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Underlying Assets and Sharia Governance Mechanism on Sukuk Yields

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Abstract

The aim of this study is twofold. The first is to examine the different performances of Sukuk's yield based on different underlying asset types. The second is to investigate the effect of sharia governance mechanism on Sukuk's yield. The underlying asset is differed by equity-based and asset-based. While the proxies of sharia governance mechanism include independent commissioner, number of sharia scholars, and the percentage of Muslim board. The control variables include conventional corporate governance such as institutional ownership and board size and the ratings and profitability of the issuers. The data covers 2015 to 2018 for 24 tranches of long-term and medium-term issuances of Sukuk from 12 corporations. Multivariate panel robust regression and comparative tests are applied. The findings show that (1) There is no significant difference in Sukuk yield's performance between different underlying asset types. (2)Better internal and sharia compliance control in the presence of Independent commissioners and sharia scholars significantly influence the yields of Sukuk.

Keywords: underlying assets, sharia governance, sharia scholars, Muslim boards, yields.

I. INTRODUCTION

Globally, supported by the development of a more efficient bond market, Islamic Capital Market development, especially in Sukuk, grew into another attractive alternative funding in emerging economies. Nowadays, Sukuk is the second largest contributor in the Islamic finance industry's assets, with a total of US$ 426 billion in outstanding value in 2017 (IFSB, 2018). However, the development of corporate Sukuk in Indonesia is faced with many challenges. According to OJK, up until April 2019, only 22 corporations have issued Sukuk. The market share of corporate Sukuk in Indonesia only accounts for around 3.5 percent of the total issuance of the corporate bond market. The challenge is on the ongoing debate of Islamic finance's 'conventionalization' and the assimilation it has to its conventional counterpart. However, sharia scholars have agreed that the main difference between conventional bonds and Sukuk lies in the presence of underlying assets in Sukuk issuances. There are two types of underlying assets commonly used in Indonesia; Asset-based and Equity-based. Furthermore, the Sukuk development also faced the challenge of the lack of confidence and trust in Sukuk after a series of high-profile Sukuk defaults in the Gulf Corporation Countries (GCCs), Malaysia, and recently in Indonesia (Naifar and Mseddi, 2013; Ariff, 2017; and Saad, 2018). Therefore, an analysis of Sukuk yields as a measure of default risk is an important sharia investment issue, since it is one, if not the only, key factor in determining the external financing costs borne by the issuer.

Focusing towards the Sukuk default phenomena, the Sukuk default cases in Indonesia were all Asset-based Sukuk. Historically, Corporations in Indonesia also prefer to issue Asset-based Sukuk over Equity-based Sukuk due to its simple and familiar feature with the conventional bonds (Usmani, 20017; and Godlewski, 2016). Unlike bonds, the yields on Sukuk are based on profit from the transaction of the underlying assets and not from interest or any prohibited activities. Consequently, one can assume that Sukuk's yield performance is in accordance with the performance of the underlying asset.

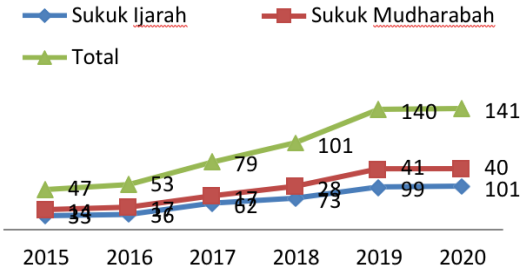

Figure 1. The Number of Sukuk Issuances in Indonesia
Source: Sharia Sukuk Statistic, OJK

Afshar (2013) claimed that Sukuk defaults were mainly due to the deteriorating creditworthiness of the issuers. While according to Bhojraj and Sengupta, (2003); Terry, (2011); Tanaka, (2014); Elhaj, (2015), and Saad, (2018), corporate governance mechanism is deemed to increase the creditworthiness of the issuers because it reduces agency risk in the company and directly related to the lower cost of debts which typically associated with higher debt yields. However, those studies still focus on the realm of conventional bonds and conventional governance. Thus, the results may be inappropriate as both differences in features, and sharia governance's perspective might have different effects on the yields on Sukuk. The remainder of this research is structured as follows. The next chapter summarizes the current state of the literature. It also includes several hypotheses. Chapter 3 describes the data, methodology, and provides some descriptive statistics. Chapter 4 presents the results of the panel regression analysis. Finally, Chapter 5 concludes and provides suggestions for future research.

II. LITERATURE REVIEW

Underlying Assets on Conventional Bonds and Sukuk

In general, the principles of Sukuk are not much different from conventional bonds. The main difference lies in the use of rewards and profit-sharing concept of an underlying asset as a remover of interest/coupon concept, which is forbidden in Islam. Therefore, the advantage of Sukuk versus traditional bonds lies fundamentally in its idealistic state, which places greater emphasis on morality and benefit by preventing transactions forbidden by Islamic jurisprudence (Saeed & Salah, 2014).

Accordingly, as the conventional bonds are structured with the basis of debt while Sukuk is equity-based or assets-based instruments, the yield or return of both investments might be different. Ramasamy et al. (2011) and Saad (2018) claimed that the yields between the two are different because the basis of income received by investors and the risk of income in Sukuk is less risky than conventional bonds. Cakir and Raei (2007) stated that Sukuk differs from bonds because they have diversification advantages, especially risk mitigation, when added to a basket of fixed income securities. Sukuk also have a different underlying asset, and one can expect that the different type of underlying asset might influence the yields of Sukuk. In this study, the author focuses on two

types of Sukuk, namely Ijarah Sukuk (asset-based) and Mudharabah Sukuk (equity-based), as the only common structure issued in Indonesia. On sharia's perspective, equity-based Sukuk is proven to have more sharia compliance because it applies to profit and risk-sharing, which is the spirit of Islamic finance (Godlewski, 2016). This results in the following hypothesis:
H1: There is a significant difference between the yields of different underlying asset types of Sukuk.

Corporate Governance Mechanism on Bonds and Sukuk Yields

Credit risk owned by Sukuk is higher than bonds (Hassan, 2012). That is because Sukuk based on the profit-sharing principle, and Sukuk itself has a unique risk that is not possessed by conventional bonds, namely sharia compliance risk. In Standard & Poor's (2011) report, it is mentioned that Western investors are interested in the Sukuk market due to a slightly higher yield of Sukuk than conventional bonds. In line with Ramasamy et al., (2011), which claimed that the lender under Islamic finance is facing more risk and, in return, the expected return rate in Sukuk is higher in Islamic instruments (Ramasamy et al., 2011). Moreover, Ariff et al. (2017) claimed that the yield of Sukuk is slightly higher than the yield of conventional bonds due to the nature of the sharia-compliant instrument. On the other hand, beyond conventional governance, sharia governance is deemed to increase the management's efficiency because sharia governance aims to solve past the conflicts between shareholders and management and deal with all stakeholders, thus reducing the risk of Sukuk for Sukuk holder (Buallay, 2019). Thus, sharia governance is expected to complement conventional governance to reduce the risk in Sukuk.

Sharia governance also recognizes that mechanism for corporate governance constitutes of Board of Directors and Commissioners, Senior Management, and Shareholder. However, the Board Management of Islamic corporations shall carry the additional task to supervise and control the Sharia compliance of Islamic instruments and objectives. Moreover, in Sharia governance, internal control shall be strongly implemented to ensure the organization's goals according to the Islamic perspective and enhance long-term profitability to all stakeholders. This function of supervisory in Indonesian two-tier system management is carried by Independent Commissioners, who also covered the Audit Committee and Governance Committee. Thus, it is crucial to have sharia scholars in internal control management to highlights effort to comply with Islamic rules. According to Mollah and Zaman (2015), Huang and Wang (2015) and Verhoeven (2007), Sharia scholars in Islamic financial institutions proved to increase the banks' performance and even have a more prominent role than the advisory role.

Islam also believes that a person's daily activities and transactions should be based on the value of truthfulness, firmness, fairness, respect for the law, kindness. Forbearance, tolerance, and uprightness, instead of deceit, haughtiness, class consciousness, ostentation, insubordination, envy, jealousy, backbiting, and self-aggrandizement (M.K Hassan, 2002). These should also naturally be manifested in individuals' involvement in business activities and operations as well as their relationship with all their respective stakeholders (Kasri, 2009). Thus, the existence of Muslims in board management can be assumed to increase a comprehensive stakeholder view in corporate governance policy and framework related to the ethical values in Muslims. One can assume that the higher the percentage of Muslims in board management, the more compliance the company is towards sharia governance, which can influence the yields of Sukuk. This brings us to the second hypothesis of this research paper

H2: There is a relationship between sharia governance and the yields of Sukuk.

III. RESEARCH METHODOLOGY

Specifically, data are retrieved from IBPA for issue characteristics for conventional bonds and Sukuk, including yield, tranches, issuer name, price of debt, issue date, maturity date, issue amount in Rupiah' million, and debt instrument categories. The data obtained from Bareksa are then cross-checked with the issuances released by IDX and PEFINDO to ensure that it was rated and issued by a public listed company. The bonds or Sukuk must still be outstanding when the data is processed to obtain the YTM. The final sample includes 12 issuers with 24 issuances of Sukuk; 19 are asset-based Sukuk, and five are equity-based.

Table 1. Research Sample

No	Name of Sukuk	Sukuk Code	Mature	Nominal (Million)	Coupon Rate	Rating	Tenure
1	Sukuk Ijarah I Angkasa Pura I Tahun 2016 Seri A	SIAPAI01A	22/11/2021	268000	8,10%	IdAAAsy	5
2	Sukuk Ijarah Berkelanjutan I Xl Axiata Tahap I Tahun 2015 Seri C	SIEXCL01CCN1	2/12/2020	323000	10,50%	AAA	5
3	Sukuk Ijarah Berkelanjutan I Xl Axiata Tahap I Tahun 2015 Seri D	SIEXCL01DCN1	2/12/2022	425000	11%	AAA	7
4	Sukuk Ijarah Berkelanjutan I Xl Axiata Tahap II Tahun 2017 Seri E	SIEXCL01ECN2	28/04/2027	336000	9,40%	AAA	10
5	Sukuk Ijarah Berkelanjutan I Indosat Tahap III Tahun 2015 Seri A	SIISAT01ACN3	8/12/2022	65000	10,60%	IdAAAsy	7
6	Sukuk Ijarah Berkelanjutan II Indosat Tahap I Tahun 2017 Seri B	SIISAT02BCN1	31/05/2022	160000	8,55%	IdAAAsy	5
7	Sukuk Ijarah Berkelanjutan I Indosat Tahap I Tahun 2014 Seri C	SIISAT01CCN1	12/12/2021	110000	10,50%	IdAAAsy	7
8	Sukuk Ijarah Berkelanjutan I Indosat Tahap II Tahun 2015 Seri C	SIISAT01CCN2	4/6/2020	67000	10%	IdAAAsy	5
9	Sukuk Ijarah Berkelanjutan I Indosat Tahap II Tahun 2015 Seri E	SIISAT01ECN2	4/6/2025	175000	10,40%	IdAAAsy	10
10	Sukuk Ijarah Pln V Tahun 2010 Seri B	SIKPPLN04B	8/7/2022	340000	10,40%	IdAAAsy	12
11	Sukuk Ijarah Berkelanjutan II Pln Tahap I Tahun 2017 Seri A	SIPPLN02ACN1	11/7/2022	186000	7,70%	IdAAAsy	5
12	Sukuk Ijarah Berkelanjutan II PLN Tahap I Tahun 2017 Seri B	SIPPLN02BCN1	11/7/2027	214000	8,50%	IdAAAsy	10
13	Sukuk Ijarah Berkelanjutan I Aneka Gas Industri Tahap I Tahun 2017 Seri A	SIAGII01ACN1	6/6/2020	147000	9,90%	A-	3
14	Sukuk Ijarah Berkelanjutan I Aneka Gas Industri Tahap II Tahun 2017 Seri A	SIAGII01ACN2	5/12/2020	107000	9,50%	A-	3
15	Sukuk Ijarah Berkelanjutan I Aneka Gas Industri Tahap I Tahun 2017 Seri B	SIAGII01BCN1	6/6/2022	99000	10,35%	A-	5
16	Sukuk Ijarah TPS Food II Tahun 2016	SIAISA02	19/07/2021	1200000	10,55%	idAsy	5
17	Sukuk Ijarah Berkelanjutan I Global Mediacom Tahap I Tahun 2017 Seri A	SIBMTR01ACN1	7/7/2022	213050	11,50%	idA+sy	5
18	Sukuk Ijarah Berkelanjutan I Global Mediacom Tahap II Tahun 2017	SIBMTR01CN2	19/09/2020	150000	11%	idA+sy	3
19	Sukuk Ijarah Berkelanjutan I Timah Tahap I Tahun 2017 Seri B	SITINS01BCN1	28/09/2022	180000	8,75%	idA+sy	5
20	Sukuk Mudharabah Berkelanjutan II Bank Maybank Indonesia Tahap I Tahun 2017	SMBNII02CN1	11/7/2020	266000	7,75%	idAAsy	3
21	Sukuk Mudharabah II Bank Sulselbar Tahun 2016	SMBSSB02	15/07/2021	50000	8,67%	idA+sy	5
22	Sukuk Mudharabah Subordinasi I Bank BRI Syariah Tahun 2016	SMBRIS01SB	16/11/2023	1000000	9,35%	A+dn	7
23	Sukuk Subordinasi Mudharabah Berkelanjutan I Tahap I Bank Muamalat Th. 2012	BBMISMSB1CN1	29/06/2022	800000	8,24%	idA-sy	10
24	Sukuk Subordinasi Mudharabah Berkelanjutan I Tahap II Bank Muamalat Th. 2013	BBMISMSB1CN2	28/03/2023	700000	7,62%	idA-sy	10

The period covers long-term and medium-term debts from 2015 until 2018. An analysis of companies' annual reports every year from 2015 until 2018 was performed manually to collect data on sharia governance, corporate governance and control variables. Using Multivariate Panel Regression with random-effect model, the vce robust t-estimation is used to handle the heterogeneity bias in STATA. To deepen the analysis, three models of regression were tested on panel of all Sukuk, panel of equity-based Sukuk, and panel of equity-based Sukuk. The regression equiation model and the measurement of research variables and operational variables are explained in the table below:

$$\textbf{YTM it} = \beta_0 + \beta_{1\text{-}3}(\textit{Sharia Governance}) + \varepsilon it \quad (1)$$

$$\textbf{YTM it} = \beta_0 + \beta_{1\text{-}3}(\textit{Sharia Governance}) + \beta_{4\text{-}6}(\textit{Conventional Corporate Governance}) + \beta_6(\textit{Profit}) + \varepsilon it \quad (2)$$

$$\textbf{YTM it} = \beta_0 + \beta_{1\text{-}3}(\textit{Sharia Governance}) + \beta_7(\textit{Rating}) + \varepsilon it \quad (3)$$

Explanation:
YTM : Yield to Maturity
β_0 : Constanta

Sharia Governance:	1) number of Independent Commissioners (IC),
	:2) number of Sharia Scholars (SS), and
	:3) percentage of Muslim Boards (MB).
Corporate Governance	:4) percentage of Institutional Ownership (IO) and
	:5) number of Board Size (BS)
Rating	:6) Rating
Profit	:7)Return on Asset on issuers

According to Kasri (2009), internal control in sharia governance shall be strongly implemented to ensure the realization of the organization's goals in accordance with the Islamic objective of good businesses, including transparency, honesty, and the satisfaction of all the stakeholders. This function of supervisory in Indonesian two-tier system management is carried by Independent Commissioners, who also covered the Audit Committee and Governance Committee. Therefore, the number of independent commissioners is used as a measure of Internal control in sharia governance for this study. It is also important to have sharia scholars within the internal control management to highlight efforts to comply with Islamic rules. Lastly, the existence of Muslims in board management can be assumed to increase the comprehensive stakeholder view in sharia governance policy related to Islam's ethical values.

Table 2. Scale Measurement

No.	Variable	Description	Proxy/Measurement	Predicted	Data	Reference
Dependent						
1	Yields	YTM	YTM approximation of Sukuk issued		IBPA, Bareksa	Saad, 2018
Independent						
1	Independent Commissioner	# of Independent Commissioner	Total number of independent commissioner in the company	-	Annual Report	Alijoyo & Zaini, 2004
2	Sharia Scholars	# of Sharia Scholars	Total number of sharia scholars in the board	-	Annual Report	
3	Muslim board	% of Muslim boards	The percentage of Muslim in board	-	Annual Report, Bloomberg	Halim, 2017
Control						
4	Institutional Ownership	% of Institutional ownership	The percentage of Institutional Ownership in th company	-	Annual Report	Saad, 2018
5	Board Size	# of Directors and Commissioners	The total number of directors and commissioners in the company	-	Annual Report	Saad, 2018

6	Rating	Rating in dummy variable	1 if categorize as investment grade AAAsy, AAsy, Asy. And 0 if categorized as non-investment grade Asy-	-	Sukuk Prospectus, PEFINDO, Fitch	Bhojraj and Sengupta, 2003
7	Profitability	ROA	Return on Asset of the company	+	Annual Report	Saad, 2018

IV. FINDING AND DISCUSSION

In a descriptive statistic analysis, it shows that Equity-based Sukuk has slightly higher yields than Asset-based Sukuk. In addition, it is also seen that the issuers of equity-based Sukuk have a higher mean number of Sharia scholars and Muslim boards. This indicates that issuing equity-based Sukuk is more favorable to Sharia scholars and the Muslim board to its compliance. While the mean rating of equity-based Sukuk is lower, the mean profitability of equity-based Sukuk issuers is higher than that of asset-based Sukuk issuers. This indicates that risk is in line with the return. As equity-based Sukuk is riskier, the return on the business, project, or joint-ventures can also yield higher. Thus, it can also mean that firms with higher profitability tend to issue equity-based Sukuk rather than Asset-based Sukuk.

Table 3. Descriptive Statistic

Side by side summary of the descriptive statistics for the yield and the independent variables, namely IC, SS, MB, control variables of IO, BS, Rating, and Profitability of the sample Sukuk of Equity-based and Asset-based whose listed and traded are presented in this table.

	Equity-Based/ Mudharabah Sukuk				Asset-Based/ Ijarah Sukuk			
Variables	Mean	Std. Dev	Min.	Max.	Mean	Std. Dev	Min.	Max.
Yields	0.0966	0.0138	0.0769	0.1191	0.0962	0.0182	0.0730	0.1885
IC	2.6667	0.6171	1.000	3.0000	3.1372	1.3714	1.0000	6.0000
SS	2.5333	0.7432	2.000	4.0000	0.7254	0.9397	0.000	2.0000
MB	0.9667	0.0879	0.7500	1.0000	0.6505	0.2613	0.1300	1.0000
IO	0.9046	0.0706	0.7900	1.0000	0.7513	0.1417	0.5000	1.0000
BS	9.3333	2.0862	6.0000	12.000	13.000	2.7640	3.0000	20.000
Rating	0.3333	0.6399	0.0000	1.0000	0.7058	1.0708	0.0000	1.0000
Profit	0.09214	0.0808	0.0051	0.2200	0.0206	0.1026	-0.6410	0.0800

Source: Data processed on STATA

However, in an independent sample t-test analysis, it shows that the Pr (T<t) value is more than 0.05, indicating that there is no statistical difference between the yield performance of equity-based Sukuk and asset-based Sukuk, rejecting the first hypothesis. Seen from the yield spread of the three panels, the volatility of equity-based Sukuk is lower than Asset-based Sukuk's. It shows that even though equity-based Sukuk has a higher risk than asset-based Sukuk, the control on the

pricing mechanism and the higher existence of sharia governance internal control is higher to perform efficiently and yield an appropriate return for the Sukuk holders.

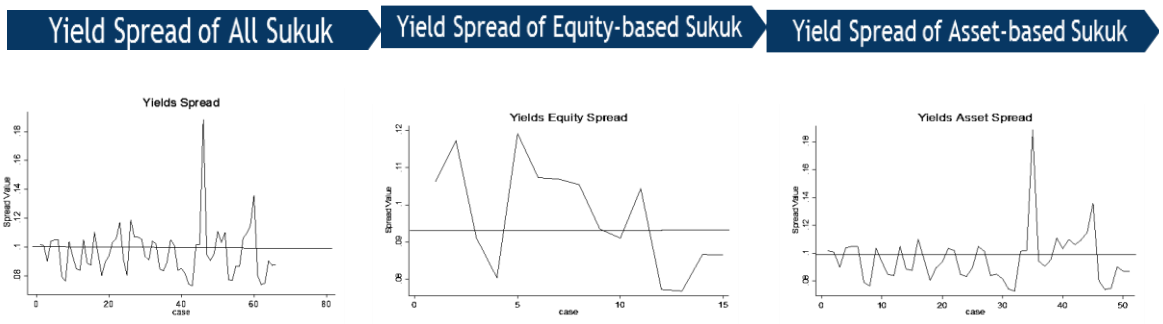

Fig. 2 Yield spread

Table 3. Two-sample t test with equal variances

Variable	Obs.	Mean	Std. Error	Std. Deviation
Equity-based Sukuk	15	0.0966	0.0035	0.0131
Asset-based Sukuk	51	0.0962	0.0025	0.0182
Combined	66	0.0963	0.0021	0.0172
diff		0.0004	0.0051	
Pr (T < t)	0.5332			

Source: Data processed in STATA

To examine the effect of sharia governance on Sukuk YTM, we tested the models and saw no classical Assumption problems and no Correlation problems within the model. The data is tested with the classical assumption test and is seen to have less than VIF value, signaling no multicollinearity problem. Wooldridge test is also done showing Prob. > F of 0.22 which is more than 0.05, signaling no autocorrelation issue in the model. However, to handle the heteroskedasticity problem in the model, VCE robust t-estimation is STATA is used. The Pearson Correlation Coefficient was used to identify the relationship between the dependent variable, sharia governance, corporate governance, rating, and profitability as a proxy for the independent variable.

Table 4. Correlation coefficients

The Pearson Correlation Coefficient in the random effect model in the panel of all Sukuk between Sukuk yield and each independent variable are presented in this table. IC is Independent Commissioners, SS is Sharia Scholars, and MB is Muslim Boards, IO is Institutional Ownership, and BS is Board Size. Further, this table presents the wise pair correlation of all the variables.

	VIF	Yields	IC	SS	MB	IO	BS	Rating	Profit
yields		1							
IC	1.67	-0.2867**	1						
SS	1.24	-0.1036**	0.2955***	1					
MB	2.42	-0.2598**	0.1943**	-0.2869***	1				
IO	2.49	-0.2831*	-0.0727*	-0.2779*	-0.1742	1			
BS	1.35	-0.1174*	-0.3513	-0.1111*	-0.0023	0.0670	1		
Rating	1.20	-0.0398*	0.3469*	-0.2891	0.3469*	-	-	1	
Profit	1.20	-0.0203	0.1735	-0.2525*	0.3208	0.3270	0.1383	0.0936	1

The correlations between each pair of variables were measured at 10 percent, 5 percent, and 1 percent significance levels. The resulted correlation coefficient values that are significant at the 1 percent level have been marked with ***, significant at 5 percent level have been marked with **, ad significant at 10 percent level has been marked with *.

In the first model, it is proven that Sharia governance can complement conventional corporate governance to explain the effect it has on lowering the cost of debts/financing in Sukuk. Profit, on the other hand, shows a significant positive relationship to the yield of Sukuk, indicating that higher profitability of Sukuk issuers correlates with higher profit-sharing for Sukuk holders.

Table 5. Robust Panel Regressio for Shorts Governance

This table presents the result of the regression analysis conducted to identify the significance of Independent Commissioners, Sharia Scholars, and Muslim Board together in explaining Sukuk yields.

Sukuk category:	Panel of All Sukuk			Panel of Equity-based Sukuk			Panel of Asset-based Sukuk		
Dependent Variable	**Yields**			**Yields**			**Yields**		
Independent Variable	Coefficient	Robust Std. Err.	Prob.	Coefficient	Robust Std. Err.	Prob.	Coefficient	Robust Std. Err.	Prob.
Sharia Governance:									
Independent Commissioner	-0.0085116	0.0020523	0.000***	-0.007642	0.0069121	0.912	-0.0014478	0.0012318	0.246
Sharia Scholar	-0.01645	0.0034922	0.027**	-0.0125098	0.0032293	0.000***	-0.0043595	0.0021067	0.044**
Muslim Board	0.0726	0.007156	0.000***	0.0063607	0.0652271	0.100	-0.0190107	0.0068447	0.008***
Constant	0.0883743	0.0100965	0	0.067196	0.0419645	0	0.0116312	0.0083108	0
R-squared	0.2850			0.6092			0.1682		
Chow Prob. > F	0.0013			0.0716			0.3653		
Hausman Prob. > Chi2	0.00062			0.0248			1		

N.B: The significant regression correlation is measured at 10 percent, 5 percent, and 1 percent significance levels. The resulted prob. values that are significant at the 1 percent level have been marked with ***, significant at 5 percent level have been marked with **, ad significant at 10 percent level have been marked with *.

Based on the results of the t-test, it was found that the independent commissioner variable significantly influences Sukuk's yield to maturity. The regression coefficient of the independent commissioner variable is considered negative in a panel of all Sukuk. This result is also in line with previous research on Bonds' yield, which stated that the more independent commissioners exist in a firm, the lower cost of debts of the firm (Bhojraj and Sengupta, 2003; and Tanaka, 2014). It means that independent commissioners can also be accounted for as sharia governance to ensure management's efficiency in Sukuk issuers. Thus, independent commissioners in Sukuk issuers are responsible for supervising the efficiency of the fund from Sukukholders and ensure the good performance of the firm to provide lower risk for all stakeholders, including Sukukholders.

The presence of Sharia Scholars as the most important sharia governance proxies in this study proved to have a significant negative influence on Sukuk's yields in all panel used in this study. Especially as the internal control in sharia governance shall be strongly implemented to ensure the realization of the company's goals under the Islamic perspective and enhance the long-run profitability to all stakeholders. The regression coefficient is negative, which explains that having sharia scholars in internal control management of Sukuk issuers as an effort to comply with Islamic rules might also result in a lower cost of financing, as seen from Sukuk's yields. And according to Mollah and Zaman (2015), Huang and Wang (2015) and Verhoeven (2007), Sharia scholars in Islamic financial institutions proved to increase the firms' performance, which directly ensure all stakeholder's interests including the Sukuk holders. Consequently, while Sukuk as a sharia compliance instrument represents a share in the tangible assets, project, business, or joint venture, the risk is also higher (Hassan and Lewis, 2014). Therefore, with the presence of Sharia scholars, the risk of Sukuk is better controlled to guarantee a lower chance of default for the Sukuk holders.

Muslim boards also show a significant negative relationship with Sukuk yields in both panels of all Sukuk and panel of Asset-based Sukuk. This result is in line with a study in Malaysian firms by Haron (2018), which suggests that the presence of Muslim directors does have a significant impact on the performance of firms in Malaysia. Firm performance increases with the presence of Muslim directors as Muslim directors are expected to perform their duty and task with full ethical values expected of them. Thus, Muslim boards can be used as one of the measurement of sharia governance in Sukuk issuers to ensure better performance and lower risk in Sukuk. These results complete the hypothesis used by Saad (2018) in Malaysia to provide empirical evidence that the percentage of Muslim boards in Sukuk issuers has a negative relationship with Sukuk yields in Indonesia.

Furthermore, to make broader analysis, the control variables of conventional corporate governance, including institutional ownership and board size, as well as the Sukuk issuers characteristics, have seen from ROA were analyzed in the next model presented in Table 4.6 below. In a panel of All Sukuk Adding the proxies of conventional corporate governance and profit of issuers in the model, sharia governance measures of independent commissioners and sharia scholars still show significant negative influence in a panel of All Sukuk. While the Muslim board shows insignificant influence in the model. Institutional ownership and board size as proxies of conventional corporate governance also show a significant negative influence on the yields of Sukuk. On the other hand, profit shows a significant positive influence on the yields of all Sukuk. Furthermore, this model also improves the r-squared from 28.5% to 38,5%. Hence, Sharia governance is proven to complement conventional corporate governance to explain the effect it has on lowering the cost of debts/financing in Sukuk. Profit, on the other hand, shows a significant positive relationship to the yield of Sukuk, indicating that higher profitability of Sukuk issuers correlates with higher profit-sharing for Sukuk holders.

Table 6. Robust Panel Regressio Result for Shorts Governance, Conventional Governance and Probablilty

This table presents the result of the regression analysis conducted to identify the significance of Independent Commissioners, Sharia Scholars, Muslim Board , Institutional Ownership, Boards Size, and Profitability together in explaining Sukuk yields.

Sukuk category:	Panel of All Sukuk			Panel of Equity-based Sukuk			Panel of Asset-based Sukuk		
Dependent Variable	**Yields**			**Yields**			**Yields**		
Independent Variable	Coefficient	Robust Std. Err.	Prob.	Coefficient	Robust Std. Err.	Prob.	Coefficient	Robust Std. Err.	Prob.
Sharia Governance:									
Independent Commissioner	-0.0032809	0.001371	0.020**	-0.5804412	0.0205404	0.022**	-0.0052841	0.0016527	0.006***
Sharia Scholar	-0.0044693	0.0013166	0.001***	-0.4747847	0.0180635	0.030**	-0.002523	0.0018317	0.189
Muslim Board	-0.0078578	0.008487	0.358	-0.003528	0.011876	0.977	-0.03256111	0.0091249	0.003***
Conventional Corp. Governance:									
Institutional Ownership	-0.0383958	0.015728	0.018**	-0.0319024	0.0134202	0.818	0.206043	0.018739	0.158
Board Size	-0.002212	0.001313	0.097*	-0.075159	0.0141807	0.61	-0.003393	0.005961	0.578
Other Variable Controls:									
Profit	0.023629	0.010104	0.036**	0.2278518	0.0041833	0.253	0.0047834	0.0041833	0.061*
Constant	0.1735633	0.0213113	0.000***	0.1547843	0.0932371	0.000***	0.1246082	0.0100902	0.000***
R-squared	0.3849			0.9479			0.7245		
Prob>F	0.0001			0.0001			0.0000		

In the model combined with rating, Sharia scholars in the panel of Equity-based Sukuk once again showed a significant negative relationship with Sukuk yields. They are signaling that in Equity-based Sukuk issuers, Sharia governance mainly relies on the presence of effective Sharia scholars. At last, rating showed a significant negative relationship with Equity-based Sukuk, indicating that higher rating correlates with lower yields of Sukuk in Indonesia. These results are in line with Bhojraj and Sengupta 2003; Tanaka, 2014, and Shailer and Wang 2015. In this model, the r- squared is also increased to 74.8% with Prob. > F of 0.0000.

Table 7. Robust Panel Regressio Result for Shorts Governance and Rating

This table presents the result of the regression analysis conducted to identify the significance of Independent Commissioners, Sharia Scholars, Muslim Board ,, and Rating together in explaining Sukuk yields.

Sukuk category:	Panel of All Sukuk			Panel of Equity-based Sukuk			Panel of Asset-based Sukuk		
Dependent Variable	**Yields**			**Yields**			**Yields**		
Independent Variable	Coefficient	Robust Std. Err.	Prob.	Coefficient	Robust Std. Err.	Prob.	Coefficient	Robust Std. Err.	Prob.
Sharia Governance:									
Independent Commissioner	-0.0035922	0.0136766	0.016**	-0.013867	0.0081352	0.868	-0.0045126	0.0012988	0.006***
Sharia Scholar	-0.009914	0.0114463	0.598	-0.016895	0.0049818	0.007***	-0.0045678	0.0031681	0.189
Muslim Board	-0.033257	0.0114697	0.015**	0.0306133	0.0057689	0.607	-0.0505996	0.0021338	0.003***
Control Variable									
Rating	-0.001557	0.015728	0.227	-0.01624	0.0063389	0.028**	0.0021925	0.0021338	0.320
Constant	0.0132327	0.011602	0.000***	0.011159	0.036284	0.012**	0.0145088	0.017882	0.000***
R-squared	0.7480			0.7306			0.7039		
Prob>F	0			0.0002			0.0000		

All of the models of Sharia governance analyzed above showed that Sharia governance could complement the conventional corporate governance to explain the effect it has on Sukuk yields seen from the yield to maturity. Therefore, the second hypothesis is failed to be rejected.

V. CONCLUSION AND FURTHER RESEARCH

The yield performance of equity-based Sukuk and asset-based Sukuk have no significant difference. It is indicating that the performance of different underlying assets does not statistically create a difference in Sukuk's yield. However, the volatility of equity-based Sukuk is lower than Asset-based Sukuk's, signaling better internal control on risk in equity-based Sukuk. Moreover, issuing an equity-based Sukuk is proved to be more favorable to Sharia scholars and Muslim boards.

This result also highlights empirical evidence that the presence of independent commissioners, Sharia scholars, and Muslim boards on Sukuk issuers ensure greater internal control to push the lower risk of financing in Sukuk for investors. Moreover, in a panel of Equity-based Sukuk, which proved to have a higher risk of investment, Sharia scholars act as the significant sharia governance's proxy capable of increasing the performance of the Sukuk and lowering the risk of default for Sukuk holders. Mollah and Zaman (2015), Huang and Wang (2015), and Verhoeven (2007) have claimed that Sharia scholars in Islamic financial institutions proved to increase the banks' performance and even have a more prominent role than the advisory role. Moreover, Sharia governance is also found as an important determinant of earning management (Quttainah, 2013). Hence, these results added more discussion to the role of Sharia governance in companies issuing sharia investment instruments. Furthermore, Saad et al. (2018) failed to prove that Muslim directors

can influence Sukuk yields in Malaysia after Halim (2017) claimed that the higher the percentage of Muslim directors in Malaysian corporations increases the chance of the corporations to issue Sukuk rather than conventional. This study has shown that percentage of Muslim boards has a negative correlation towards Sukuk yield, supporting Halim (2017), which claimed that Muslim directors are proved to have higher Islamic financing awareness.

There is very limited literature on the practical measure of sharia governance in Indonesia. The author hopes that there will be more research on sharia governance by adding other proxies of sharia governance, such as the presence of Sharia auditors in firms. Last but not least, Investors and Corporations should pay attention towards sharia governance to reduce the default risk of Sukuk.

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