CHAPTER 6

CONCLUSION

6.1 Introduction

The establishment of Sukuk provides new activities for financing instruments; the most important thing is the transforming from debt obligation to asset-ownership. In line with this notable development of Sukuk, investigating the impact of three issues of Sukuk within the stock market was examined. This thesis focused on investigating the stock market response to three main activities of Sukuk, which are Sukuk issuance announcement, Sukuk yield spread, and Sukuk liquidity.

This chapter is constructed in three areas of discussion, section 6.2 provides a summary of the thesis's findings, while section 6.3 lays out the contribution of the study, and, finally, section 6.4 provides the limitations of the study.

6.2 Summary of Findings

This study tested the impact of Sukuk activities progress over the primary and secondary market on the stock market response. Three main activities were identified – Sukuk announcement, Sukuk yield spread, and Sukuk liquidity. Previous studies focused on each activity separately, except the activity of Sukuk liquidity which has not been previously investigated. This study developed three different methodologies to test each activity. The event study methodology is used to test the stock market reaction to Sukuk announcement, while the ARCH and GARCH models are used to investigate the Sukuk yield spreads and stock market volatility, and the Latent

liquidity model and Amihud liquidity model are used for testing the link between Sukuk liquidity and stock market liquidity. The results obtained from these methodologies are briefly explained in three sections, and a general discussion of the three Sukuk activities is also provided.

6.2.1 Sukuk Announcement

For the Sukuk announcement activity, two stock markets are tested to investigate the stock return response to Sukuk announcements in Southeast Asia and GCC. These stock markets were selected for various reasons. First, the high involvement of the Sukuk instrument within these stock markets, as well as its high portion globally. As reported by the Malaysian International Islamic Financial Centre (MIFC), at the end of 2018 (MIFC, 2019), the Malaysian Sukuk outstanding dominates around 50.5% from the outstanding global issuance of Sukuk, followed by Saudi Arabia at 19.9%, UAE 8.4%, Indonesia 7.3%, and Qatar 4.1%. These five nations were clustered into two groups as Southeast Asia (Malaysia and Indonesia) and the GCC (Saudi Arabia, UAE, and Qatar), as each group share some similarities such as stock market development, corporate governance maturity, and its correlation to the global market. Second, to date, previous studies investigated the linkage between Sukuk activities and stock market response; hence a comparative study was done for different regions, as these studies only focused on domestic or among sectors. Providing a comparative investigation between two regions allows fund managers to reallocate their assets portfolio accordingly.

The results of the event study for Southeast Asia showed a significant and negative reaction of the stock return to the Sukuk announcement within the event study (-5, +15), one significant and positive reaction is found for the event window (-5, +15).

According to the result obtained, the time period of the announcement starts to show a positive response from day eleven, which is attributed to the information digested by the stock market players as assumed by the asymmetry information theory. This result is in agreement with several previous studies, such as Alam et al. (2013), Elian and Young Taft (2014), and Rahim and Ahmad (2015), who found some specific event windows that confirm a significant and positive reaction. For the GCC case, there was a significant and negative reaction within three specific windows (-1, +14), (0, +3), and (-1, +5), while a significant and positive reaction was found within two specific windows (-5, +4) and (0, +7). It can be concluded that investors in the GCC market take a longer time to digest Sukuk announcements and take action, unlike the Southeast Asia market investors who need less time, which is due to information availability and level of maturity. Also, this is attributed to the late adoption of a corporate governance code by the GCC security markets compared to the Southeast Asia market, which makes the investor decision process longer. The corporate governance code works to ensure providing much information to the stock market by the issuers, a stock market with adequate transparency and accountability in place, can ultimately reward or punish firms for their governance practices.

Identifying the determinants of abnormal return of stock has been tested by employing the ordinary least squares regression model. The regression analysis showed the significant impact of tenor, and time-lapse for the Southeast Asia market, while four factors that amount, coupon rate, time-lapse, and market capitalization were found significant for the case of GCC, which are related to the differences in characteristics of the two regions. The Saudi Arabia market is considered to be the largest issuer of Sukuk within the GCC and relies more on equity-based Sukuk, unlike the Southeast Asia market, which relies more on debt-based Sukuk (Mahomed et al., 2018). Also, the

lack of a secondary Sukuk market in the GCC has led investors to adopt a buy-hold strategy to maturity, and there is no special committee for Shari'ah compliance in the Saudi market, which contrasts with Southeast Asia. The absence of Shari'ah committee delays the investors' decision toward Sukuk investment, taking into consideration that most of the Sukuk buyers' financial institutions in GCC, seek to get approval from their committee for Shari'ah first. Hence, rebalance the stock market reaction toward Sukuk takes a longer time compared to Southeast Asia. Based on the results of this study, it is recommended to investigate further determinants of cumulative abnormal return within the GCC market, such as liquidity, yield to maturity, and Sukuk structure.

The stock market reaction varied among the reported previous studies discussed within the literature review section of this study. These variations are attributed to the stock market structure, time horizon, sector, economic situation, and macroeconomic indicators. In the case of Southeast Asia and GCC, the negative reaction disappeared in twelve days; the market slowly absorbed the negative news. The slow absorption from the stock market can be linked to other financial events' interactions. These events found with a negative effect on the stock market, such as dividends, CEO turnover, change in interest rate, which interfered with the Sukuk announcement.

6.2.2 Sukuk Yield Spread

Unlike the previous studies that investigated the link between the yield spread and stock volatility, first, this study investigated whether new or seasoned Sukuk issuance has a higher spread, second; it differentiates between the link of new and seasoned yield spread of Sukuk to stock market volatility, which aims to figure out if there is a significant difference in terms of the impact of new or seasoned Sukuk yield spread on the stock market volatility. Testing this activity focuses on two emerging stock markets

– Malaysia and Indonesia – other Sukuk markets, such as the GCC are not covered due to the lack of data and differentiating characteristics of new and seasoned Sukuk issuances. The result found that, first, there is a significant difference in yield spread between new and seasoned Sukuk issuances; also, the hypothesis assumed is accepted as new Sukuk yield is associated with higher spread compared to the seasoned Sukuk yield spread. This is due to the default risk; the higher yield spreads the higher the interest paid on these Sukuk coupon. This result in agreement to assumption of Conard and Frankena (1969) cited by Arnone (2020) that anticipate a rise in yields spread of new bonds, to that, investors hesitate to hold new issues for fear of suffering capital losses, underwriters could be expected to increase their yield of the new issues, thus increasing the new-seasoned yield spread. In contrast, the findings of Loderer et al. (1991) indicated that the quality rating of the new bond issue works to mitigate the associated uncertainty related risk, and then lower the yield spread of new bond.

Second, to explain the movement of new and seasoned yield spreads of Sukuk with the stock market volatility, this movement is represented by the volatility of each asset tested in this study. The result confirmed a significant relationship between the movement of the two types of tested Sukuk (i.e., new and seasoned) and the stock market volatility. In addition, the sampled firms exhibited that new Sukuk yield is associated with higher spread in comparison to the seasoned Sukuk yield spread. According to Yap and Gannon (2007), the high value of the sum of GARCH estimates implies the presence of persistence of volatility where the expected future volatility takes longer to decay to the unconditional variance.

The co-movement between the Sukuk yield spread and the stock market volatility found by this study supported the stock-bond correlations evident by the previous studies. The co-movement interpret by the collective decision by the investors

toward stock market assets, either the debt securities or shares. Usually, investors look at the spread between Sukuk and the government 10-year note. The short end reflects the interest rate which is set by the central bank. The long end is set by market conditions. Therefore, the short end is the primary determinant of the Sukuk yield spread. Therefore, the yield curve reflects the economy's prospects in which the central bank is aiming to stimulate the economy by lowering the interest rate or raising the policy rate to tighten it. In this context, this decision will affect the stock market at the same time.

6.2.3 Sukuk Liquidity

This study is considered to be the first empirical evidence to test the linkage between Sukuk liquidity and stock market liquidity. Several 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 investment requires a sizeable high frequency of transactions on a 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 a monthly basis. This study applied two liquidity measurers – latent liquidity model and 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 the stock market liquidity.

The result revealed that first, there is a significant difference between the two measurements of Sukuk liquidity: the latent model and the Amihud model. Second, latent Sukuk liquidity has a significant and positive association with stock market

liquidity in the Malaysian stock market, third, 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.

The result obtained confirmed the seventh hypothesis that states Sukuk liquidity has a significant and positive influence on the stock market liquidity. This result is in agreement to the liquidity and asset prices theory of Amihud and Mendelson (1986), which considered asset liquidity as a driver of asset return. Hence, this led to the liquidity of either Sukuk or stock market. In this context, a relationship between the market liquidity assets emerged from the potential cash flow of the market as one unit. Furthermore, the lack of specific asset liquidity within the stock market will infect other different assets.

In term of the higher impact of Latent liquidity modelled by Mahanti et al. (2008) on the stock market liquidity compared to the liquidity measures suggested by Amihud (2002), it can be interpreted to the weighted average based for calculation, Latent liquidity relies on outstanding Sukuk to the total Sukuk market outstanding on a monthly basis, while Amihud liquidity measure relies on aggregate trading volume. According to Goyenko et al. (2009) bond liquidity is mostly affected without a lag to market events shock compared to stock market liquidity, then, outstanding Sukuk liquidity will reveal higher impact on the stock market liquidity, unlike Amihud liquidity measure that depends on the aggregate trading volume.

In respect of Sukuk grade hypothesis that states higher Sukuk grade has higher impact on stock market liquidity compared to low Sukuk grade, the higher grade of Sukuk represents the higher probability of repayment by the issuers, as well as the higher demand from the potential buyers in the secondary market. Hence, it is expected

that Sukuk liquidity has a higher association with the stock price. The result confirmed that a higher Sukuk grade has a higher liquidity impact, which is in agreement to the result of He and Xiong (2012) that found 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. Investors maximize the expected present value of the cash flows their assets generate, including the costs of the transaction. In equilibrium, the return on an asset is an increasing function of its transaction cost because investors require compensation for bearing these costs. The relation between illiquidity and return is increasing and concave, i.e., it increases less for less liquid assets, which are held by investors with longer investment horizons who can depreciate their transaction costs over a longer period. The illiquidity effect is more prominent for liquid assets, which trade and hence bear the transaction costs more frequently.

6.3 Contributions

This study contributes significantly by providing beneficial information about Sukuk activities to investors, regulators, and portfolio managers. This study focuses on three activities of Sukuk within the primary and secondary markets. The significant contributions of this study are categorized into five sub-sections as follow:

6.3.1 Contribution to Theory

The theoretical contribution of this study is to the Trade-off theory. The debate of this theory estimated a positive reaction from the stock market. The positive reaction of stock market return comes from the positive reaction of the investors, who hold sufficient information about the purpose of the capital financing.

Specifically, under the trade-off theory, firms will only take decisions (i.e., issuing new stocks or debt) if they expect benefits from the issuance. An implication of the theory is that the market reaction to both equity and debt securities will be positive, which is due to that investor will assume that firms' manager takes financing decision that lower the cost of finance and has higher leverage.

The Trade-off theory work was based on long term assumptions, but the theory did not study it in the short-term period. Methodically, this result obtained by employing the event study methodology, which tested a short term within 15 days prior and post the announcement of Sukuk, testing was within the short term to avoid other firm announcements interrelation. Theoretically, the assumption of trade-off theory in long term cannot be applied for the short term. This study has contributed to investigating the short-term effect. The results from this study provide additional findings for the trade-off theory.

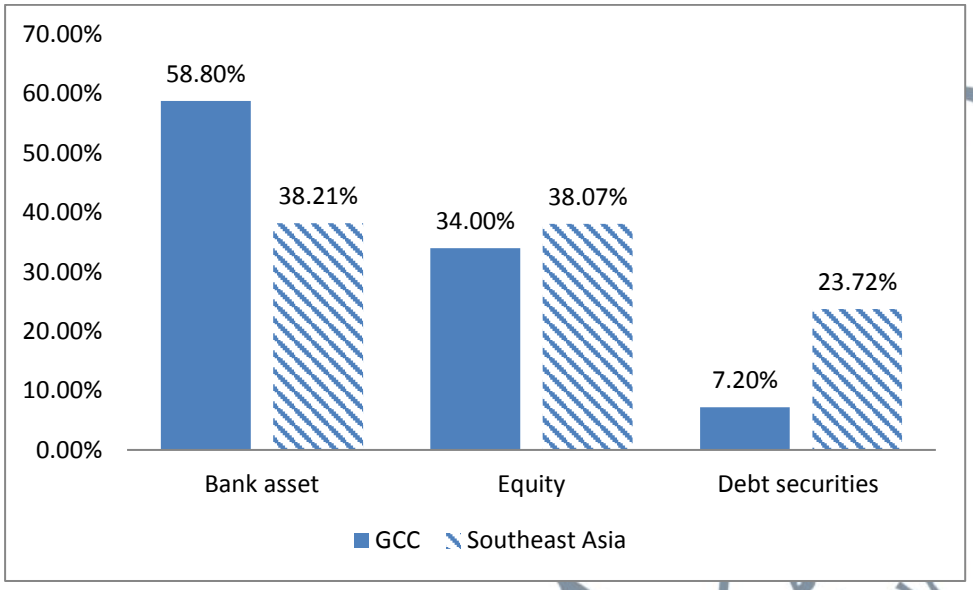
It is found that, stock market showed a significant and negative reaction toward Sukuk announcement. Nevertheless, this is in contrast as found in the trade off theory in the long term, in which it is supposed to be positive reactions. There are two reasons why the stock market reacts negatively in the short term. Firstly, the shifts of liquidity from stock market toward bond market, which lower the return of the stock market. Second, the time-lapse between announcement and actual date, investors seek for

further information about the issuance and issuer, this led to negative return of the stock market.

6.3.2 Contextual Contribution

In terms of Sukuk announcement and its impact on the stock return reaction, unlike previous studies, this study extends the scope of previous literature on Sukuk announcement and stock market reaction to include two regions that are Southeast Asia and GCC. This contextual contribution from Southeast Asia and GCC provides crucial information concerning the risk impact of different business environments as one of the risk mitigation strategies. Figure 6.1 below clarifies that debt securities comprise 7.2% of the GCC capital market, while the percentage of debt securities comprises 23.72% from the Southeast Asia capital market. This difference in debt securities proportions within both regions provides evidence toward the heavily negative reaction by the GCC stock market. The capital structure of GCC is heavily funded by bank assets and equity; only a small portion is funded by debt. In the issuance of new Sukuk, liquidity from equity shifted toward the debt securities. In contrast, the capital structure of Southeast Asia is balanced between bank assets: equity: and debt securities (38:38:24). The shift of liquidity from equity to debt in the GCC is bigger compared to the shift of liquidity in Southeast Asia. Therefore, the negative stock market reaction due to the Sukuk announcement is bigger in the GCC than in Southeast Asia.

Hence, international investors must take into consideration the heavily negative stock market reaction within the GCC stock market, specifically when they face a temporary shock in the stock market related to the Sukuk announcement.



Source: (Regan, 2017)

Figure 6.1: Capital Market Structure Comparison, GCC and Southeast Asia – 2016

6.3.3 Practical Contribution

The present study provides useful information about Sukuk announcement, Sukuk yield spread, and Sukuk liquidity within the primary and secondary Sukuk market. This study takes into consideration the impacts of these three research objectives of the thesis. The three research objectives of this thesis represented by the effect of Sukuk announcement, the co-movement of Sukuk yield spread, and the association of Sukuk liquidity. This study contributes by providing crucial information for practitioners in both Sukuk and stock markets to understand the mechanism of sukuk and how they are related to stock market.

For example, in the event of Sukuk announcement, unlike the previous studies, this study tested new determinant of the stock market reaction. The new determinant represented by time-lapse, which refers to the time between announcement date of Sukuk and the actual date of issuance. The result found a significant and negative association of Sukuk announcement to the stock market return, align to the previous

studies conducted by (Godlewski, Turk-Ariss, & Weill, 2014; Mohamed, Yahya, & Ishak, 2017; Rahim & Ahmad, 2014; Sherif & Erkol, 2017). Hence, practitioners can benefit through scheduling the time-lapse to be set less than 11 days. This period gives more time to the investors to digest the issuance information and take action.

Nevertheless, starting from the twelfth day, the stock market reaction shifts from negative to show the significance and positive reaction. Hence, it is suggested for Sukuk issuers to give a grace period of 12 days' notice to the investors in the Sukuk market to absorb the temporary negative shock of the Sukuk announcement. Thus, mitigating the investors' negative reaction to the Sukuk issuance announcement requires a specific time, and the identification of such time relies on the many factors mentioned previously by Khartabiel, Abu-Alkheil, Ahmad, & Khan, (2019), Mohamed, Yahya, & Ishak (2017), and Rahim & Ahmad (2015) such as the size of issuance, maturity, coupon rate, and market capital of the issuer. As investor gets sufficient time between the announcement and the actual date, the investor gains more information related to the issuance, which gives the investors ample time and rational decision making that create the atmosphere for the stock market to react positively.

In terms of Sukuk yield spreads, few studies have given attention to the association between Sukuk yield spread and stock market volatility. This study goes deeper by differentiating between the impact of new and seasoned Sukuk yield spreads and the stock volatility. Studying this activity strengthens the related literature on Islamic finance; it adds to the debate of the movement of both Sukuk and stock market volatility.

The contribution of this study provides a comparison of the risk level of both new and seasoned Sukuk to the portfolio managers. New Sukuk yield spread has a lower risk compared to seasoned Sukuk yield spread. Hence, it is better for fund managers to

strategies the composition of the fund portfolio based on the risk appetite. If the fund has risk aversion, the fund manager can buy a new Sukuk to replace seasoned Sukuk. On the other hand, if the fund is an aggressive fund, the fund manager can hold the seasoned Sukuk.

In addition, according to the higher negative correlation between the new Sukuk yield spread and the stock market volatility, it is better for fixed income portfolio, the fund manager lower portfolio volatility by buying new Sukuk. This attributes to the volatility mitigation by involving new Sukuk to the fixed income portfolio.

6.3.4 Methodology Contribution

This study contributes to the methodology used to examine the co-movement between Sukuk yield spread and stock market volatility. Unlike the previous studies that employed ordinary least square such as Dreassi et al. (2016), Balli, Billah, Balli, and Gregory-Allen (2020), and Saad, Haniff, and Ali (2018), this study applied ARCH and GARCH models. The use of ARCH and GARCH can overcome the heteroscedasticity problems that resulted from the unequal variance of the error term in the ordinary least square method (Engle, 1982). The ARCH and GARCH are used to improve the computed prediction of the error term variance, and also to correct the least squares deficiencies (Bollerslev, 1986).

In terms of Sukuk liquidity, this study is considered to be the first empirical evidence that employed the latent liquidity model for Sukuk and its relationship to the stock market liquidity. This evidence highlights the association mechanism of both Sukuk and stock market liquidity. This association helps in managing firm liquidity for both the debt and equity instruments. The association of Sukuk liquidity and stock

market liquidity provides a better understanding of the different levels of liquidity that change in accordance with the level of debt rating.

In term of testing the impact of Sukuk liquidity on stock market liquidity, previous studies lack the optimal measurement of Sukuk liquidity due to the low frequency of Sukuk transactions within the secondary market. This study employed the latent liquidity measurement as suggested by Mahanti et al. (2008), which focuses on aggregate trading volume on a monthly basis. The latent liquidity is proven to be a liquidity measurement, which is found positively related to the stock market liquidity.

6.3.5 Policy Makers Contribution

This study provides crucial information to the policy makers in two areas. Firstly, this study found a negative return reaction from the stock market toward the Sukuk announcement. The policy makers, specifically those Sukuk issuers and the Security Commission, it suggested to avoid making several Sukuk announcements within the same period and schedule the Sukuk announcements to be in 12 days grace period. Several announcements of Sukuk in a short time-lapse will lead to a negative return to the stock market. However, it recommended announcing 12 days before the issuance date. This is to mitigate the potential negative return from the stock market. Figure 6.2 illustrates a sample of 11 announcements over May 2019; it can be noted that there is a clustering status with an average of 2.81 time-lapse of the announcements. Furthermore, Figure 6.3 illustrates the Malaysian stock market index in May 2019. The announcements of Sukuk were spotted over the month to confirm how clustering announcements caused a negative reaction from the index. Taking into consideration,

the dropped occurred on 14th May 2019, but rebounded thereafter, which may have to mitigated by controlling the size of Sukuk issuances announcements at that period.

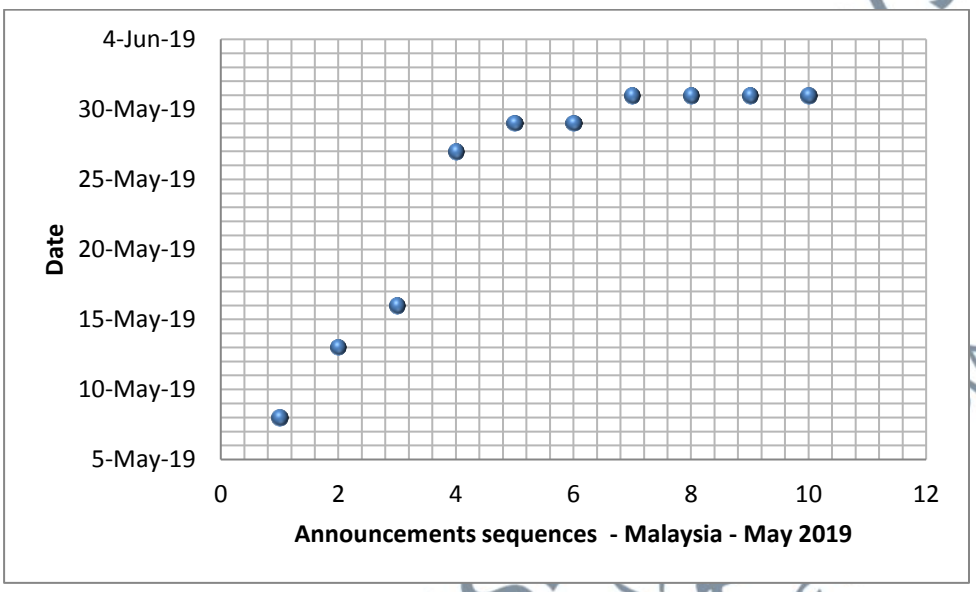


Figure 6.2: Sample of Sukuk Announcements over May 2019 - Malaysia

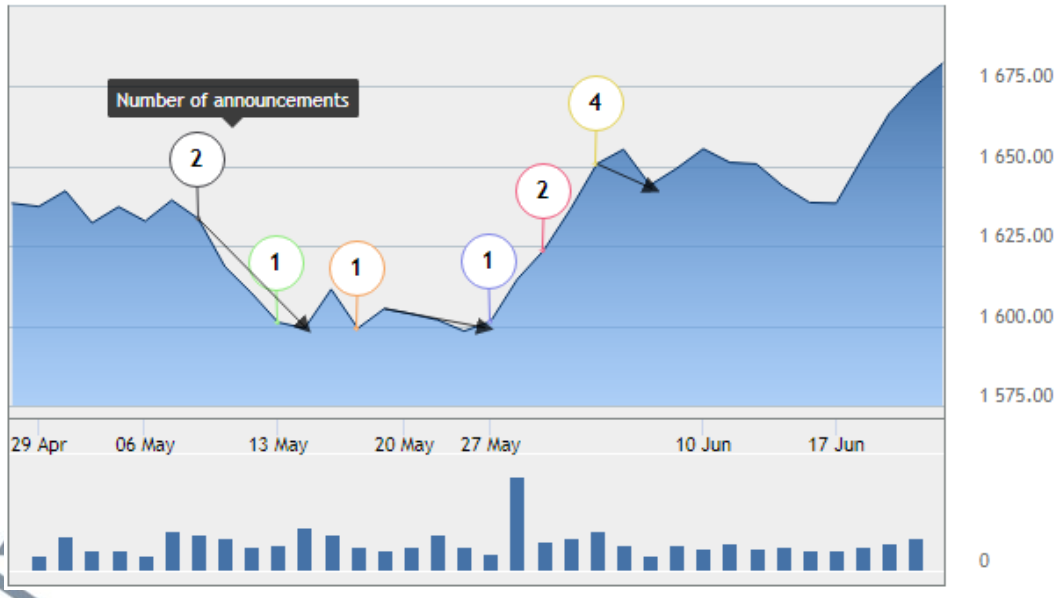


Figure 6.3: KLCI Index Trend over May 2019

Secondly, this study provides new evidence about the association between Sukuk liquidity and stock market liquidity, which will help policy makers to improve stock

market liquidity. Policy makers can draft monetary policies that take into consideration the response of Sukuk market liquidity to the monetary policy is without lag, while stock market liquidity responds with a lag. This is supported and proven by previous studies such as Goyenko and Ukhov (2009), Anh (2019), Tranthihai (2016), and Debata, Dash, and Mahakud (2018). Hence, boosting the market liquidity is better through Sukuk liquidity instead of stocks, as the liquidity of Sukuk showed a faster response to the monetary policy. In addition, to maintain a higher level of liquidity within the stock market, a higher Sukuk grade showed a higher liquidity relationship to the stock market liquidity; thus, regulators can benefit by avoiding the issuance of low-grade Sukuk.

6.4 Limitations of The Study

Although this thesis provides empirical evidence related to three Sukuk activities – Sukuk issuance announcement, Sukuk yield spread, and Sukuk liquidity – the empirical analysis of each activity was subject to several limitations. First, the empirical analysis was done of the Sukuk issuance announcements and stock market reaction; as the timing gap was not investigated previously, the scope of this activity was limited to the corporate Sukuk announcements. Government Sukuk announcements were not covered, as these have a fixed timing between the announcement date and the actual date of issuance, which is regulated by Bank Negara. Hence, including government Sukuk announcements would distort the result obtained. Second, for Sukuk yield spread activity, this study focuses on two nations – Malaysia and Indonesia – which is due to the lack of data related to the Sukuk yield spread from other markets such as the GCC. Third, for Sukuk liquidity activity, the scope of this study was limited to the secondary market in Malaysia, which provides suitable data for analysis, unlike the GCC and Indonesian secondary markets, which lack symmetric trading data for Sukuk.

This study assumes no other event conflicts during the Sukuk issuance announcements, which may affect the potential time-lapse, as other financial events, such as dividend pay-outs, CEO turnover, changes to the accounting policy, and so on are excluded, as well as other economic events, such as changes in tax rate, interest rate, and other monetary policies that may affect the stock market trend.

This study followed the Gregorian calendar to test the stock market reaction toward Sukuk announcement in five countries' stock markets that Malaysia, Indonesia, Saudi Arabia, UAE, and Qatar. Based on the Hijri calendar uses in those Muslim countries, it recommended for the future studies to take the Hijri calendar into consideration. In Muslim countries such Saudi Arabia, the Hijri calendar uses widely by most of the official transactions. In this regard, it expected to find religious factors that may affect the stock market reaction upon the Sukuk announcements.

This study does not take into account the Sukuk structure effect on stock market response. In this regard, it recommended to the future study to take into consideration Sukuk structure impact, which may differ over the several types of Sukuk structure.