



Factors Influencing Issuers' *Sukuk* Structure Preference: The Case Study of KSA Banks

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Abstract

The purpose of this research paper is to examine the factors that influence the issuers' *sukuk* structures and the impact of *sukuk* on the performance of the Kingdom of Saudi Arabia (KSA) *sukuk* issuing listed banks using the pooled OLS regression and the random effects panel models. The findings of this study show that while both bank size and the issued amount of *sukuk* positively affect the performance of the *sukuk* issuing listed banks of the KSA, a negative effect of the leverage ratio on performance was noted. Meanwhile, the *sukuk* dummy is reported to be statistically insignificant though it has a positive and negative magnitude in both models. Nevertheless, given the insignificance of the dummy variable, we can conclude that the factors that affect the issuers' *sukuk* structure in the case of the *sukuk* issuing listed banks of the KSA is profit maximization rather than *Shari'ah* compliance. Thus, this study may offer some policy insights for policymakers in KSA especially because *sukuk* issuance boost banks performance.

Keywords: *Sukuk* structure, *Shari'ah* compliance, Bank performance, Saudi Arabia

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1. Introduction

Since the recent Global Financial Crisis, Islamic finance has been widely recognized as an alternative option to the long existing conventional financial system in both the banking system and the *sukuk* (Islamic bonds). Though there are other differences between the conventional and Islamic banks as well as *sukuk* and bonds in terms of operations and purposes, however, the fundamental difference is the interest rate, which is the number one in the *Shari'ah* compliant list. However, Islamic finance has recently proved its significance to economic development through the positive impact on economic growth. In a similar context of the recent literature of the financial development and economic growth nexus, which has documented the positive role of finance on economic growth (Ang, 2008), Islamic finance has also confirmed the positive causality of the finance growth nexus. In studying the relative importance of Islamic banks using a sample of 22 Muslim countries with dual-banking systems, (Pejman Abdedifar, 2016) found a significant positive association between the Islamic banks market share and the development of financial intermediation, financial deepening and economic welfare especially in low income or predominantly Muslim countries.

Meanwhile, the significant contribution of Islamic finance to the economic growth has been further supported through empirical evidences from Malaysia and Indonesia. In the case of Malaysia, (Kassim, 2016) has reported that Islamic finance makes important contributions to the real economy through the effective carrying out of the financial intermediation role of pooling and channeling of funds to the investment activities. In the case of Indonesia, (Omar, 2012) have found a significant bi-directional relationship between the Islamic banking development and economic growth in both the short-run and long run.

Nonetheless, at the firm level, the instruments of Islamic finance including *sukuk* have been used extensively by both financial and non-financial firms. In this regard (Dzolkarnaini, 2017) have found that Islamic financing forms a significant share of the firms' capital structures, and less profitable firms were

found to prefer the use of *sukuk* to conventional bonds from the perspective of agency cost. It is evident that Islamic finance has proven to be good for economic growth, and the banking sector which currently has 80 per cent of the global Islamic finance asset market share and total assets of USD1.5 trillion as of 2016 is expected to dominate the industry (Nurhafiza Abdel kaderMalim, 2017).

Nevertheless, given the agency cost theory and the preference of banks for *sukuk* to conventional bonds, this study is aimed to examine empirically the factors that influence the issuers' *sukuk* structure performance focusing on the listed banks of the KSA. This study mainly investigates whether the reason the *sukuk* issuing listed banks prefer *sukuk* with certain structures is because of *Shari'ah*-compliance or profit maximization. Meanwhile, it also tests the impacts of issued *sukuk*, banks size and leverage ratio on the performance of the *sukuk* issuing listed banks of the KSA. The finding of this study is expected to offer some policy insights.

The remaining sections of this paper is organized as follows: section 2 discusses the literature reviews with regards to *sukuk*, banking performance in general and with specific focus to the KSA. Section 3, illustrates the employed methodology and the used data set. Section 4, reports the empirical results and finally, section 5 provides the conclusion for the paper.

2. Literature Review

In the banking industry, the most important barometer is the performance of the bank, which is mostly represented either with ROA and/or ROE. However, the current trend of literature is mainly focused on the comparison of the Islamic and conventional banks in terms of stability and performance particularly after the global financial crisis. In examining the convergence of the performance of commercial and Islamic banks during and after the financial crisis, (Zoubi, 2017) have found that initially Islamic banks have weathered the impact of the global financial crisis better than the conventional commercial banks in the period of 2007-2008. However, after the crisis spread to the real economy starting from 2009, the profitability of the Islamic banks has declined substantially relative to the conventional commercial banks. Meanwhile, the convergence of all banks to the same level of profitability as measured by ROA and ROE was observed for the years 2010-2014. On the forces that drive the performance of Islamic and conventional banks, (Hajer Zarrouk, 2016) reported that both banks performance is affected positively by the cost effectiveness, asset quality and level of capitalization. Meanwhile, the authors found that Islamic banks operate better than the conventional banks due to their offer of non-financing activities and when they operate in an environment where the gross domestic product and investment are high.

Nonetheless, some recent studies have concluded that some of the main factors that influence the performance of banks are bank size and capital which are total assets and total equity particularly for the case of Islamic banks as reported by (Nama Trad, 2017) and (Adnan, 2016) respectively. However, in examining the overall financial performance of the Islamic and conventional banks (Michael Doumpos, 2017) have found that while conventional banks outperform both Islamic banks and banks with Islamic window in the case of Asia and the Gulf Cooperation Council, Islamic banks performs better in the MENA region. Meanwhile, the authors highlighted that the overall financial strength index of the banks is influenced by the various country-specific attributes.

Taking the case of the KSA, (Fachin, 2016) documented that concentrating on the largest banks, Islamic banks were found to have a positive impact on the financial system stability. Meanwhile, in examining the profitability of the domestic banks and the foreign banks which have been allowed to operate in the KSA for the purpose of the financial stability, (Abdelazeez Y. H. Saif-Alyousfi, 2017) have found that domestic banks to be more profitable than foreign banks but both banks found to be more profitable with higher capital and less profitable with larger bank size.

Post the recent global financial crisis of 2008-2009, many firms both financial including banks and non-financial have frequently issued different *sukuk* structures for different purposes such as portfolio diversification, refinancing and mitigation of risks. However, in the case of corporates (Nagano, 2016) has conducted a study on who should issue *sukuk* and when. Findings show that firms issue *sukuk* when they have accessibility to the *sukuk* market, have low degree of financial constraints and the undervaluation of the firm in the pre-issuance periods were the main determinants to issue *sukuk*. Meanwhile, with regards to timing, the *sukuk* issuance was preferred when the pecking order conditions of the market accessibility are satisfied. Meanwhile, a similar study by (Dzolkarnaini, 2017) found that the issuance of *sukuk* does benefit less profitable firms, and hence is preferred to the conventional bonds. However, (Kassim, 2016) stated that *sukuk*

and conventional bonds have fundamental differences in terms of risk/return and their structures which are the main *Shari'ah* concerns though no virtual financial differences irrespective of the debt and equity based methods.

The main argument with regards to *sukuk* structure is the issue of asset backed and asset based structures. Meanwhile, (Hidayat, 2013) found that though the asset backed is more *Shari'ah* compliant than the asset based *sukuk* in terms of form and substance the asset based, the author has found that the latter to be more dominant due to *Shari'ah*, legal framework and market demand. Meanwhile, (Grassa, 2013) also found that regulatory quality has a significant effect on the development of *sukuk* market and countries with such regulatory quality have larger *sukuk* market. However, in the case of the GCC region, firms who issue *sukuk* are those that have specific characteristics as well as opting for larger debt and long tenor (Miniaoui, 2017). Nevertheless, the purpose of this study is to examine the factors that influence the Issuers' *sukuk* structures by taking the *sukuk* issuing listed banks of the KSA.

3. Methodology and Data

3.1 Empirical Specification

The empirical specification to estimate the model is as follows:

$$Y_{it} = \beta_0 + \beta_1 RE_{it} + \beta_2 BS_{it} + \beta_3 SS_{it} + \beta_4 SD_{it} - \beta_5 LR_{it} + \mu_i + \mu_{it} \dots \dots \dots (1)$$

Where Y_{it} represents ROA, for bank i as a measure of performance at time t . Meanwhile, β_0 and μ_i and μ_{it} are the constant and error terms for the whole model and the individual bank at time t respectively. $\beta_1, \beta_2, \beta_3, \beta_4$ and β_5 are the respective coefficients of the independent variables in the estimated panel model. For the *Shari'ah* dummy variable, which is our focus variable, the 1 represents *Shari'ah* compliance whereas 0 represents otherwise, which in our model case is profit maximization. However, the RE, BS, SS, SD and LR are the short forms for return on equity, bank size, *sukuk* size (amount), *Shari'ah* Dummy and the leverage ratio for the *sukuk* issuing listed banks in the KSA.

3.2 Variables

3.2.1 Dependent variable

In this study, we run a panel data model to examine the impacts of the stated independent variables on the performance of the KSA banks, which is represented by the ROA. The existing literature identifies both ROA and ROE as good measures of banking performance. While the ROA is one of the general measure of bank profitability which often reflects the ability of banks to achieve return on its sources of fund to generate profits, the second measure of performance, the ROE reflects how firms utilize its shareholder's wealth to generate revenue (Olaere Oluwaseyi, 2017). However, (Siddiqui, Financial contracts, Risk and Performance of Islamic Banking, 2008) has also confirmed that profitability is commonly judged by ROA and ROE, saying that the ROA shows how a bank convert its assets to net earnings and a higher ratio of ROA means a better management ability to convert the assets into net earnings. Meanwhile, the ROE shows net earnings per unit of equity capital. (Ismail, 2014) has also documented that financial performance is measured by ROE and ROA, which represents returns on common stocks of shareholders and the efficiency of utilizing available assets in creating profits. Nevertheless, we preferred to use ROA as a dependent variable and incorporated ROE as an independent variable due to the high correlation with ROA.

3.2.2 Independent Variables

In this study our independent variables are ROE, total assets, *sukuk* and leverage ratio. The total asset represents the bank size (BS) and is expected to have positive impact on the banks performance as documented by (Kosmidou K. , 2008) and negative impact on their earnings volatility (Poghosyan, 2012). Moreover, it was documented by Ahmed and Khababa in 1999 as stated by (Zeitun, 2012) that BS is one of

the main determinants of the KSA banks' performance. Meanwhile, while *sukuk* amount is expected to have positive amount, the leverage ratio is expected to have negative impact on the bank performance. Finally, our focus variable which is the *Shari'ah* Dummy (SD) is also expected to have a positive magnitude and be significant if it represents *Shari'ah* compliance and otherwise if not *Shari'ah* compliance, which means profit maximization.

3.3 Data and Sample

Due the available short period of the *sukuk* data series, particularly the amount of the issued *sukuk* by the 9 listed banks of the KSA including the two Islamic banks, we have collected our data sample from 2008 till 2016. However, we have tried to take an average of each of the three years for each bank before we run both the pooled OLS regression and the random effects model. Meanwhile, we have taken the log of the three of our independent variables, which are total assets, amounts of the issued *sukuk* and the leverage ratio. Thus, the average years are 2010, 2013 and 2016. The sources for our data are Datastream Eikon for the *sukuk* data and Bloomberg for the rest of the variables.

4. Empirical Results

Table 1 below summarizes the results of the descriptive statistics of the variables used in our analysis. The mean of the ROA as the dependent variable is 1.66 with a standard deviation of 0.563. However, among the independent variables, the standard deviation of the total assets, which represents bank size, is the highest followed by the amount of the issued *sukuk* and return on equity, and are deviated by 0.771, 0.484 and 4.692 respectively. Meanwhile, the mean of the LR is quite higher than ROA with standard deviation of 0.541.

Table 1: Statistical Summary of Dependent and Independent Variables

Variable	Mean	Std. Dev.	Min.	Max.
ROA	1.660694	0.5629593	-0.0800667	2.277167
ROE	13.10109	4.692373	-0.3363667	18.98849
TA	25.37468	0.7707637	23.62432	26.81458
SA	21.3988	0.4842354	20.43558	22.10956
LR	3.910587	0.5407811	2.69765	4.907525

Table 2: Correlation Coefficients between Variables (Dependent and Independent)

	ROA	ROE	TA	SA	LR
ROA	1				
ROE	0.7385	1			
TA	0.702	0.4491	1		
SA	0.4709	0.1304	0.6603	1	
LR	-0.5524	-0.0246	-0.1452	-0/3609	1

Table 2 above presents the correlation coefficients among the variables. While both returns on equity and total assets have quite higher positive correlation coefficients with return on assets, the remaining variables with the exception of leverage ratio, which have low negative association, have lower positive correlations with return on assets. However, the results are still not very high i.e. less than 0.8. Therefore, our chosen variables do not suffer from potential multicollinearity problems.

Table 3: ROA OLS (Model 1)

Independent Variables	Coefficients	Std. Dev.	p-Values
Constant	-3.090766	1.633549	0.095
ROE	0.0749007	0.128704	0.000
Logged total asset	0.2605973	0.0917032	0.022
Logged <i>sukuk</i> amount	-0.0654376	0.0983301	0.524
Logged leverage ratio	-0.3713333	0.0668933	0.001
Dummy <i>sukuk</i>	0.0469952	0.1026541	0.659
No. of observations	14		
R-squared	0.9482		
Prob > F	0.0001		

The impacts of the bank size, which is represent by the log of total assets, the log of issued amount of *sukuk*, log of leverage ratio and the *sukuk* dummy for Islamic banks as *Shari'ah* compliance and otherwise for the rest of the commercial banks as profit maximization, on the KSA banking industry performance is analysed. In this case, we have run two models incorporating the ROE as an independent variable, which are the pooled OLS regression and the random effects model.

As we can see from Table 3 of the pooled OLS Model 1 above, the coefficient of the log of total assets are significant at 5%, which means banks size has a positive impact on the KSA banks performance. Meanwhile, the log of leverage ratio and the log of *sukuk* amount are also significant at 1% and 5% level of significance respectively but with negative signs, which means that the KSA listed banks performance is negatively impacted with leverage ratio and the amount of issued *sukuk*. The *sukuk* dummy though has a positive magnitude sign, it is not statistically significant, which confirms that the KSA issuing banks issued *sukuk* for profit maximization rather than *Shari'ah* compliance. Nevertheless, the pooled OLS regression Model 1 indicate a high R-Square of 95% and the overall significance is at 1%. Meanwhile, the ROE is highly statistically significant at 1% level of significance.

Table 4: ROA RE (Model 2)

Independent Variables	Coefficients	Std. Dev.	p-Values
Constant	-4.763152	1.379894	0.001
ROE	0.065037	0.117885	0.000
Logged total asset	0.1182626	0.0607628	0.052
Logged <i>sukuk</i> amount	0.1623177	0.0718927	0.024
Logged leverage ratio	-0.2224662	0.0238333	0.000
Dummy <i>sukuk</i>	-0.0457876	0.1318636	0.728
No. of observations	14		
R-squared	1672.53		
Prob > F	0.000		

As can be observed from Table 4 of the random effects model of Model 2, we have arrived to a more logical result. The bank size which is represented by the log of total asset is significant at 5% level of significance. An increase of bank size by 1% leads to the enhancement of the performance of the KSA *sukuk* issuing listed banks by approximately 0.12. This finding is consistent with (Kosmidou, 2008) who documented that total assets has a positive impact on ROA. Meanwhile, (Zeitun, 2012) found that bank size is one of the main determinants of the KSA banks performance. The log of *sukuk* amount is also significant

at 5% level of significance with positive magnitude. This clearly indicates the positive impact of *sukuk* on the KSA *sukuk* issuing listed banks performance. It is evident that an increase of the issuance of *sukuk* amount by 1% will boost the issuing banks performance by 0.16. However, the leverage ratio, which is consistent in the two models in both the levels of significance and the sign of the magnitude, confirms that incurring a debt leads to the decline in the banking industry performance. For the case of the KSA *sukuk* issuing listed banks, a rise of debt to equity by 1, will impact the performance of these banks negatively by 0.22 decline. Finally, the *sukuk* dummy irrespective of its sign was used by (Nafis Alam, 2013). It is statistically insignificant, which almost consistent with the above models asserting that the purpose of issuing *sukuk* by the KSA listed banks is not *Shari'ah* compliance but a rather profit maximization.

5. Conclusion

This paper examines empirically the factors that influence the issuers' *sukuk* structures by among the KSA *sukuk* issuing listed banks using a panel data set of 9 banks from 2008-2016. In estimating the impacts of the banks size, issued amount of *sukuk* and leverage ratio including the *sukuk* dummy which represents the *Shari'ah* compliance or otherwise, which in our case is profit maximization have been considered. The study employed the pooled OLS regression and the random effects models. The findings of this study show that, while both bank size and the issued amount of *sukuk* affect the *sukuk* issuing listed banks of the KSA performance positively, the leverage ratio was found to have a negative impact on their performance. Nevertheless, the *sukuk* dummy is reported to be statistically insignificant though it has a positive and negative magnitude in both models respectively. However, given the insignificance of the dummy variable, we can conclude that the factors that affect the issuers' *sukuk* structure in the case of the *sukuk* issuing listed banks of the KSA is profit maximization rather than *Shari'ah* compliance. Therefore, this study may offer some policy insights for policymakers in the KSA.

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