DETERMINANT OF SUKUK ISSUANCE IN INDONESIA FROM INFORMATION ASYMMETRY PERSPECTIVE (2013-2022)

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Abstract

Previous research found that sukuk is more exposed to information asymmetry problems, especially adverse selection, than bond. Indonesia as the third largest country for sukuk market falls below its peers in terms of governance. It means the information asymmetry in Indonesia is relatively higher which could reduce market effectiveness. So to improve sukuk market in Indonesia, studying the implication of information asymmetry and how it affects the capital structure decision is important. This study try to explain the issuance of sukuk in Indonesia 2013-2022 from information asymmetry perspective. This study uses secondary data from 2013-2022 and would be done by using logistic regression to conclude if the variables representing adverse selection and moral hazard affect the decision of sukuk issuance. Our regression found evidence of adverse selection in Indonesia sukuk market but did not find moral hazard problem. The result supports previous research that concludes that sukuk structuration leads firms with higher financial distress and a lower reputation to enter the market. The result could help investor to understand sukuk market and review their risk management procedure. It could also become additional material for government to design a suitable regulatory environment for a more govern sukuk market that would improve the development of sukuk market.

Keywords: Information asymmetry; sukuk; bond; Indonesia

Research Background

Sukuk is the second largest sector by assets in Islamic finance. Sukuk grew by 14% in 2021 to US$713 billion in total outstanding. The growth is driven by the GCC and Southeast Asia. The three largest sukuk market lying on Malaysia as the leader, Saudi Arabia and Indonesia. Sukuk issuance increased in 2021 to a record US$202.1 billion (ICD - Thomson Reuters 2022). It indicates sukuk is attractive investment instruments in the capital market.

Sukuk shares several similarities with bonds such as nominal value, maturity date, rate or margin and a regular stream of cash-flows provided to investors. Some scholars argue that the differences between sukuk and conventional bonds are mainly cosmetic (Klein & Weill, 2016). They explained that sukuk margin is usually benchmarked to the equivalent interest rate so although it is only used for pricing, it worries some scholars about riba.

On the other hand, several scholars also argue that sukuk has major features that would distinguish from its conventional counterparts. The main characteristic that makes sukuk different from bonds is that sukuk must be backed by a real asset (Wilson 2008). Klein and Weill (2016) define sukuk as tradable certificates of ownership that

give the right of a stream of revenue from an investment project. Guizani (2020) considered sukuk as hybrid securities because it bears the features of stocks and bonds. Unlike bond, sukuk involves partnership and non-partnership business agreements, not a lender-borrower relationship (Uddin, Kabir, Hossain, Wahab, & Liu, 2020). In partnership sukuk (mudarabah or musharakah) investors and issuer of the asset share profits and losses from certain activities stipulated in the contract while non-partnership contracts (ijarah and murabahah) create either lessor-lessee or buyer-seller relationship between the investors and borrowers. Thus, sukuk holders have recourse to the assets in the event of default although they lack right of voting and interfering in underlying asset (Guizani, 2020).

Islamic instruments, including sukuk, involve a high information cost because it has more complex contract than bond. Sukuk requires SPV to temporarily isolate the underlying asset or contract and, as explained above, its contractual relationship is not simply lender and borrower make it more exposed to moral hazard and adverse selection (Guizani, 2020). Previous research (e.g Abdul Halim et al. 2020; Guizani 2020; Uddin et al. 2020; Nagano 2017; Klein and Weill 2016; Hanifa, Masih, and Becha 2014) confirmed that sukuk is preferable for firms that face a higher information asymmetry cost. Their research confirmed the presence of adverse selection that low quality firm would prefer sukuk over bond and sukuk issuance is interpreted by investor as negative signal (Godlewski, Turk-Ariss, & Weill, 2013). Uddin et al. (2020) argued the reason behind sukuk issuance, other than religious motive, are sukuk provides lighter indebtedness consequences, avoidance of effective third-party monitoring, and tax advantage.

The first Indonesia sukuk was issued in 2002 following the issuance of Sharia ruling No 32/DSN-MUIIIX/2002. Since then, Indonesia sukuk market has grown at a steady pace but still smaller comparing conventional bonds. In 2021, sukuk market accounted for 4,3% from total debt market in Indonesia (IDX 2022). Although Indonesia is one of the largest sukuk market and have the highest indicator for its knowledge, its governance score still fall behind other countries like Malaysia, Bahrain, Oman, Kuwait and UAE (ICD - Thomson Reuters, 2022). In addition, Fitch Rating also classify Indonesia in Group D which consist of countries where the law is not sufficient for investor protection. Considering the current condition, sukuk market in Indonesia could face higher asymmetric information relative to other countries. In other words, Indonesia sukuk market could face adverse selection and moral hazard problem which is the manifestation of information asymmetry.

Future studies should consider mitigating issues and limitation arising from adverse selection and moral hazard (Paltrinieri, Hassan, Bahoo, & Khan, 2020). In order to set the right risk mitigation policy, the underlying problem in sukuk market need to be understood. In addition, despite being center of Islamic Finance, study about Indonesia sukuk market is still limited. Most studies include Indonesia in multi-country analysis, but rarely studies Indonesia in particular. This study tries to fill the gap by

exploring the determinant of sukuk issuance and try to explain Indonesia sukuk market from asymmetric information perspectives.

According to the research background, this research is going to test determinant of sukuk issuance decision in Indonesia 2013-2022 from information asymmetry perspectives.

To explain the issuance of sukuk in Indonesia 2013-2022 and provide the analysis based on information asymmetry perspective.

The result could help investor to understand sukuk market and review their risk management procedure. It could also become additional material for government to understand deeper about Indonesia sukuk market characteristics and use it to develop a favourable regulatory environment for a more govern sukuk market.

This paper only covers the case of Indonesia 2013-2022, so some potential universal characteristics in sukuk issuance cannot be generalized. This paper also exclude unlisted issuers due to the unavailability of data collection. Moreover, it is also exclude the financial industry due its different nature and level of information.

Metode
Sample and Data

The population in this research is all companies that issued sukuk and bonds in Indonesia for period 2013-2022. This study uses purposive sampling by choosing only company who met criteria: (1) issued at least one kind of debt securities between 2013-2022 (2) Not a financial institution. The data were obtained from Thompson-Eikon database. After selection, samples comprised of 64 companies with 671 issuances of sukuk and bonds. It accounted for 33,74% from total debt market in Indonesia.

Table 2. Sampling Procedure

No	Sampling Procedure	Total
1.	Companies who issued sukuk and bonds period 2013-2022	190
2.	Financial Institutions	(80)
3.	Unlisted and Delisted companies	(46)
5.	Total sample	64

Source : Data processed by researcher

Variables Identification

This research tries to explore the relationship among variables. The dependent variable used in this research is categorical variables which 2 if the company issued sukuk in corresponding year, 1 if the company issued only bond in corresponding year and 0 if the company did not issued any debt securities. The independent variable follows Klein and Weill (2016) and Majumdar and Puthiya (2021) which are profitability, liquidity, leverage, collateral, market to book ratio and maturities. Following both research and (Altunbaş, Kara, & Marques-ibanez, 2010), this research

used financial data year before issuance to prevent an endogenous issue since the variable the year before the issuance cannot be impacted by the issuance itself.

Table 3. Variables

Variable Type	Description	Variable	Proxy	Measurement	Previous Researches	Hypotesis
Dependent	Sukuk Preferences	Categorical	Sukuk	if the company issued sukuk in corresponding year (1), if the company only issued bond (0)		
Independent	Adverse Selection	Profitability	EBITDA TA	EBITDA / Total Asset	Klein & Weill (2016), Majumdar & Puthiya (2021), Mohamed dkk (2015)	Negative
		Liquidity	CR	Current Asset / Current Liabilities	Klein & Weill (2016), Majumdar & Puthiya (2021),	Negative
		Leverage	DTA	Total Debt/Total Asset	Klein & Weill (2016), Majumdar & Puthiya (2021), Mohamed dkk (2015), Uddin dkk (2020)	Negative

		Tangibility/Collateral	Fixed Asset	Total Fixed Asset/ Total asset	Klein & Weill (2016), Majumdar & Puthiya (2021), Mohamed dkk (2015)	Negative
	Moral Hazard	Market to book ratio	MTB	Market value per share / Book value of equity per share	Klein & Weill (2016), Majumdar & Puthiya (2021), Mohamed dkk (2015)	Positive
		Maturity	Maturity	Years counted from issuance date to maturity date	Klein & Weill (2016), Majumdar & Puthiya (2021), Mohamed dkk (2015)	Positive
Control	Covid-19	Binary	Covid19	Dummy variable = 1 if sukuk/bond issuance took place in year 2020-2021 dan 0 otherwise	Lin & Su (2022)	
	Size	Total Asset	Log_TA	Log Total Asset	Guizani (2020), Majumdar &Puthiya (2021), Ashraf dkk (2021), Uddin dkk (2020), Grassa	

	Amount	Log Amount	Log_Amount	Log from Issuance amount in a year	Klein & Weill (2016), Abdul Halim et al. (2020), Mohamed dkk (2015)	
					&Minaoui (2018), Nagano (2016)	
	Year Issuance		Years Issuance		Majumdar & Puthiya (2021), Klein & Weill (2016)	

Data Analysis Technique

Since the dependent variable is categorical, the analysis is carried out by using logistic regression because the dependent variables is categorical. When dependent variable is categorical, the assumption of normal distribution can not be used so it would not be appropriate to use linear regression model like ordinary least square (OLS) method. The logistic regression model is stipulated as:

$$Sukuk_{i,t} = \beta_0 + \beta_1 EBITDATA_{i,t-1} + \beta_2 CR_{i,t-1} + \beta_3 FixedAsset_{i,t-1} + \beta_4 DTA_{i,t-1} + \beta_5 MTB_{i,t-1} + \beta_6 Maturity_{i,t} + \beta_7 log\_TA_{i,t-1} + \beta_8 log\_Amount_{i,t} + \beta_9 Covid19_i + \beta_{10} Years\ Issuance_{i,t} + \varepsilon_{i,t}$$

Where:

Sukuk : categorical variables (if the company issued sukuk in corresponding year (1), if the company only issued bond (0)

EBITDATA : profitability measured by EBITDA / Total Asset of firm I at year t-1

CR : liquidity measured by current asset / current liabilities of firm at year t-1

Fixed Asset : tangibility measured by total fixed asset/ total asset of firm i at year t-1

DTA : leverage measured by Total Debt/Total Asset of firm i at year t-1

MTB : Market value per share / Book value of equity per share of firm i at year t-1

Maturity : the mean of sukuk/bond maturity of firm i at year t (in years counted from issuance date to maturity date)

Covid-19 : Dummy variable = 1 if sukuk/bond issuance took place in year 2020-2021 dan 0 otherwise

Log_TA : Size proxied by the logarithm of the total assets of firm i at year t-1
Log_Amount : the logarithm of the total amount issuance of firm i at year t
Year Issuance : the dummy variable of years

Result and Discussion
Samples and Descriptives

The panel data of 64 firms shows 186 observations with issuance (135 with only bond issuance and 51 with sukuk issuance). The total issuance over 2013-2022 from the samples are USD19.370.373.632. Those number is accounted for 30,44% of the total population (total issuance value in Indonesia bond market) and 33,74% from total number of issuance in Indonesia. It means Indonesia bond market mostly come from financial institution. From the data, we also can conclude that bond issuance continue to dominate bond market in Indonesia. Figure 2 represents the trend in the value of bonds/sukuks issued by samples during the period of our study.
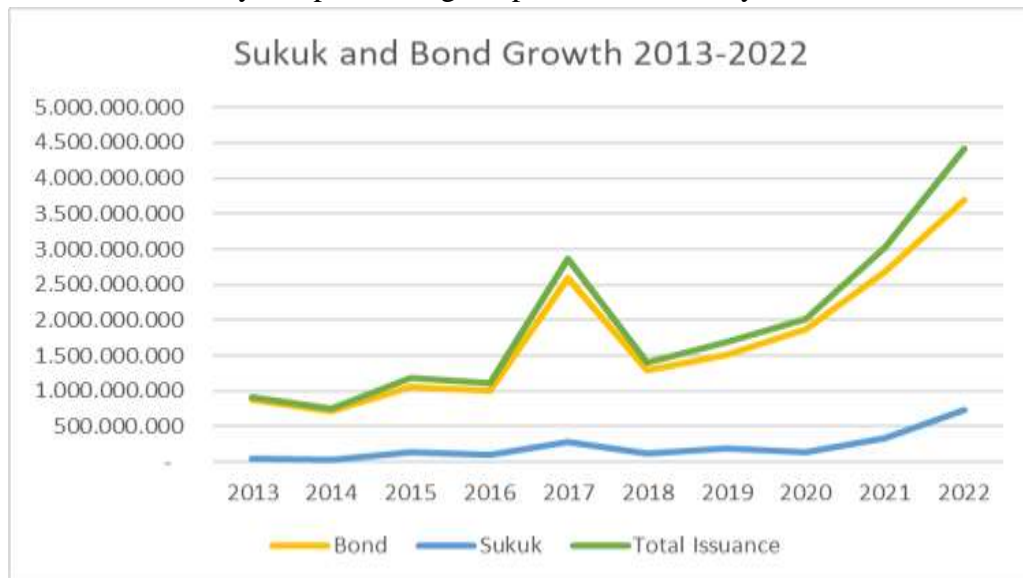
From the descriptive statistics, we found that standard deviation is higher in variables EBIDATA, DTA, maturity and MTB. To solve this condition, researcher used winsorized means in 2% and 98% quartiles to reduces the effect of outlier. Unlike other variables, some observation has negative value of EBITDATA and MTB. Negative values of EBITDATA shows that some companies has losses in certain period, while negative MTB shows that company has negative equity which means it was in financial distress condition or investing in high cost property, plant and equipment (PPE) by issuing stock.

Table 4. Descriptive Statistics

Variable	Mean	Std.Dev	Min	Max
EBITDATA	0,09581	0,20555	-2,63733	1,09961
CR	1,57786	1,64771	0,02593	24,79729
DTA	0,65415	0,99795	0,06377	19,82561
FixedAsset	0,60591	0,21570	0,04232	1,00000

MTB	2,27486	2,32223	-3,19735	22,41000
Maturity	1,33270	2,21351	0,00000	16,24658
log_TA	13,66005	1,39995	8,76230	16,78344
log_Amount	17,96432	0,98327	15,36760	20,49918

Regression Result

The regression was carried out by using logistic regression in STATA to understand the reason behind firm preferences of sukuk. The dataset consist of 186 issuance. We check the multicollinearity among variables and found no variables has extreme values of collinearity (>0,7). We also perform the goodness fit of test after regression by using three indicators which are -2 log likelihood ratio, chi square and Pseudo R values. The -2 log likelihood shows value of 54,028 with p value of chi square 0,0000 means that the model has significant value over null model. Pseudo R2 test show that regression model has explanatory power of 27,43% from the maximum model. All result conclude that the model is fit.

The result shows that EBITDATA has positive and significant relationship with sukuk issuance. While CR and market to book ratio has negative and significant influences toward sukuk preferences. DTA is negative and significant in 90% level of confidence. Maturity is found to be insignificant. All control variable also do not have significant influence toward sukuk preferences. An increase in EBITDATA would increase the probability of sukuk preferences by 10.825 times. While an increase in CR, DTA and MTB would decrease the the probability of sukuk preferences by 2,5595 times, 28,9855 times and 0,5016 times respectively.

Table 5. Regression Result

	Coefficient	*Std.Error*	*P>|z|*
SukukIssuance			
EBITDATA	9,2896	4,1038	0,024
CR	- 0,9399	0,4371	0,032
DTA	-3,3666	1,8686	0,072
FixedAsset	-0,5251	1,2090	0,664
MTB	-0,6900	0,1841	0,000
Maturity	0,3371	0,2139	0,115
log_TA	0,1836	0,2493	0,461
log_Amount	0,0675	0,2808	0,810
COVID19	-14,8753	1.530,4130	0,992
LogLikehood	-82,24		
Numberofobs	186,00		
Prob>chi2	0,0000		
PseudoR2	0,2743		

Discussion
Adverse Selection

The regression result shows evidence that firms in sukuk market are exposed to adverse selection problem. In line with hypothesis, we found that liquidity and leverage has negative and significant relationship in sukuk issuance. Contrary, profitability was found to have positive relationship with sukuk issuance. It means firm who entered sukuk market has high profitability but are in financial distress caused by low liquidity and has low access to debt market. In addition, tangibility or collateral found to be insignificant in sukuk market.

Profitability shows a firm's ability to generate profit hence it also shows the ability to pay back its debt. Positive relationship between profitability and sukuk issuance shows that firm issuing sukuk has higher profitability comparing with firm who doesn't issue sukuk. It also means that the firms may choose to hold on to their retained earnings to take advantage of future investment opportunities (Mohamed, Masih, & Bacha, 2015). Liquidity and leverage have negative relationship with sukuk issuance. Liquidity shows ability of the firm to finance its short term activities. Firm with lower level liquidity seems to face higher level of financial distress. While leverage shows the accessibility to financial market. Lower level of leverage means lower accessibility to financial market. It could also mean that the firm has lower reputation because reputation is very important in financial market. Overall, tangibility has insignificant relationship with sukuk issuance. It means that there is no differences between sukuk and bond issuance in term of tangibility. However, by definition, collateral is essential requirement for sukuk contract so it requires further research.

Kirabaeva (2011) explains that adverse selection problem has small impact in normal condition but when economy is in crisis it could lead to significant losses and market halt thus market participant need to set several mitigation policies. Further, Kirabaeva (2011) suggest that setting up collateral could decrease uncertainty and mitigate adverse selection problem. It also could be decreased with government intervention by setting up right policy to ensure market liquidity.

Moral Hazard

The regression result shows lack evidence of moral hazard in Indonesia sukuk market. The market valuation and book value of firm seem to be in line so it doesn't derive higher information asymmetry between shareholder and management of the firm. Variable maturity found to be insignificant which means there is no difference between conventional debt and sukuk. Thus hypothesis that there is implication of moral hazard in sukuk market is rejected.

Conclusion

Our regression found evidence of adverse selection problem in Indonesia sukuk market. Firm with higher financial distress and lower reputation most likely enter sukuk market than conventional bond market. Moreover, the result shows lack evidence of moral hazard in sukuk issuance proven by negative relationship with market to book ratio and insignificant relationship with maturity. This result confirmed previous research by Klein and Weill (2016), Nagano (2016) and Majumdar and Puthiya (2021).

It could be supported evidence to Godlewski, Turk-Ariss, and Weill (2016) that sukuk issuance derives negative signal in financial market.

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