

Impact of Sukuk Liquidity on Stock Market Liquidity: Evidence from Malaysia

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Abstract: *Stock market liquidity suffers from low volume trading in Malaysia. There is a high concern previously toward boosting the stock market liquidity through sukuk liquidity. This study aims to investigate the impact of sukuk liquidity on stock market liquidity. Investigating the impact of sukuk liquidity on stock market liquidity received less attention, this is due to the lack of measurement that commensurate to the low frequency of sukuk trading within the secondary market. This study employed two measurements of asset liquidity by using ordinary least square technique. The Amihud sukuk liquidity and latent sukuk liquidity were used to be tested against the stock market liquidity. The data used for this study span from 2008 to 2016 from the Malaysian secondary market based on monthly basis. The result of this study found a significant difference between the both liquidity measurements of sukuk that Amihud sukuk liquidity and latent sukuk liquidity. Also, there is a significant and positive impact of both sukuk liquidity measurements on the stock market liquidity. The result of this study provides a novelty finding within the stock market liquidity. It recommended by this study that the improvement of sukuk liquidity reflects a potential improvement on the stock market liquidity.*

Keywords: Sukuk liquidity, stock market liquidity, latent liquidity, Malaysia

1. Introduction

The major purpose of the firms is to maximize their value, which induced several previous studies to seek those determinants that link to the firm value. The liquidity effect is one of the determinants that link to the value of the firm in this regard. Investigating the association between bonds and the stock liquidity has received much attention recently. Despite the high concern about the relationship between bonds and the stock liquidity, unexplained areas remain that need to be explained such as the potential effect of bond liquidity on the stock market liquidity (Anderson, 2017). Several previous studies (Bernile, Korniotis, Kumar, & Wang, 2015; Ejlsing, Grothe, & Grothe, 2015; Huang, Huang, & Oxman, 2015; Shih & Su, 2016) have investigated the impact of liquidity among different financial asset classes, and some previous studies emphasized on the relation between bond liquidity and stock market liquidity. Ruslan Y. Goyenko and Andrey D. Ukhov (2009) found a bidirectional relationship between the bond market liquidity and stock market liquidity, within this relationship, the bond market liquidity worked as a channel of monetary policy toward the stock market. As it proven that improving the bond market liquidity lead to higher the stock market liquidity. According to Cheong, Cherng, Zhi, and Huai (2021) the Malaysian stock market suffers a low liquidity, specifically since the financial global crisis in 2008.

The low frequency of bond (either Islamic or conventional) transaction information is an obstacle for investigating and interpreting the link between bond liquidity and other financial assets' liquidity. However, the latent liquidity model of Mahanti et al. (2008) offers a new approach to overcome this obstacle, as it depends on the monthly basis of transaction information instead of a daily basis. For this reason, the Malaysian market is targeted by this study as it is considered the largest market of Sukuk trading which would strengthen the feedback results of the study. Hence, this study seeks to investigate the association between sukuk liquidity and stock market liquidity in Malaysia.

This paper is organized into seven sections, the first section provides an introduction to elaborate motivation behind conducting this study, the second section provides a background on the secondary market in Malaysia, the third section discusses the stock market liquidity mechanisms, the fourth section is assigned to discuss previous literature related to the linkage between bond market liquidity and stock market liquidity, the fifth and sixth sections provide the methodology used and result obtained respectively, finally the conclusion section ends the organization of this paper.

2. Secondary market in Malaysia

The secondary market of bonds has witnessed a notable development over the last three years, 2017-2019. According to the issued bond league table by Bank Negara Malaysia (BNM), the total trading activities within the secondary market recorded RM1.95 trillion in 2017, corporate Sukuk had occupied 11.6% from the overall trading activities recording a growth of 2% compared to 2016 and amounting to RM174.34 billion. While the secondary market's share of the corporate Sukuk in 2018 recorded a growth of 0.8% compared to 2017 which occupy 12.4% of the total trading activities within the secondary market; while the total trading in 2019 grown by 49% to reach RM2.3 trillion, Sukuk had occupied 12.3% from the overall trading activities as shown in Figure 2.1.

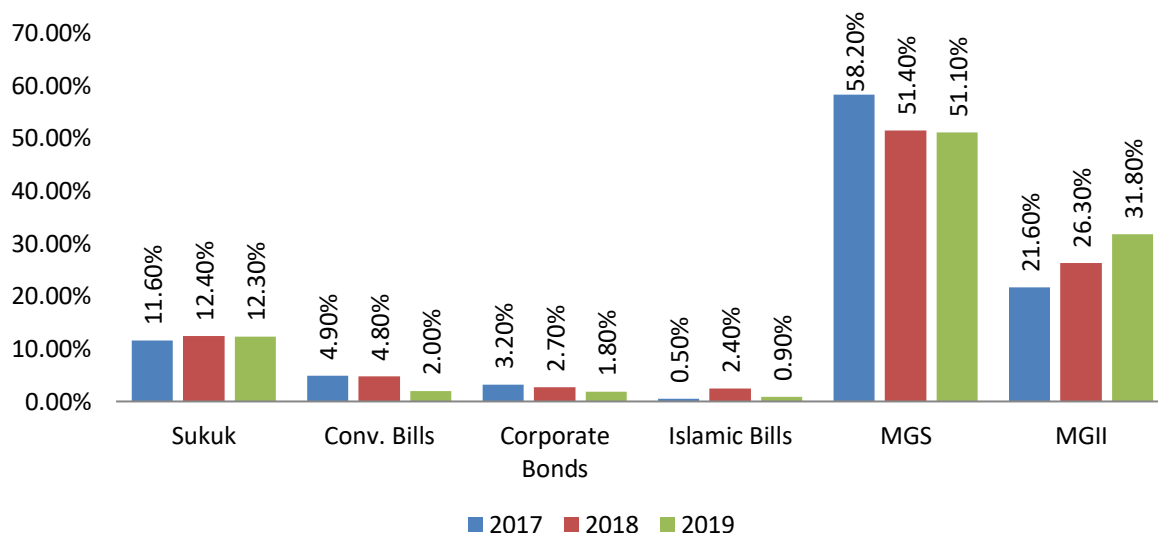


Figure Error! No text of specified style in document..1: Secondary Bond Market – Malaysia

Source: Bank Negara Malaysia (BNM) – bond info hub

MGS: Malaysian Government Securities; MGII: Malaysian Government Investment Issues,

3. Stock Market Liquidity

Liquidity refers to the capability to trade in the market as an asset with ease, that is, expeditiously, with low costs of transaction and also have low price impact (Vivian W Fang, Thomas H Noe, & Sheri Tice, 2009). At first glance, this seems to be well established since liquidity is a concept widely used by investors worldwide. But what is not so obvious is whether liquidity is valued or not, there are predictions in stock market liquidity, clarified by the Sukuk liquidity (Norshafizah Hanafi, Amirul Hamiza Abdul Hamid, & Jasmani Mohd Yunus, 2018b). Liquidity is a factor that could be valued by the market since liquidity (or rather illiquidity) is a risk that the investor must face when trading a bond in the market (Butler, Grullon, & Weston, 2005). Illiquid assets will surely be more difficult to buy and sell, incurring higher transaction costs, and, possibly, suffering a lag between the placing timely order and the transaction itself (Nguyen, Duong, & Singh, 2016).

Stock market liquidity refers specifically to the ability to quickly transformed into money (Singh, Gupta, & Sharma, 2015). The liquidity explains how fast and at steady rates an asset may be bought and sold. This is essentially a function of the amount of purchasing and selling firms participating and how transactions could efficiently be done. The number of shares or the sum of transactions on the exchange typically determines liquidity, Liquidity is measured through the number or volume of traders in the market (Amihud, Mendelson, & Pedersen, 2012).

High rates of stock market liquidity are created when the trade record is large and there are high amounts of supply and demand for an asset, so buyers or sellers become easier to locate. When only a few companies are actively investing, it is regarded as an unregulated stock market. stock market liquidity for numerous reasons is very significant, however, it affects the speed with which positions can be opened and closed (Kahraman & Tookes, 2014). As there is still someone ready to look at both sides of a given situation, a liquid equity market is usually correlated with little risk. That will introduce investors into the equity market, leading to the attractive dynamics of the stock market. The seller can locate the investor in a liquid stock market rapidly by reducing the expense of the asset to enable it to invite. Contrary, a customer does not need to spend extra to protect their preferred asset (Amihud, Hameed, Kang, & Zhang, 2015).

Better liquidity indicates that in the actual stock market there are few offers to purchase and sell. This raises the likelihood that every customer would offer the maximum price and brings back to the cheapest cost any seller could consider. Moreover, the spread of bid-offer would shrink (Hamiza & Hamid, 2017). Since the costs of assets differ from the original stock market, a larger distribution of deals on the marketplace would lead to larger spreads. This could mean that there is a much extensive profit if a stock market were illiquid. The stock market liquidity is not inevitably to be fixed, however, it functions on various scales from high liquidity to low liquidity (Muharam, Anwar, & Robiyanto, 2019). The liquidity position of a stock market based on numerous factors, like the level of economic condition, political decisions, monetary intervention decision, and the transaction timing. High stock market liquidity is often associated with large trading volumes and low spreads (or costs of sale).

4. Literature

The liquidity dynamics between bond and stock market has received much concern. This is attributed to the role of both assets in determining the financial market liquidity.

(Chordia, Sarkar, & Subrahmanyam, 2005a) found a significant correlation between bond liquidity and stock market liquidity, indicating that a shock to quoted spreads in bond market will affect the quoted spreads in stock market. In this regard, latter (Ruslan Y. Goyenko & Andrey D. Ukhov, 2009) found a lead-lag relationship between bond market liquidity and stock market liquidity, besides a bidirectional Granger causality is confirmed. This result indicates the role of bond market liquidity in improving the financial market liquidity through stock market liquidity.

In specific, concerning the effect of liquidity on the Sukuk market, it should be noted that both market-driven liquidity and the individual liquidity of corporate bonds have a significant impact on bond yield differentials, and, therefore, on real returns.

When considering how such liquidity/liquidity risk affects the price of a corporate Sukuk, now, studies have the tendency to emphasis the level of total liquidity which affects liquidity. Though, the liquidity of a Sukuk could behave distinctively with the precise situation of its issuer in the broader situation of security behaviours in the corporate Sukuk market. A fairly low number of investing institutions invests in the Sukuk sector to date, though the general population of the other investors knows very little about the behaviour of the market. Norshafizah Hanafi, Amirul Hamiza Abdul Hamid, and Jasmani Mohd Yunus (2018a) stated that Sukuk in the market that shows greater liquidity as investors do not know them or do not have access to them. This situation is attributed to the low awareness from investors about sukuk.

Although issuing new debt is considered to be one of the firm instruments for increasing the level of liquidity ratio, the main questions behind management decisions about extending the firm leverage that should be addressed as: What is the influence of Sukuk liquidity on the stock market liquidity? Islamic bonds (Sukuk) have been regarded as one of the financing instruments during the last decade. They have proven their stability as an external finance source (Aloui, Hammoudeh, & ben Hamida, 2015).

The significance of asset liquidity was addressed by numerous scholars. According to Amihud and Mendelson (1986) stated that the higher spread assets give profits the higher expected stock returns, which drives investors that hold a longer period to choose assets that have a higher spread. This provides more incentive for a firm to increase its liquidity. Liquidity is one of the firm functions used by management for growing the firm yield, and decreasing the opportunity cost of capital (Amihud & Mendelson, 2012). Thus, an investor who holds higher spread assets will hold the assets for a longer period for higher expected returns. This, in turn, motivates the firm to improve its liquidity. Amihud and Mendelson (2012) considered asset liquidity as a concave return, taking into account the lower influence of liquidity for a short-term investment, which is limited to a lower spread of assets. In addition, Amihud (2002) explained the excess of stock returns as a compensation for the lack of market illiquidity, or as compensation from the firm for the risk premium (Amihud, 2002). Amihud (2002) assumed that without relation between the stock market liquidity and the firm cash flow, the lack of market liquidity would rise in the expected return of the stocks, which would raise the level of firm credit risk and lower the firm value in turn (Amihud, 2002).

He and Xiong (2012) addressed the bond liquidity premium resulting from the bond liquidity depreciation, which causes a side effect on the bond credit risk. Deterioration of the bond liquidity leads to increasing the cost of liquidity from the impact price resulting from the asymmetry of information between the information held by the buyer, and that gained by the

seller. The lower rollover of bonds in the financial market is often the result of the stock market liquidity level. This is attributed to the bidirectional relationship between the bond market liquidity and stock market liquidity. As the spread in quoted price in bond market will affect the quoted price in stock market (Chordia et al., 2005a). Hence, He and Xiong (2012) claimed that short-term debt will be affected more and there will be higher sensitivity from the stock market liquidity in the market. The current bond liquidity goes down as much as the new bond issuances are gained and lost by the firm. Consequently, shareholders must make decisions that prevent mixing the current bond liquidity from the new bond issuance. To avoid the rollover losses from issuing new bonds, He and Xiong (2012) suggested that shareholders must bear the current bond losses until the due bond is paid in full.

Linking the bond liquidity and stock return is constrained by the lack of daily data for bond trading. In this context, a few studies linked between bond liquidity and stock liquidity; for instance, Chordia, Sarkar, and Subrahmanyam (2005b) observed the dynamics of liquidity under several monetary situations from 1991 to 1998. The results indicated that the market liquidity, for either bonds or stocks, increased or decreased according to the entire market liquidity. However, this relies on the market condition, e.g. recession or prosperity. In the recession market condition, most of the market assets lose part of their liquidity due to the higher credit risk of the market. Meanwhile, the prosperity market condition helps to increase market liquidity. Also, Anderson (2017) investigated the causal association between bond liquidity and stock return, in which the yield spread of the bond was used as a measurement of bond liquidity. Anderson (2017) used the Imputed Round Trip Cost (IRC) for measuring the bond liquidity, which estimates the operation cost of trading through the ask and bid price over the maximum price of the imputed round-trip trades. Anderson (2017) found a significant association between bond liquidity and stock return, where improving the bond liquidity leads to improving the profitability, which can be gained by lowering the related transaction cost of higher bond liquidity, as well as higher expected cash flow. Vivian W Fang, Thomas H Noe, and Sheri Tice (2009) showed that stock market liquidity regulates firm value by growing incentives and price informativeness. However, this study focuses on corporate Sukuk, which highlights other channels through the conditions of funding, in which the liquidity of Sukuk can influence the stock market liquidity. Despite the low activity of Sukuk in the secondary market, the prior literature found a significant link between Sukuk issuance and stock market reaction (Ahmad & Rahim, 2014; Said, Suhaimi, Rahim, & Haris, 2018).

Contrary to the previous studies that investigate the association between bond liquidity and stock market liquidity. This study provides an evidence for the impact of sukuk liquidity and stock market liquidity based on two measurements, Amihud sukuk liquidity, which constructed based on the monthly frequency of sukuk trading, besides latent sukuk liquidity based on the aggregate sukuk trading.

5. Methodology

Due to the low frequency of bond transaction information, there is a difficulty in establishing an accurate measurement. This gap has formed an obstacle for measuring bonds that have a low frequency of transactional information. Mahanti et al. (2008) proposed a new metric for liquidity, called Latent liquidity. This measurement closes the gap between the high and low transactional information of bonds. Previous studies (Dick-Nielsen, Feldhütter, & Lando, 2012; Gissler, 2017; Nashikkar, Subrahmanyam, & Mahanti, 2011) employed the latent liquidity, but these studies only focused on the conventional bonds. Providing an optimal measure for bonds liquidity is still in debate, especially those that trade irregularly or are not traded in the

secondary market, such as in the case of Sukuk. To overcome this issue, Mahanti et al. (2008) provided a new and simple measurement of liquidity for bonds that do not trade regularly. Hence, due to the daily trading data limitation of Sukuk, the liquidity measure of Mahanti et al. (2008) stated latent liquidity, will be used to measure Sukuk liquidity. Opposite to the measurement of Amihud and Mendelson (1986) that relies on the basis of everyday trading, the latent liquidity measurement focuses on the aggregate trading volume on monthly basis, which proposes that the turnover of Sukuk trading is negatively related to illiquidity cost; as shown in Equation (1):

$$ASL = \frac{1}{D_{iy}} \quad D_{iy_{t=1}} \frac{VOLSUK_{iyt}}{NSUKO_{iyt}} \quad \text{Equation (1)}$$

Where

Amihud Sukuk liquidity = Sukuk liquidity using Amihud (2002) equation

VOLSUK = trading volume in Sukuk

NSUKO = number of Sukuk outstanding

iyt = Sukuk i on month t in year y

The latent liquidity means the aggregate-weighted average the degree of separate turnover of the bond holding in the market Mahanti et al. (2008). Therefore, applying this measurement to the Sukuk liquidity in this study will be defined as the level to which the turnover of individual Sukuk is a fraction of the total Sukuk market. Furthermore, the latent liquidity measurement in this study is defined based on Mahanti et al. (2008); as shown in Equation (2):

$$LLS_t^i = \sum_j \pi_{j,t}^i T_{j,t} \quad \text{Equation (2)}$$

Where, $\pi_{j,t}^i$ is the latent liquidity of individual Sukuk i issued by issuer j at time t calculated as the aggregate weighted average of outstanding Sukuk to the total Sukuk market outstanding on monthly basis; and $T_{j,t}$ is the average Sukuk market turnover by issuer j at the end of month t , which represents the ringgit trading volume ratio of the issuer to the total Sukuk market outstanding at the end of month t .

The key indicator of stock market liquidity is widely recognized as one of the better liquidity factors (Fang, Tian, & Tice, 2014). The relatively effective range. It is designed on a high ratio of trading data and is also used for liquidity steps based on the low ratio of data. This is the average of the overall amount of the gap in a trade price to the middle point of the bid quota to the purchase level; as defined in Equation (3):

$$STL \text{ (relative effective spread)} = \frac{2 |P_t - Mid_t|}{Mid_t} \quad \text{Equation (3)}$$

Where:

P_t = trade price at time t

Mid_t = the midpoint of the prevailing bid and ask quotes at time t

The testing of the hypothesis, proposes Sukuk liquidity as a determinant of stock market liquidity, multivariate regression is used. The multivariate regression model is defined as Equation (4):

$$SML = C_1 + C_2 LLS + C_3 ASL + e \quad \text{Equation (4)}$$

Where

SML = stock market liquidity
LLS = latent liquidity of Sukuk
ASL = Amihud Sukuk liquidity
e = an error term

Due to the lack of Sukuk market in providing the secondary market trading data; the sample of this study is limited to the Malaysian corporate Sukuk where the required data to measure the latent liquidity of Malaysian Sukuk is available at the Bond Info Hub database operated by Bank Negara Malaysia. The aggregate trading activities of the corporate Sukuk are 108 observations on monthly basis over the period from 2008 to 2016. The selection of this period is due to the notable low stock market liquidity, besides the constraints of data availability.

6. Results and discussion

The multivariate regression model stands on three assumptions that will be tested before retrieving the result of the multivariate regression analysis. To measure the hypothesis of linearity, Table 1 shows the correlation test result for the model construct that comprises three variables: stock market liquidity (SML), latent liquidity Sukuk (LLS), and Amihud Sukuk liquidity (ASL). The correlation result confirmed a positive association between latent liquidity Sukuk and stock market liquidity at ($r=0.972$, $p=0.000$), and a positive association between Amihud Sukuk liquidity and stock market liquidity at ($r=0.513$, $p=0.000$). The result obtained from the correlation test meets the linearity assumption of regression that condition linearity within the model construct.

Table 1: Correlation Test for stock market liquidity and Sukuk Liquidity

		STL
LLS	Pearson Correlation	.972**
	Sig. (2-tailed)	0.00
ASL	Pearson Correlation	.513**
	Sig. (2-tailed)	0.00

** (2-tailed) correlation is significant at the level of 0.01

Key: STL = stock market liquidity, LLS = Latent Liquidity of Sukuk, ASL= Amihud Sukuk liquidity

To satisfy the heteroscedasticity assumption for the regression model, the heteroscedasticity test is conducted, the result of which is shown in Table 2. This indicates the probability of the Chi-square higher than 0.05, which confirms the data has no heteroscedasticity issue.

Table 2: Heteroscedasticity Test: Breusch-Pagan-Godfrey

zF-statistic	1.9801	Prob. F(4,103)	0.103
Obs*R ²	7.7118	Prob. Chi-Square(4)	0.103
Scaled explained SS	55.7510	Prob. Chi-Square(4)	0.000

To test the multicollinearity assumption, Kalnins (2018) indicates that multicollinearity issues occur when a high correlation of one or more exogenous variables within the model construct with the dependent variable or among each other. The multicollinearity issue within the model constructs confuses the results and leads to incorrect inferences, as the model will not be able to relate the predictors' variance with the regression outcomes (Adeboye, Fagoyinbo, & Olatayo, 2014). The multicollinearity issue was tested for in the stock market liquidity model by using the VIF. As shown in Table 3, the obtained VIF for both liquidity measurements reported less than 4.0 as recommended by Kalnins (2018).

Table 3: Multicollinearity test – Sukuk liquidity model

	Collinearity Statistics	
	Tolerance	VIF
LLS	0.748	1.337
ASL	0.748	1.337

Dependent Variable: STL: stock market liquidity

The hypothesis is tested in two stages. First, the analysis of variance (ANOVA) is tested to confirm whether or not there is any similarity between both measurements of Sukuk liquidity. The second stage tests Sukuk liquidity measurements, latent liquidity and Amihud liquidity, against stock market liquidity.

The first stage compares two measurements of liquidity, first Latent liquidity Sukuk (LLS), and second Amihud liquidity (ASL). The sample t-test is applied to know the significant variance between the two measurements, then proceeds with the second regression model test to check which liquidity measurement has an influence on the stock market liquidity. Table 4 represents the result obtained from the independent sample test, which reveals that there is a significant variability difference between the two measures of liquidity – latent liquidity of Sukuk and Amihud liquidity Sukuk – as the Levene's test of variance equality is significant at ($p=0.017$). Also, the result confirmed a significant difference between the latent liquidity of Sukuk and Amihud liquidity Sukuk as there is a mean difference equal to (-1.979), which is significant at ($t=-8.949$, $p=0.000$).

Table 4: Independent Samples Test - Sukuk liquidity measures

		Liquidity measurements	
		Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F	5.791	
	Sig.	0.017	
t-test for Equality of Means	t-test	-8.949	-8.949
	df	214	213.923
	Sig	0	0
	Mean Difference	-1.979	-1.979

In the second stage, Table 5 below shows the model result of stock market liquidity and Sukuk liquidity using two measurements of Sukuk liquidity – the latent liquidity of Sukuk and Amihud liquidity Sukuk – as explanatory estimators. The model was used to determine whether

or not the latent liquidity of Sukuk and Amihud liquidity Sukuk have an important effect on the stock market liquidity. the objective of the investigation is to determine the model fits the data well or not. the statistical results and the reports of the model results of stock market liquidity, latent liquidity of Sukuk, and Amihud liquidity Sukuk for the study used are summarized and described in Table 5 below.

Table 5: Regression test – latent and Amihud liquidity measures

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.0032	0.0009	-3.4388	0.0008
LLS	0.0091	0.0004	24.1536	0.0000
ASL	0.0037	0.0004	9.5474	0.0000
R-squared	0.9703	Mean dependent var		0.0164
Adjusted R-squared	0.9697	SD dependent var		0.0204
F-statistic	1713.5780			

The result of the $R^2 = 0.970$ displays that the overall goodness of fit of the models is high. Moreover, the test results indicate that the model passes the functional form misspecification, and the residual errors test at 1%. This suggests that the model is stated in a well manner and that the estimated regression model performs well. To know the model of the best-fitting equation for forecasting new scores on latent liquidity of Sukuk and Amihud liquidity Sukuk on C, a regression model was applied and the assessed theoretical equation as shown in equation (5):

$$SML = C_1 + C_2 LLS + C_3 ASL + e \quad \text{Equation (5)}$$

The regression equation is shown in equation (6):

$$SML = (-0.003) + 0.009 * LLS + 0.004 * ASL \quad \text{Equation (6)}$$

This model fits the data well ($F = 1713.578$, $p < 0.0000$ and $R\text{-squared} = 0.970$). The result obtained from the first stock market liquidity model confirmed the significant and positive impact of latent liquidity of sukuk on the stock market liquidity at ($\beta = 0.009$, $t = 24.154$, $p = 0.000$), and a significant and positive impact of amihud liquidity sukuk on the stock market liquidity at ($\beta = 0.004$, $t = 9.547$, $p = 0.000$).

the result obtained confirmed an association between sukuk liquidity and stock market liquidity, as there is no existing evidence in previous studies to indicate this association, specifically for sukuk instruments. in considering sukuk as an instrument of debt, few studies from the conventional bonds are reported. Gentile and Giordano (2013) found a contagion among the euro and us stock market; the contagion between the debt and equity liquidity is confirmed in causality association, where the higher liquidity in the debt market leaks positively to the equity market. the same occurs in the economic crisis in which the lower liquidity of either the bond or stock market causes the lower liquidity of the other instrument. also, Chowdhury, Uddin, and Anderson (2018) tested the liquidity effect in eight (8) developing stock markets in Asia; the finding indicates a bidirectional association between bond liquidity and stock market liquidity. the finding emphasized the role of monetary policy

in that government expenses, private borrowing and money supply affect the stock market liquidity for both the bond and stock market.

The finding revealed a significant association between bond liquidity and stock return, where improving the bond liquidity leads to improving the profitability; this can be gained by lowering the related transaction cost of higher bond liquidity or higher expected cash flow.

In the case of the Malaysian secondary market, most investors in the Malaysian stock market prefer to hold Sukuk till the maturity date (Hanafi et al., 2018b), which is interpreted as being due to the low association between Sukuk liquidity and stock market liquidity for the two Sukuk liquidity measurements. Also, the lower trading of Sukuk within the secondary market (Smaoui & Ghouma, 2020), which is attributed to the high domination of financial institutions over the secondary market (ULUSOY & Mehmet, 2018) and the insufficient information about Sukuk (Duqi & Al-Tamimi, 2019). According to ULUSOY and Mehmet (2018), only 6% of Sukuk is traded by securities Brokers and traders in the Malaysian stock market, while the Sukuk trading by financial institutions comprises 78%, with insurance firms at 5%, and 11% traded by investment funds and firms. Apergis, Artikis, and Kyriazis (2015) found evidence that firms with a small capital market have a higher trading frequency on the secondary market compared to large capital firms. For the finding of Jaccard (2013), illiquidity within the stock market, either in debt or equity instruments, would be a reason for the economic recession and the stock market.

The positive association between Sukuk liquidity and the stock market liquidity can be explained by the risk trend of both instruments. Investors shift their investment decisions based on risk and return (Janor, Yakob, Hashim, Zanariah, & Wel, 2017); debt is considered as being a less risky instrument compared to shares (Modigliani and Miller, 1958) in recession economic conditions, as investors shift their investment to lower risk instruments, while in stable economic condition, investors take their decision to invest on the base of risk aversion. Hence, assets that share the same risk weight, will share the same trend of liquidity (Ruslan Y Goyenko & Andrey D Ukhov, 2009). Hakim and Rashidian (2002) tested the cointegration among Dow Jones Islamic market index, Wilshire 5000 Index, and three-month T-bills; the finding confirms an equal Sharpe ratio for both the Wilshire 5000 Index and three-month T-bills. This result clarifies a parallel and positive risk to the debt instrument represented by three-month T-bills and the stock market index represented by the Wilshire 5000 Index. This result concludes that the probability of leaking investment from a higher risk instrument, such as equity to debt can be neglected for the case of stock market index.

7. Conclusion

This study is considered to be the first empirical evidence to test the linkage between Sukuk liquidity and stock market liquidity. numerous previous studies lack the measurement of debt liquidity impact; which is due to the low frequency of this type of asset. measuring the liquidity of an asset requires a high large frequency of transactions on daily basis to predict the association between sukuk liquidity and stock market liquidity. the latent liquidity measurement that was produced by Mahanti et al. (2008) enables the liquidity of bonds to be measured on monthly basis. this study applied two liquidity measures – the latent liquidity model and the amihud liquidity model – to test the linkage between sukuk liquidity and stock market liquidity. the liquidity of sukuk is tested for two purposes, first, to test the relationship between sukuk liquidity and stock market liquidity, and, second, to examine which sukuk grade (rating) has a higher impact on stock market liquidity. the result showed that, first, there is an

association between the two measurements of sukuk liquidity; the latent model and the amihud model. second, latent sukuk liquidity has a positive association with stock market liquidity in the Malaysian stock market, third, the latent sukuk liquidity showed higher impact on stock market liquidity compared to the amihud sukuk liquidity model. fourth, sukuk liquidity with a higher grade has a higher impact on stock market liquidity compared to low sukuk grade.

amihud (2002) explained the excess of stock return as compensation for the lack of market illiquidity, or as compensation from the firm for the risk premium (Amihud, 2002). Amihud (2002) assumed that without relation between the stock market liquidity and the firm cash flow, the lack of market liquidity leads to increasing the expected return of stocks, which, in turn, will increase the level of firm credit risk and will lower the firm value. Trading securities with less liquidity by investors increases the associated cost of trading these securities and neglects the direct costs of transaction trading, which are transaction tax and fees. The price impact will be higher in line with the inflexibility of controlling the transaction negotiation from the investor side. The result of this can be the weak position of sellers, as well as the level of buyer information and the immediate condition of transactions from the seller. The ask-bid spread will be higher in this case, thus representing a sacrificed cost from the seller, which is interpreted according to the level of information provided to both parties. Hence, the higher the liquidity cost, the higher the expected return will be. Hence, the higher liquidity cost is redesigned by the investor's decision to set the transaction trading according to the level of security liquidity, and to the level of asymmetric information. Portfolio managers generally accept the small amount of Sukuk on the open market as a possible explanation. However, the fluctuations in the Sukuk Price Premium have been further clarified by other factors, such as stock market return, spread lag and pitfall.

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