reputation and image.

Despite of some similarities between Sukuk and conventional bond in term of fixed maturity term, bear profit (coupon) and tradable at normal yield price, Sukuk are still different from the conventional bond as it signifies the undivided shares in ownership of assets and services (Zakaria et al., 2012). Thus, Sukuk needs more studies as other scholars and researchers need to see the distinctions that Sukuk may have as compared to conventional bonds as Sukuk may comes in different forms of structure based on its purpose.

On the other hand, corporate governance via its monitoring mechanisms serve as a watchdog to look after the management practices in dealing with debt arrangements. Governance mechanisms include monitoring the actions, policies, practices, and decisions of corporations, their agents, and affected stakeholders. Corporate governance practices are affected by attempts to align the interests of stakeholders. One of the effective corporate governance mechanism is ownership structure as different ownership structure lend different extent of effective monitoring. Firms need active monitoring by corporate governance mechanism due to agency problem.

Agency problems arise from the: (1) conflicts in desired goals of principals and agents; (2) information asymmetry that makes it difficult for the principal to validate the behaviour of the agents; (3) different risk preferences that lead to the difference between principal and agents' preferred actions; and (4) difficulties principals have in monitoring agents' actions (Eisenhardt, 1989). Any divergence in the interests between shareholders and managers, as insiders, can be aligned if ownership rights are concentrated in the hand of insiders (Jensen & Meckling, 1976).

Control and ownership structure refers to the types and composition of shareholders in a corporation. Ownership is typically defined as the ownership of cash flow rights whereas control refers to ownership of control or voting rights. Corporate engagement with shareholders and other stakeholders can differ substantially across different control and

ownership structures. Some common ownership monitoring could be in the form of institutional ownership, insider ownership or blockholder ownership.

This current study is aiming to examine the impact of ownership structures based on institutional and insider investors towards Sukuk credit rating while controlling the firm's characteristics.

This paper consists of five sections. The next section is the review of related literatures based on prior researchers as well as theoretical discussion that lead to the development of the study hypothesis. Next section is the methodology details encompass the sampling and measurements used to proxy each variable tested in establishing the models. Findings and discussion are discussed in the next section and finally the last section concludes the whole study.

2. Literature Review

Sukuk ratings also conventionally known as credit rating. It is determined by the assessment of the probability distribution of future cash flows to its holders of the rating agencies, which in turn, depends on the future cash flows to the firm. Two basic types of Sukuk ratings found in the literature. They are those Sukuk ratings, designed for specific debt issues or other financial obligations applicable in Sukuk markets and those Sukuk ratings for debt issuers applicable in Sukuk markets (Huang, Chen, Hsu, Chen & Wu., 2004). The former is the most frequently studied and can be referred to as a "bond rating" or "issue credit rating." It is essentially an attempt to inform the public of the likelihood of an investor receiving the promised principal and interest payments associated with a Sukuk issue (Huang et al., 2004). The latter is a current opinion of overall capacity of issuers to pay their financial obligations, which conveys their fundamental creditworthiness. It focuses on the issuers' ability and willingness to meet their financial commitments on a timely basis.

Ashbaugh-Skaife, Collins and Lafond (2006) demonstrate that the creditworthiness of a firm is determined by assessing the likelihood that its future cash flows will be sufficient to cover costs of debt service and principal payments.

Investors, who are interested to buy Sukuk, have to pay attention to Sukuk ratings because the rating provides information and gives signals about the probability of failure of debt of a company. As the mean of the firm's future cash flow distribution shifts downward or the variance of its future cash flows increases, the likelihood of default increases and the firm's Sukuk rating will decline (Ashbaugh-Skaife et al., 2006). Presumably, the rating agencies can sort through the intricacies of a firm's balance sheet and come up with an assessment of the extent to which its capital structure puts the firm at risk of bankruptcy (Hovakimian, Kayhan & Titman, 2009). Faulkender and Petersen (2006) state that bond market access is an important determinant of financial leverage. Graham and Harvey (2001) reveal that credit ratings are the second most crucial factors influencing a firm's debt policy.

The default Sukuk rating can be assumed for short horizon of one year, whereas the "Sukuk ratings" or "issue Sukuk ratings" can be assumed for long horizon (Altman & Rijken, 2004). Further, both types of ratings are very important to the investment community for valuation of their securities. As a result, larger body of investors including institutional investors rely on

those ratings for valuation of their securities provided by rating agencies, due to their independent and unbiased nature. Some of the most influential rating agencies are S&P, Moody's rating agencies and Fitch rating agency. Definitions of these ratings are release by these rating agencies, which they themselves are firms, but these firms are not 'buy', 'hold' or 'sell' indicators (Altman & Rijken, 2004).

Rating agencies do not have significance influences to indicate market direction, except serving only as a guide to the issuer's ability and willingness to meet the terms of the issue that they take into account in any investment decision. Furthermore, Moody's, Standard, and Poor's (S&P) as rating agencies have produced credit ratings for sovereign and corporate bond issues in the United States for many years (Hull, Predescu & White, 2004). Both Moody's, Standard, and Poor's (S&P) together with Fitch rating agency play a key role in the pricing of credit risk and in the delineation of investment strategies (Altman & Rijken, 2004). In the case of Moody's the best rating is Aaa with the next best rating being Aa. After that come A, Baa, Ba, B and Caa. The S&P ratings corresponding to Moody's are AAA, AA, A, BBB, BB, B, and CCC respectively and bonds with rating of Aaa and AAA are considered to have almost no chance of defaulting in the near future (Hull et al., 2004).

Moody divides its Aa category into Aa1, Aa2, and Aa3; it divides A into A1, A2, and A3; and so on. Similarly S&P divides its AA category into AA+, AA, and AA-; it divides it is A category into A+, A, and A-; etc. Only the Moody's Aaa and S&P AAA categories are not subdivided. Ratings below Baa3 (Moody's) and BBB- (S&P) are referred to as "below investment grade" (Hull et al., 2004, p.3). Based on the indications of these rating agencies, a lower rating usually indicates higher risk, which causes an immediate effect on the subsequent interest yield of the debt issue (Huang et al., 2004). In addition to this, many regulatory requirements for investment or financial decision in different countries are specific based on such Sukuk ratings. Abad-Romero and Robles-Fernandez (2006) quoted that the accounting and finance literature agrees that the company's market evaluation is a perpetual assessment of a firm's effectiveness or net present value. The component of systematic risk of total risk return captures the risk of an individual firm's security that cannot be diversify by portfolio management.

Chiang and Venkatesh (1988) posit that insiders and institutional investors create information asymmetry because they know more than individual investors do. Ashbaugh-Skaife et al. (2006), argue that institutional investors are very important for a well-functioning holding large position of Sukuk as they have the financial interest to view management of firms and policies. In addition, Elyasiani, Jia and Mao (2010) find that institutional ownership could stabilise firm's cost of debt and improves credit rating.

The benefit of institutions investors in controlling liquidity can be seen via two ways; either decreasing liquidity resulting from increasing information asymmetry or increasing liquidity resulting from higher price due to competition among institutions. Institutions due to their large scale, have an inherent merit in producing and processing information about a firm, and thus are well inform than other investors. Their information advantage can therefore inspire better liquidity management. Furthermore, by acting as pooling vehicles, they can also diversify individual liquidity needs, and boost overall liquidity as well as diminishing liquidity variation over time.

Bradley, Chen, Dallas and Snyderwine (2008) examine the empirical relations between the governance structure of public corporations in the United States and the credit ratings and pricing of their debt securities by examining the effects of insider ownership, institutional ownership and block shareholdings. They believe that these variables relate to differing degrees and forms of ownership. They posit that insider ownership may align the interests of a management and director team, and this brings beneficial to creditors. They find that stable boards, defined as boards having attributes relating to tenure, liability indemnification and classified board structures, have higher credit ratings. Their results show that insider investors are significant and negative to credit rating while institutional investors were insignificant to credit rating.

Due to the corporate inefficiencies, there is a distinction of ownership and control. Poor management and corporate governance practices has been blame for decline in ratings. Adams, Mansi and Nishikawa, (2010) that due to agency problems between managers and shareholders, the actual firms' performance began to deviate apparently from this equilibrium point.

Since Sukuk have started to play important roles in the capital market, a systematic and strategic monitoring mechanism is in need. Despite of its rating by the professional bodies, Sukuk issuer internal control and governance monitoring are also vital to ensure a reliable financial disclosures of the issuers financial condition as well as a healthy business conducts including the corporate reputation and issuer capability to maximise investors' wealth. Thus, a positive and significant relationship between ownership structure and credit risk of Sukuk is expected.

Stakeholder theory is a framework for examining the connections, between the practice of stakeholder management and the achievement of various corporate performance goals. Stakeholders are persons or groups with legitimate interests in procedural and/or substantive aspects of corporate activity and identified by their interests in the corporation. The interests of all stakeholders are of intrinsic value. The theory is used to describe, and sometimes to explain, specific corporate characteristics and behaviors. Stakeholder theory has been used to describe the way managers think about managing (Brenner & Molander, 1977), and how some corporations are actually managed (Clarkson, 1991). Moreover the theory is also used to interpret the function of the corporation, including the identification of moral or philosophical guidelines for the operation and management of corporations.

According to Re and Reed (1983) in stakeholders contexts, the objective of corporate governance is to maximize the interests of all stakeholders rather than shareholders alone which must be seen through stakeholders model, encouraging the active participation of all or many of its stakeholders.

Macey and O'hara (2003) posit that based on Stakeholder Theory, firm cannot create value if it ignores the interests of stakeholders. In practice, the active participation of stakeholders, the inquirer of long-term firm value, the trust relationship between the firm and stakeholders, and the interconnection among stakeholders are the main proposals in the stakeholder model of corporate governance.

Clarke (2004) discusses the importance of Stakeholder Theory in specifying the distribution of rights and responsibilities among different participants in the corporations such as board, managers, shareholders, and other stakeholders for making decisions on corporate affairs. It is concerned with holding the balance between economic and social goals and between individual and communal goals.

Jensen (2001) proposes that stakeholder theory can add the specification that the objective function of the firm is to maximize the total long-term firm value, and when the total long-term value is maximized, the array of satisfaction as a whole satisfaction can be achieved. By this way, corporate executives can be in a better position to assess the trade-off among competing constituencies.

Stakeholder management can be linked to organizational success through analytical argument. The main focus of this effort is to establish concepts of principal-agent relations (Jensen & Meckling, 1976) and the firm as a nexus of contracts which leads to agency theory.

According to Jensen and Meckling (1976), agency theory distinguishes the agency relationship between principals and the agent. The relationship is based on a contract where the principal(s) appoint the agent *'to perform some service on their behalf which involve delegating some decision making authority to the agent'* (Jensen & Meckling, 1976, p. 310).

Due to these contractual relationships, there exists a separation between the ownership and management (control) of a company. This conflict of interests will eventually lead to agency costs. Monitoring costs are incurred by shareholders in relation to their actions in measuring, monitoring and controlling managers' activities.

Morck, Shleifer and Vishny (1989) support the view that managerial ownership or ownership among the managers and other firms' executives can be an effective device in reducing agency costs. These groups are the insider investors to the firms. However, Morck et al. (1989) argue that, at a certain critical level of ownership holding, managers may prefer to generate private benefits of control, and this would result in a non-monotonic relationship between the level of managerial ownership and firm value between managers and shareholders, while a negative relationship shows the existence of managerial entrenchment problems.

Institutional shareholder ownership can influence managers' incentives (Pound 1988; Bushee, 1998), by monitoring their behaviour, thus, minimizing the likelihood that managers would misuse companies' corporate resources. Bushee (1998) states that institutional shareholders monitor companies by participating in a company's governance activities or by gathering information and correcting the pricing impact due to managerial decisions. Even though monitoring activities are costly, institutional shareholders have the incentive to monitor managers since they usually hold companies for a long period (Bushee, 1998). Indeed, certain institutional shareholders appoint their own representatives on Boards of Directors of companies which they invested in (Abdul Rahman, 2006).

Corporate governance mechanisms can affect bond ratings indirectly through a reduction in information risk. Sengupta (1998) provides an evidence that a positive association between the quality of corporate disclosure and bond ratings were found suggesting that corporate governance tools are vital for debt management.

Governance mechanisms can reduce information risk by inducing firms to disclose information in timely manner. In supporting this notion Ajinkya, Bhojraj and Sengupta, (1999) document that financial analyst' ratings of overall corporate disclosure practices of a sample of firms is positively associated with the proportion of the independent board and institutional shareholders.

Bhojraj and Sengupta (2003) explore the link between governance mechanisms and bond yields and ratings. They conclude that an effective corporate governance mechanism could affect bond yields and ratings through its impact on default risk of the firm.

Using a framework of Standard and Poor's, Ashbaugh-Skaife et al. (2006) provide insights into the characteristics of governance that are likely to affect the cost of debt financing and provides one explanation for why some firms continue to operate with weaker governance when doing so may lower credit ratings.

Grassa (2015) investigates whether Islamic banks with strong corporate governance benefit from higher credit ratings relative to Islamic banks with weaker governance. After controlling for Islamic bank-specific risk characteristics, she found that credit ratings are negatively associated with the number of blockholders, CEO power, the supervisory role of the Shariah board and investment deposits; and positively associated with share listing ownership, board independence, women directors, board directors expertise and Shariah board expertise.

Institutional ownership reflect the percentage of shares held by all the reporting institutions as a group or the number of outstanding shareholders (Anderson, Mansi & Reeb, 2004). Companies that have a greater number of institutional ownership are thought to have better prospects for long-term earning performance (Khorana, Servaes & Wedge, 2007). The findings of Ferreira and Matos (2008) support the idea that the expansion of institutional ownership reduces firms' cost of capital. Wang and Zhang (2009) find that dedicated institutional investors' leads to increase in credit spreads, which these types of investors indicates high information asymmetry within a firm, which leads to higher cost of debt.

According to Gugler, Mueller and Yurtoglu (2003) corporate governance institutions reduce agency problems in companies and thereby align the interests of managers and shareholders. Weak corporate governance systems allow managers to pursue their own goals at the shareholders' expense. Chung, Elder and Kim (2010) also posit that good governance improves financial and operational transparency and thus reduces information asymmetry between insiders and outside investors. They find that firms with better corporate governance exhibit higher stock market liquidity and lower trading costs.

As one of corporate governance tools, institutional investors may reduce potential conflicts interests between the management and providers of capital through effective

monitoring of their actions. Institutional ownership is important in determining the cost of debt. This is because long-term institutional investors are in a good position to learn about the firms they own and have a deep motivation to monitor them since they can secure larger benefits from it. Bhojraj and Sengupta (2003) find that firms with greater institutional ownership enjoy higher ratings but lower bond yields on their new debt issues. Bondholders perceive institutional investors as parties with huge stakes that are able to minimize expropriation or misallocation of funds, better progress the firm's productivity as well as providing management with intact planning strategies. This positive perception by the bondholders may mitigate the firm's default risk. Nevertheless, concentrated institutional ownership could lead to institutions influencing firm decisions that could be pricey to other capital providers.

Boubakri and Ghouma (2010) examine the effect of governance monitoring tools on bond yield-spreads and ratings in a multinational sample of firms. Their study provides evidence that ultimate ownership and family control have a positive and significant effect on bond yield-spreads, and a negative and significant effect on bond ratings. Financial firms' investors have a positive effect on bond ratings only, while State agency investors have no effect on either bond yield-spreads or ratings. They concluded that a higher protection of debtholders' rights generally reduces bond yield-spreads and increases bond ratings.

Farooqi, Jory and Ngo (2015) study the association between institutional shareholdings and credit ratings. They classified the institutional investors based on their degree of intervention and activism levels and found that passive investors are associated with better-rated firms while active ones are associated with lower-rated firms. Their findings further suggest that active institutional investors trust that there is more value in low-rated firms as these investors are more likely to find low-priced stocks among low-rated firms due to financial and managerial inputs to progress. Passive investors, on the other hand, incline to track market indices that consist of mostly high-rated firms.

Elyasiani and Jia (2010) examine the association of between the level and stability of institutional ownership and corporate firm performance. They find that there is a positive relationship between firm performance and institutional ownership stability. Their result is robust to different types of the institutional investors' measurement. When they disaggregate institutional investors into pressure-insensitive and pressure-sensitive categories, they still find that stable shareholding of each group has a positive impact on performance, with the first group exerting a larger effect. The channels of the effect include, but are not limited to, decreased information asymmetry and increased incentive-based compensation. Their results imply that the stability in shareholdings is more important to good corporate governance than the proportion of shares held by investors.

Institutions due to their scale have an inherent advantage in producing and processing information about a firm, and thus are better informed than other investors are. Institutional ownership also has much incentive to monitor companies that they own than individual investors because of their larger stakes in the company. Firms with poorer ratings may benefit from the interventionist actions of active institutional investors to restore their financial health. Therefore, this study hypothesizes that.

Insider investors who are affiliated with the firm may have an interest to maximize the value of firm (Barnea & Rubin 2010). Insider investors are the shareholders among the officers or/and directors of a firm. Minority shareholders face a permanent dilemma because once they invested their fund as managers always have full discretion to make use of this fund either to maximise the shareholders wealth or for their own personal benefits. Inside investors are also called to be managerial ownership and managerial ownership can affect agency cost and the value of firm (Klapper, 2012).

Based on a sample of publicly traded companies in New Zealand, Bhabra (2007) examines the relationship between insider stock ownership and firm value. Their results indicated that insider ownership and firm value are positively related for ownership levels below 14% and above 40% and inversely related at intermediate levels of ownership. These results are fairly robust to different measures of firm performance and to several different estimation techniques on New Zealand panel data over 1994–1998.

Gordon and Pound (1993) find that the structure of share ownership significantly influences voting outcomes on shareholder-sponsored proposals to change corporate governance structures. Insiders and outside directors who hold significant stock positions tend to align strategically with management, who often oppose the shareholder-sponsored proposals.

Insider investors that hold large equity positions in a company are crucial to look over the governance system because they have the financial interest and independence to view firm management and policies in a balanced way and they have the voting power to pressure the management if they observe any self-serving behavior (Shleifer & Vishny, 1997).

Ashbaugh-Skaife et al. (2006) predict that insider investors will be negatively related to bond rating with the underlying assumption that insiders will use their voting power to expropriate firm resources for their personal benefit or resist shareholder-sponsored proposals to increase the monitoring of their actions which are likely to lead to greater agency risks for bondholders. In addition, higher insider ownership would result in stronger incentives for officers and managers. This is based on the idea that managers invest in projects that have very high returns when successful but low probabilities of success which may increase bondholders' risk due to the differential payoff structure between bondholders and shareholders. Their findings however, showed that insider investors is not significant to bond rating. Therefore, this study hypothesise:

H1: Institutional investors has a significant relationship with Sukuk rating

H2: Insider investors has a significant relationship with Sukuk rating

3. Methodology

This study examines the association of Sukuk rating and ownership structure using a quantitative approach. The study observation period was 2008-2013.

3.1 Data Collection

The data collection process began on 30th December 2012. During that time, there were 294 Islamic and conventional bond issuers all together available on Malaysian Securities

Comission website for the period of 2008 to 2013. Since this study focuses on Sukuk, thus the first sampling criteria eliminated the conventional bond issuer, leaving the Sukuk issuer to only 123 issuing companies.

The next sampling criteria focused only on the public companies that listed under Bursa Malaysia. Out of these 123 companies, only 30 companies listed under Bursa Malaysia left after eliminated 93 companies. The final sampling criteria eliminated five more companies due to rating requirement. Neither Rating Agency Malaysia (RAM) nor Malaysian Agency of Rating Corporation (MARC) rated these five eliminated companies. Thus, the final sample Sukuk issuer companies were left to be 25 companies.

The year of observation for this study began from 2008 to 2013 (six years) for all the 25 sample companies. Therefore, the final firm-year sampling observation were 150 (25 companies for six observation years).

Following Hovakimian et al. (2009) and Han, Moore, Shin and Yi (2013), the numerical score for each ratings for this study is as follows: AAA = 9, P1 = 8, AA =7, A = 6, BBB = 5, BB = 4, B = 3, C = 2, D =1. Table 1 shows Sukuk rating description and score based on RAM and MARC.

Table 1: Descriptions and code numerical of the ratings

Rating	Codes ¹	Description
AAA	9	superior safety
P1 ²	8	very high safety
AA	7	high safety
A	6	adequate safety
BBB	5	moderate safety
BB	4	low safety
B	3	very low safety
C	2	high likelihood of default
D	1	default

To accommodate the examination of the effect of institiuonal investor and insider investor effect to Sukuk rating, this study developed three empirical models.

$$Rating_{it} = \beta_0 + \beta_1 INSI_{it} + \beta_2 LEV_{it} + \beta_3 Profit_{it} + \beta_4 Size_{it} + \varepsilon_{it} \quad (1)$$

$$Rating_{it} = \beta_0 + \beta_1 INI_{it} + \beta_2 LEV_{it} + \beta_3 Profit_{it} + \beta_4 Size_{it} + \varepsilon_{it} \quad (2)$$

$$Rating_{it} = \beta_0 + \beta_1 INSI_{it} + \beta_2 INI_{it} + \beta_3 LEV_{it} + \beta_4 Profit_{it} + \beta_5 Size_{it} + \varepsilon_{it} \quad (3)$$

Where:

$Rating_{it}$ = numerical scores represented by the Codes derived from the ordinal rating by RAM and MARC for firm i over a fiscal year t,

¹ The numerical codes here are the numerical score assigned to quantify the ratings given to all Sukuk issuer in this study to enable the data analysis.

² In this study, we are focusing for Islamic Medium Term Notes (IMTNs) with long and/or short term ratings. P1 is the highest rating for short-term rating by RAM while AAA to D are the long-term ratings used by both RAM and MARC.

$INSI_{it}$ (*Institutional*) = % of the company's common share held by institutions for firm over a fiscal year t,

INI_{it} (*Insider*) = % of the company's common share held by the company's officers and directors for firm i over a fiscal year t,

$Leverage_{it}$ = Total debt over total asset of firm i over a fiscal year t,

$Profit_{it}$ = Net income over total asset of firm i over a fiscal year t,

$Size_{it}$ = Total asset (log) for firm i in period t,

4. Findings and Discussion

4.1 Descriptive Results

Table 2 summarizes and describes the univariate results via descriptive statistics of sample size for of this study for ownership structure and firm characteristics that explain Sukuk ratings.

Table 2: Summary Statistics on the Variables

Panel A: Descriptive statistics of continuous independent variables, N=150

Variable	Mean	Median	Std. Dev	Min	Max	Skewness	Kurtosis
Ownership Structure							
INSI	44.38	36.31	26.84	0.67	96.26	0.29	-1.15
INI	21.10	12.44	22.61	0	77.9	0.79	-0.54
Firm Characteristics							
Leverage	0.53	0.50	0.18	0.2	0.89	0.23	-1.04
Profit	0.05	0.05	0.04	-0.14	0.20	-0.29	2.12
Size	6.75	6.50	1.13	4.30	9.30	0.36	0.57

Panel B: Descriptive statistics of Sukuk Rating, N=150

Sukuk rating	Codes	Frequency	%
low safety	4	6	4
adequate safety	6	6	4
high safety	7	78	52
very high safety	8	6	4
superior safety	9	54	36
Total of observation		150	100

Table 2, Panel A depicts the descriptive result of continuous independent variables—ownership structure and firm characteristics. Sukuk rating appeared in the form of ordinal variable.

Table 2, Panel A also shows the skewness and kurtosis of these continuous independent variables. The skewness results show that the amount and direction of departure from horizontal symmetry is normal within the range of 1.96 while kurtosis results also indicate that the height and the sharpness of the central peak is normal (also within the range of 1.96).

Within the ownership structure component from Table 2, Panel A, the average (median) percentage of shares held by institutional investors is 44.38% (36.31%) while the average

(median) of shares held by inside investors (officers and directors) is 21.09% (12.44%) with a standard deviation of 22.6.

Within the firm characteristics component the descriptive statistics from Table 2, Panel A indicates that the average (median) total debt to total asset (leverage) is 0.53(0.50). The standard deviation of the sample firms' leverage is 1.75 with upper and lower quartile value of 0.89 and 0.2 respectively. The average (median) profit of sample firms is 0.05 (0.05) with a standard deviation of 0.04 while the maximum and minimum are 0.20 and -0.14 respectively. The average (median) sample firms' of total asset (issuer size) is 6.74 (6.50) with a standard deviation of 1.12% and the upper and lower quartile value of 9.30 and 4.29 respectively.

Table 2, Panel B shows the descriptive statistics of Sukuk rating percentage and frequency. The highest percentage was recorded by high safety rating, coded by '7' with 52% followed by 36% of superior safety rating. The remainder ratings share a similar percentage at 4% — low safety, adequate safety and very high safety rating. The results imply that the Sukuk rating scored by the sample firms were very good where the ratings score were dominated by 'high safety' and 'superior safety'.

4.2 Analysis of mean values between high and low rating

Table 3 below reports mean values of Sukuk rating with ownership structure and firm characteristics variables between high and low Sukuk rating firms. In order to separate the two groups of high and low rating, 'low safety' and 'adequate safety' have been combined as low rating while 'high safety', 'very high safety' and 'superior safety' have been combined and defined as high rating. As such, 12 sample firms (8%) are considered as low rating firm while 138 (92%) firms are considered as high rating firm.

Table 3 compares high and low rating firms with respect to Sukuk rating. The differences in mean values of the two sub-sets of firms are test for significance using the *t* test. Table 3 indicates that high rating Sukuk dominated almost all Sukuk issuers (92%) during this study period. The results show that the differences in mean values are statistically significant for leverage and profit.

Table 3: Analysis of mean differences in Sukuk rating, ownership structure, and firm characteristics between high and low rating firms

RATING	N,150	INSI	INI	Leverage	Profit	Size
<i>High Rating</i>	138	.139	.229	.000	.007	.307
<i>Low Rating</i>	12	.006	.012	.000	.000	.001
<i>Difference</i>	<i>(t-stat)</i>	1.487	-1.209	-5.982***	2.752***	1.025

Firm-year observations = 150.

*** Significant at $p < 0.01$ (2-tailed), ** Significant at $p < 0.05$ (2-tailed) and * Significant at $p < 0.10$ (2-tailed).

4.3 Spearman Correlation Results

Table 4 presents Spearman correlation among all pairs of the variables of ownership structure, firm characteristics and Sukuk ratings.

Despite measuring the non-parametric data, Spearman correlation still deems suits to measure the strength of a linear relationship especially for the ordinal scale variable (Sukuk rating). The results in Table 4 show that profit (PR) is significantly negative and positive correlated with Sukuk rating (Rating). However, the correlations appear as low correlation of -.288 and .206.

Although there are some significant correlations among pairs of several variables, the highest correlation occurs between profit (PR) and leverage with a significant correlation coefficient of -.677. This is to be expected as the higher the leverage, the lower the profit will be as the leverage interest offset the profit. The correlation coefficient for institutional investors (INSI) and insider investor (INI) of -.564 is also high.

Table 4: Correlation matrix of Sukuk rating, ownership structure and control variables

** Correlation is significant at the 0.01 level (2-tailed) and * Correlation is significant at the

	INSI	INI	Leverage	Profit	Size
INI	-0.564**				
Leverage	-0.119	-0.066			
Profit	0.096	0.022	-.677**		
Size	-0.440**	0.435**	-.048	-.004	
Rating	-0.059	-0.067	-.147	.206*	-.060

0.05 level (2-tailed).

4.4 Multivariate Results

This study employed ordered logit regression (OLR) due to different categories of credit ratings. OLR is an extension of the logistic regression model for any dichotomous dependent variable allowing for more than two ordered response categories. Ashbaugh-Skaife et al. (2006) recommend this technique whenever the dependent variable has multiple values that can be ranked from low to high. For the dependent variable of this ordered logit model, this study collapsed the initial nine multiple Sukuk ratings into final five categories of Sukuk ratings due to availability and this also reflects the ordinal risk assessments.

This study estimate the models in Table 5, using an OLR based on a nine-way ratings classification³, adapted and integrated from RAM and MARC long term as well as short term rating scales. However, due to availability of issuers with their respected rating scales, this study end up with only five rating scales—AAA, P1, AA, A and BB.

In the analysis of determinants of the Sukuk credit rating in this study, three models are estimated. Model 1 is to test the predicted relations between INSI and Sukuk rating while model 2 is to test the relationship between INI and Sukuk rating. Model 3 combines the INSI and INI together to Sukuk rating. All models control the effect of firm characteristics.

Model 1 of Table 5 results show no significant result between INSI and rating however leverage shows a significant and negative effect to rating. Model 2 results show a negative and significant result of INI and leverage to rating. INI and leverage again shows a significant relationship with rating in a negative direction in Model 3, however INSI is still insignificant.

³ The nine rating scales are AAA, P1, AA, A, BBB, BB, B, C and D.

The overall results imply that the higher number of insider investors, the lower the Sukuk rating. Insider investors are the companies' officers, executives or board members. Their appearance lowered down the Sukuk rating which could due to higher expropriation risk among these insider investors. Insider investors are also relates to least independence judgement. The overall Pseudo R² of the three models show a low proportion of the total variability of the outcome that are accounted for by these models where Model 1 showed 13.9%, Model 2 showed 15.8% and Model 3 showed 16.2%. Only focus variables of interest are tested across these Models, as such low Pseudo R² is expected.

Table 5: Regression of the Effect of Ownership Structure on Sukuk Rating with Firm Characteristics

Variables	Model-1	Model-2	Model-3
Ownership Structure	coefficient (t stat)	Coefficient (t stat)	Coefficient (t stat)
INSI	.002 (.28)		-.010 (-.99)
INI		-.017* (-1.57)	-.021* (-1.83)
Firm characteristics			
Leverage	-.359** (-2.59)	-.363** (-2.62)	-.375** (-2.73)
Profit	5.623 (1.34)	6.863 (1.54)	6.811 (1.52)
Size	.072 (.40)	.192 (1.08)	.139 (.74)
Pseudo R ²	0.139	0.158	0.162
Firm-Year Observation	150	150	150

Note: *** Significant at $p < 0.01$ (2-tailed), **Significant at $p < 0.05$ (2-tailed), *Significant at $p < 0.10$ (2-tailed).

Ownership structure proxy by both institutional and insider investors showed a mix results to Sukuk rating. First, institutional investors appeared to be non-significant to rating with mix directions. When institutional investors variable was tested in separate model —Model 1, it showed a positive and non-significant effect to rating, but when it was tested together with the appearance of insider investors variable, the direction became negative and still remain non-significant. Bradley et al. (2008) results support this current study's findings. They also found mix direction results of institutional investors to rating with non-significant effect.

Nevertheless, the second proxy for ownership, insider investors showed a negative and significant effect to Sukuk rating in both Model 2 and Model 3 of this current study. These results imply that the appearance of insider investors who may consists of either firm's executives or board members lowered down the Sukuk rating which could due to higher expropriation risk among these insider investors. Insider investors are also relates to least independence judgement. Supporting this result, Bradley et al. (2008) also find that insider investors have negative effect to rating. They suggested that the more shares held by insiders the more sympathetic the management would be to its shareholders in any dispute involving

the firm's creditors. Insider ownership might also increase the potential for self dealing on the part of the firm's management.

However, this current study results in overall contradict to Ashbaugh-Skaife et al. (2006). They find that institutional and insider investors both have a non-significant and positive effect to bond rating. Nonetheless, in Model 1 when institutional investors model was tested alone as proxy for ownership, it showed a non-significant and positive effect to Sukuk rating. This part is similar to Ashbaugh-Skaife et al. (2006). The direction of institutional investors' direction to rating in this study is also similar to Bhojraj and Sengupta (2003), however their results show a significant effect. Different setting of market share, number of sample firms and control variables could be part of the reasons for this contradict result to Ashbaugh-Skaife et al. (2006); Bhojraj and Sengupta (2003).

4.5 Ordered Logit Model Marginal Effect

In order to find further evidence on ownership structure, as well as the firm characteristics variables on Sukuk rating, an ordered logit model marginal effect analysis is carried out. This analysis assessed the probability of every unit of independent and control variables to the Sukuk rating. The marginal effects are calculated to estimate the economic significance of each independent variable (Livingston, Naranjou & Zhou, 2008).

Logit model of marginal effects shows the change in probability when the independent variable increases by one unit. The marginal effect in this study represents the change in the probability of receiving low Sukuk rating. The partition of these 150 observations between low and high Sukuk rating is following the analysis in Table 6. 'Low safety' and 'adequate safety' rating were combined and categorised as low rating while the rest are considered as 'high rating'. Therefore marginal effects in this study show the results of the impact of rating changes (upgrade/downgrade) by the independent variables on the probability of these rating changes.

The ownership structure results in Table 6 showed that the probabilities of institutional investors to capture the rating moved from .001 to -.005 whenever the rating changed from adequate to superior safety. Same pattern applied to insider investors, from .001 to -.006 whenever the rating changed from adequate to superior safety. The results of ownership structure proxy by both INSI and INI at superior rating imply that the lower number of institutional and insider investors have 5% and 6% chances to be rated at superior rating.

Table 6: Ordered logit model marginal effect.

Sukuk rating	marginal effect for low safety	marginal effect for adequate safety	marginal effect for high safety	marginal effect for high safety	marginal effect for very high safety	marginal effect for superic safety
Ownership Structure						
INSI	.0003	.001*	.004**	-.0003		-.005**
INI	.0004	.001*	.005**	-.0004		-.006**
Firm characteristics						
Leverage	.017	.044	.224	-.018		-.271
Profit	-.040	-.110	-.540	.044		.640
Size	-.009*	-.023**	-.116***	.010*		.140***

Note: *** Significant at $p < 0.01$ (2-tailed), ** Significant at $p < 0.05$ (2-tailed) and *Significant at $p < 0.10$ (2-tailed).

5. Conclusion

As Sukuk development has shows steady growth across the globe with great acceptance as Islamic debt instrument, its credit risk that follow each issuance is therefore became vital to be scrutinised. Debt holders as well as shareholders reliance on corporate governance monitoring mechanisms have become part of the motives for this area of study been examined by prior researchers.

Therefore, this study aims to examine the effect of ownership structure as one of the corporate governance monitoring mechanism to Sukuk rating. Sukuk rating represents the credit risk assessment made by the establish rating agencies such as Standard & Poor, Fitch and etc. to see the debt issuers credit worthiness in debt obligation. Since this current study is based in Malaysia setting for the study period 2008-2013, the rating data were provided by the local rating agencies—RAM and MARC. Two proxy for ownership variables chosen were, institutional and insider investors.

The results of this study show that institutional investors have a non-significant effect to Sukuk rating with a mix positive and negative directions. When this variable was tested alone together with the control variables of financial characteristics —leverage, profit and size, the results showed a positive and non-significant effect to Sukuk rating. However, the direction change when the variable was tested with the appearance of insider investors to proxy ownership and the non-significant effect remains.

Nonetheless, insider investor variable shows a significant and negative effect to Sukuk rating in both tested models. The results imply that greater number of company's executives and board members hold outstanding shares give a negative effect to Sukuk rating.

This study could provide insight to practitioners regarding the idle ownership structure especially when it deals with debt management affairs. Future researchers within the same research area could explore the other corporate governance monitoring mechanisms that are believed to have different extent of effect to debt management. Different settings are also vital in order to ensure generalization of the findings.

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