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Investigating FTSE KLCI Using CAAR Estimations Following Sukuk Announcement in Malaysia: Based on Sukuk Ratings

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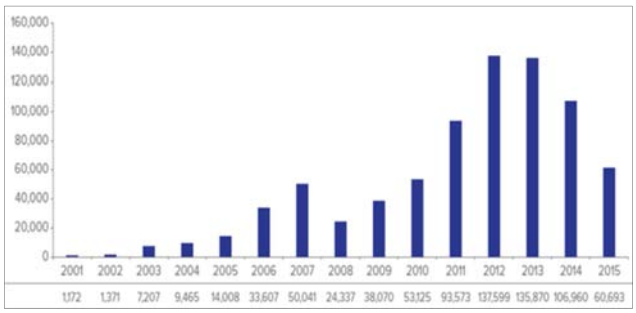
Abstract: The intention of the article is to explore whether different rating announcements on sukuk issuance provide any supplementary information to market for the years 2004-2011 in Malaysia. Data collected from the Securities Commission Malaysia (SC) and Bloomberg database. This research classifies the sukuk ratings from highest to poor quality. The investigation exercises event study methodology using cumulative average abnormal return (CAAR) on symmetric and asymmetric performances based on the reaction of the FTSE Kuala Lumpur Composite Index (FTSEKLCI) to the news of sukuk issuance. The results designate positive and significant asymmetric reactions on sukuk issuance. The market responds positively and significantly to the announcements of sukuk for the rating of high-quality, excellent and good ratings. However, FTSE KLCI will react negatively for the medium, questionable and weak ratings. The conclusions would be useful to issuers, investors, and decision-makers in assessing the credit risk of sukuk issuance. This study assists the sukuk issuers and investors in making profitable decisions on their investment.

Keywords: Sukuk Ratings, Event Study, Asymmetric, FTSE KLCI, CAAR

1. Introduction

Malaysia has substantially established its status as a global leader in Islamic finance and the world's largest issuer of sukuk [1]. Sukuk represents an essential role in funding the economy, accounting for more than half of the country's total debt, both concerning balances outstanding and issuance [2]. The demand of sukuk increased in the last few years and gained universal acceptance as an alternative to conventional financial products. sukuk has begun as one of the most significant mechanisms to raise finance in the market through Shari'ah guidelines. Sukuk also attracts to conventional investors looking for sukuk that provides the opportunity for developing the original asset and hence the value of sukuk themselves, while the original debt in bonds cannot be increased [3]. It is the most active Islamic debt market instrument in Malaysia because it covers almost 90 percent of Islamic capital market [4]. The fundamental problem with this research is when [5] found that the financial crisis has a significant negative effect on the development of the sukuk market since the amount of sukuk issued in those years has declined considerably. Figure 1 shows the total global sukuk issuance till December 2016, which is USD 767,099 million.



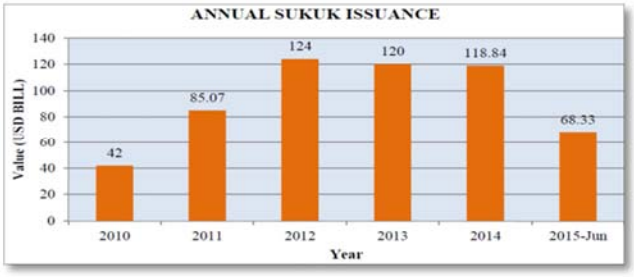
Source: IIFM Sukuk Database

Figure 1. *Total Global Sukuk Issuances (Jan2001-Dec2015).*

According to Sukuk Report 2011, although the sukuk

market has seen the challenging business environment, however, the trend is once again turning positive and be confident that the lessons learned from the crisis will make sukuk even better instrument. According to [6], rating agencies face a trade-off between timeliness and volatility while evaluating issuer's creditworthiness. Information material required to assess an issuer's creditworthiness arrives at a high frequency. Thus, credit ratings must be continually updated if they are to incorporate the latest information. The updating increases the volatility of credit ratings. Rating agencies try to adjust these contradictory aims by making multiple statements, some of which are assigned to reflect the latest news and others of which are intended to produce a stable signal of credit quality.

Sukuk issuance up to June 2015 has observed a diminished in the sukuk issuance due to the pullback determined by the Central Bank of Malaysia (BNM) and rearranged to the other liquidity management instrument. The rationale behind the BNM declaration is due to the impact of fuel prices, political commotion and drop in the value of MYR. Furthermore, sukuk issuances in 2016 also remain uncertain due to the effect of fuel prices and the industry performance, will depend on the economic recovery and government spending.



Sources: Global Sukuk Report 1Q 2015, Business News

Figure 2. *Annual Sukuk Issuance.*

The remains of the paper constructs as follows. Section 2 discusses the related literature review on the stock market reactions. Section 3 deliberates the theoretical framework. Section 4 highlights the research methodology. Section 5 debates the findings, and the final section concludes the paper.

2. Literature Review

2.1. Definition of Sukuk

According to the Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI), sukuk is defined as "certificates of equal value that represent an undivided interest in the ownership of an underlying asset (both tangible and intangible), usufruct, services or investments in particular projects or special investment activities" [7]. The Islamic Development Bank (IDB) defined the sukuk as, "an asset-backed bond which was designed or structured by the Shari'ah and which might be traded in the market" [8]. Sukuk is defined by [9] as "certificates of equal value which evidence undivided ownership or investment in the assets using Shari'ah principles and concepts approved by the Shari'ah Advisory Council (SAC)".

2.2. Stock Market Reactions

The market reactions are significantly positive during event windows [-3, 0] 4-day and [-3, 3] 7-day for the period 2000-2006 in Malaysia [10]. The positive reaction does not depend on investors' decision for Islamic-compliant activities, but it is due to similar factors obtained in studies on conventional bonds. Besides, [11] find significant negative abnormal returns approaching the announcement days, and the acknowledgments are asymmetrical to different types of bonds issuance statements in Malaysia over the period 2001-2007. Thus, [12] report a significant negative abnormal return happens a day before the announcement date of 45 listed companies on Bursa Malaysia incorporated in issuing of Islamic debts during 2005 to 2008. Meanwhile, there is a wealth effect of the announcement of sukuk issues for the period 2001 to 2006 in Malaysia [13]. In short, empirical evidence points that stock market responses to sukuk issuance are mixed and inconclusive.

Just before the firms' positive surprise earnings announcements, [14] indicates a significant positive market reaction. When a company stated positive surprise earnings, investors looked to notice a positive signal about the firm's future, that caused an increased in the company's stock price. Therefore, [15] find that there is a negative return on FTSEKLCI for the shorter horizons [0,0] one-day and [-1,+1] three-day events; and positive reactions are recorded only during the five-day event in 2009. In 2010, sukuk issues generated positive responses for all calculations for all event windows.

A study uses the EU sovereign bond yield, and credit default swap (CDS) spreads daily data to bring out an event study, interpretation of the reaction of the government yield spreads before and after announcements from rating agencies [16]. Their outcomes display significant responses of government bond yield spreads to changes in grade notations and outlook, especially in the case of negative announcements. During the investigation period in [17], the CDS market seems to predict generally and respond to negative rating announcements since positive rating announcements are found in general less significant. Most outstanding CDS market response is related to negative view watch list announcement. [18] reports that rating downgrades have little negative effect on stock returns and its volatility. He concluded that rating agencies provide valuable information to foreign exchange markets. [19] suggested that rating agencies respond slowly to changes in underlying credit quality. They found that downgrade announcement abnormal return reactions are predominantly related to the severity of the downgrade signal. They found significant negative pre-announcement abnormal return results, potentially followed by positive post-announcement corrections. [6] Found that all types, including changes in outlook, have a considerable impact on CDS spreads. Despite

rating announcements preceded by similar announcements have a bearing company. The price impact is greatest for firms with split ratings, small cap companies, and businesses rated near the threshold of investment grade. However, the empirical study conducted on sukuk ratings is limited, and the present study attempts to address the gap hence contribute to the literature.

2.3. Sukuk Ratings

Sukuk issuances are required in Malaysia to be accompanied by a credit rating at all times. Malaysia has two credit rating agencies (CRAs) that contribute independent opinions on the credit risks and potential default risks of a particular issuer. The Rating Agency Malaysia Berhad (now known as RAM Rating Services Berhad) are the first rating agency, was established in November 1990. The second is Malaysian Rating Corporation Berhad (or MARC), was incorporated in October 1995. A credit rating is a mechanism through which an independent third party, for example, credit rating agencies (CRAs) make an assessment of the probability of a corporate issuer to default on its debt repayments. Malaysia is one of the first countries in the world to expect the recognition of CRAs for the purpose of sukuk rating issue (Mohamad and Mohd Saad, 2012). Ratings will gather from MARC, BAPM and RAM will be categorized into six groups ranging from high quality (AAA, AAA-, AA+) to poor (B, B-, CCC+) as shown in TABLE 1 below.

Table 1. *Range of Investment Grades.*

NO.	INVESTMENT GRADES	RATINGS
1	Highest quality	AAA, AAA-, AA+
2	Excellent	AA, AA-, A+
3	Good	A, A-, BBB+
4	Medium	BBB, BBB-, BB+
5	Questionable	BB, BB-, B+
6	Poor	B, B-, CCC+, D

Sources: Walter et al., (1999).

3. Theoretical Framework

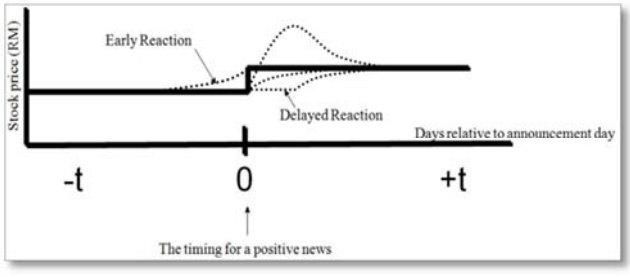
3.1. Pecking Order Theory

Pecking Order theory proposed by [20] set a higher priority for internal financing and preferred debt over equity in case of external funding. According to their theory, managers tend to establish their capital structure based on the cost of adverse selection arising from information asymmetry between better-informed managers and less-informed investors, which is much lower for the bond than equity. They developed a model in which external financing hurt common stock prices. When raising external funds, managers tend to issue securities in ascending order of risk (or in a pecking order) to preserve the wealth of shareholders. The effect of new financing may be positive, neutral or negative, depending on how the implied changes in cash flow interacts with the changes in leverage implied by the type of security issued.

The Pecking Order theory has also been supported by [21]. Their analysis showed that straight debt financing had a small non-negative effect on the firm value and also pure equity investment had a relatively large negative valuation effect. Several theoretical models related to the motivation for the issuing of convertible securities, pricing, and wealth which affect issuers have also been recorded in their theory. Based on the Pecking Order theory, debts were better than equity because of their low costs [13]. It signaled good news to investors when a firm used debt as a financing tool. Thus, bond offering size was positively related to the cumulative average abnormal return (CAAR). Otherwise, maturity would have a negative relationship with CAAR. The longer the term, the higher the coupon was to compensate the bondholders for the additional risk of tying up money for a longer period. Pecking Order theory postulated a negative relationship between profitability and debt ratio. Hence, the debt ratio would have a negative correlation with the CAAR.

3.2. Event Studies Theory

Event studies theory explains how the cumulative average abnormal returns (CAAR) are measured and how a market responds to either positive or negative news. According to [22], event studies are a valuable tool in finance for the valuation of firms and for estimating the changes in firm value resulting from, for example, changes in its capital structure. The value of a company is challenging to measure. However, if there is an efficient market for the firm's stock, the impact of a decision can estimate by the fluctuation in the stock price around the time when the determination enhances public awareness. Despite the fact that such events can study in many different ways, the empirical literature has taken a particular approach based on statistical tests of the significance of abnormal stock returns around the event dates. Figure 3 below shows that the reaction of a stock price to news, which will also change the security price, cannot be predicted.



Source: Frederic 2001

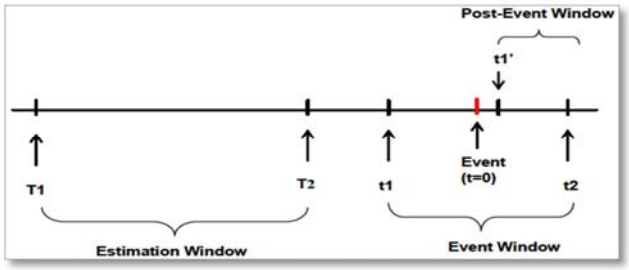
Figure 3. *Reaction of Stock Prices to News.*

In an event study, there are four types of reactions to test for any evidence (i) under reaction, (ii) overreaction, (iii) early reaction, or (iv) delayed reaction around the event. Thus, a measure of the event's economic impact can be constructed using the security prices that are recognized over

a relatively short period [23].

The efficient markets hypothesis (EMH) can be identified depending on the level of available information: (i) weak form EMH, (ii) semi-strong form EMH and (iii) strong form EMH. The weak form EMH affirms that current asset prices already reflect past prices and volume information. Then, the security prices are the most publicly and simply accessible information. The information received in the previous sequence of prices of security is fully reflected in the current market price of that security. In comparison, the semi-strong form EMH mentions that all publicly available information is already included in the asset prices. Finally, the strong form EMH specifies that private information or insider information to be quickly incorporated into the market prices.

According to [24], the main differences between the models are the chosen benchmark return model and the estimation interval. An abnormal return (AR) is defined as the return (R) minus a normal return (NR). The determination of the normal return requires the estimation of some parameters. This estimation is typically performed over an estimated period, $[T_1; T_2]$, which precedes the event period, $[t_1; t_2]$. The event is typically defined to occur at t = 0. Notice that the time index t counts "event time" which is the number of periods (days, months) from the event and does not represent the usual calendar time. Figure 4 shows the timeline of an event study.



Source: Frank 2007

Figure 4. *Timeline of an Event Study.*

In analysing abnormal returns, it is conventional to label the event date as time t = 0. Hence, from now on, $AR_{i;0}$ denotes the abnormal return to the event date and $AR_{i;t}$ denotes the abnormal return t periods after the event [24]. If there is more than one event relating to one firm or stock price series, they are treated as if they affect separate firms. They consider an event period, running from t_1 to t_2. In order to study stock price changes around events, each firm's return data can be analysed separately. However, this is not very informative because a lot of stock price movements are caused by information that is not related to the event being studied. The effect of this unrelated information could be reduced by averaging the information over a number of firms, thus improving the accuracy of the study. The average abnormal returns from zero indicate abnormal performance because they are all centered around one particular event. The average of abnormal returns should reflect the effect of that particular event. The usual way to study performance over longer intervals is by means of cumulative abnormal returns, where the abnormal returns are aggregated from the start of the event period, t_1, up to time t_2. In event studies, the cumulative abnormal return (CAR) is aggregated over the cross-section of events to obtain the cumulative average abnormal returns (CAAR). The CAAR estimates can be obtained by aggregating the AAR_t's over time.

4. Methodology

4.1. Data Collection

The data of sukuk issuance in Malaysia are collected from the Bloomberg database, the Securities Commission of Malaysia, Bursa Malaysia, and Zawya Sukuk. The sample period (2004−2011) and the sukuk data that are garnered in this research are from 50 selected by listed companies in FTSEKLCI that issue sukuk in Malaysia. The data of stock markets are accumulated from the historical prices available in the Data Stream database, excluding Saturdays and Sundays, giving a total of about 265 days a year. This research moves forward by looking into the stock market reactions in the FTSE KLCI.

4.2. FTSE Kuala Lumpur Composite Index (FTSE KLCI)

The Kuala Lumpur Composite Index (KLCI) is a capitalization-weighted stock market index. It was launched in 1986 and is now known as the FTSE Bursa Malaysia KLCI. The FTSE KLCI comprises 100 companies. The 100 companies cover around 81 percent of the full market capitalization of the FTSE Bursa Malaysia EMAS Index, as of 30 April 2009. The enhancement will adopt the internationally recognized index calculation formula to increase transparency as well as making the index more tradable. This index includes basic material, healthcare, technology, consumer service, financial, oil and gas, telecommunication and utility industries. This investigation has determined this index because it is the main index in Malaysia that comprises Islamic and conventional companies, within the period of study (2004-2011).

4.3. Method

The formula for measuring the return is as follows:

$$R_{mt} = \left[(P_{(t)} - P_{(t-1)}) / P_{(t-1)}\right] \quad (1)$$

where $P_{(t)}$ is the stock market daily price at closing. $P_{(t-1)}$ is the stock market daily price at closing on the previous day. The daily return of any stock can be calculated using the following formula:

$$R_{it} = \ln (P_{it}/P_{i(t-1)}) \quad (2)$$

where R_{it} is the return on security i for day t. P_{it} is the price of share i for day t and $P_{i(t-1)}$ is the price of share i on the day before day t. The following formula can be used to calculate the market model's expected stock return:

$$E(R_{it}) = \alpha_i + \beta_i (R_{mt}) + \epsilon_{it} \quad (3)$$

where α_i is a market model parameter, β_i is a market model parameter, R_{mt} is the return of a market index for day t, $E(R_{it})$ is the market model's expected stock return and ϵ_{it} is the error term. To calculate the difference between the actual returns and the expected returns predicted by the market model, the abnormal return (AR_{it}) can be obtained from the following formula:

$$AR_{it} = R_{it} - [(\alpha_i + \beta_i R_{mt}) + \epsilon_{it}] \quad (4)$$

where R_{it} is the return on a share i in period t, AR_{it} is an abnormal return for the firm i at period t.(α and β) are estimated using a market model which relates the given sukuk to the return of the market portfolio. The returns of the FTSE Kuala Lumpur Composite Index are used as a proxy of market returns. They are calculated by running a regression of sukuk returns against the market returns. After estimating the abnormal returns for each firm, the abnormal return for all of the firms on each day of the event window are then aggregated and averaged as (5); where N is equal to the number of firms in the sample:

$$AAR_t = \frac{1}{N}\sum_{t=1}^{N} AR_{it} \quad (5)$$

$$\text{t-test} = CAAR / \delta(CAAR) \quad (6)$$

where: AARt = Average abnormal return of period

δ = Standard deviation of average abnormal return over the estimation window

To observe the cumulative effects, the cumulative abnormal returns (CAARt,+t2) are computed as (7) below:

$$CAAR_{(-t1,+t2)} = \sum_{=t1}^{=t2} AAR \quad (7)$$

5. Findings and Discussion

The results of this research are separated to Table 2 (High-Quality Rating), Table 3 (Excellent Rating) and Table 4 (Good Rating). Table 5 will show the summary of sukuk issuance.

The high-quality rating did not respond to early reactions to the 2008 global financial crisis. It showed high confidence among investors to invest in sukuk with the high-quality ratings. These three ratings show positive results as the maximum results before and during the crisis. Positive responses to the crisis happened because of a lack of information among sukuk investors and an inefficient market on the FTSE KLCI. The results show a delay reaction to the negative news during the 2008 global financial crisis. All three ratings show the same event [-40,+20] as the minimum CAAR after the crisis. The market reacts negatively before and during the crisis following the negative news. Before the crisis, the high-quality rating shows that the best result is at the asymmetric event [-3,+1] and the worst result of the also asymmetric event [-20,+40]. There are more negative significant results compared to before the crisis. The high-quality rating shows the maximum number of significant negative results compared to excellent and good ratings. These results show that investors who invest in sukuk according to the highest quality rating avoided risks during the crisis.

Table 2. *CAAR Estimations by Ratings, Based on FTSE KLCI (High-Quality Rating).*

Event Window	Types of Events	Cumulative Average Abnormal Return (CAAR)		
		High-Quality Rating AAA, AAA-, AA+		
		2004-2006	2007-2008	2009-2011
[-1,+1]	Symmetric event windows	0.0205***	-0.0287**	-0.0086**
		11.159	-2.854	-2.441
[-2,+2]		0.0096	-0.0298***	-0.0209**
		.983	-3.678	-2.121
[-3,+3]		0.0207*	-0.0448***	-0.0253**
		2.628	-5.165	-2.449
[-7,+7]		0.0062	-0.0431***	-0.0274**
		.257	-7.766	-2.082
[-15,+15]		-0.0166	0.0023	-0.0309*
		-1.250	.145	-1.825
[-30,+30]		-0.0669*	0.0308	-0.0724***
		-2.484	1.673	-2.904
[-1,+3]		0.0040	-0.0189*	-0.0231**
		.690	-2.084	-2.239
[-3,+1]		0.0371***	-0.0547***	-0.0107**
		9.652	-5.698	-2.505
[-2,+4]		-0.0074	-0.0202***	-0.0225**
		-.339	-3.723	-2.126
[-4,+2]		0.0044	-0.0734***	-0.0247**
		.562	-5.141	-2.504
[-3,+5]		0.0112	-0.0507***	-0.0249**
		.953	-12.424	-2.375
[-5,+3]		0.0193	-0.0881***	-0.0260**
		1.556	-4.943	-2.485
[-3,+7]	Asymmetric event windows	0.0054	-0.0067	-0.0267**
		.267	-1.525	-2.477
[-7,+3]		0.0215	-0.0814***	-0.0260**
		1.874	-4.347	-2.140
[-4,+10]		0.0011	-0.0802***	-0.0367***
		.097	-4.123	-2.975
[-10,+4]		-0.0075	-0.0594***	-0.0227*
		-.265	-18.381	-1.698
[-10,+20]		-0.0445	0.0053	-0.0421**
		-2.002	.089	-2.395
[-20,+10]		-0.0199	0.0054	-0.0321*
		-2.069	.370	-1.906
[-20,+40]		-0.2333**	0.0714	-0.0505**
		-2.969	.969	-2.611
[-40,+20]		-0.0763***	0.1380***	-0.0726***
		-7.046	9.465	-2.906

Note: t-statistics are in parentheses, *Significant at 10%, **Significant at 5%, ***Significant at 1%
Source: Author's calculation

The excellent rating shows the largest number of sukuk issuance compared to the high-quality and good ratings, showing investor confidence to invest in sukuk during the crisis. After the crisis, the market indicates that negative news generated negative CAAR values. The best result of the high-quality rating after the crisis was at the symmetric event [-1,+1], and the worst result for the period after the crisis is

on the asymmetric event [-40,+20].

Table 3. *CAAR Estimations by Ratings, Based on FTSE KLCI (Excellent Rating).*

Event Window	Types of Events	Cumulative Average Abnormal Return (CAAR)		
		Excellent Rating AA, AA-, A+		
		2004-2006	2007-2008	2009-2011
[-1,+1]	Symmetric event windows	0.0040	-0.0027	-0.0029
		1.277	-.903	-.589
[-2,+2]		0.0109**	0.0001	-0.0024
		2.204	.010	-.307
[-3,+3]		0.0102*	-0.0041	0.0131**
		1.757	-.670	1.161
[-7,+7]		0.0161	0.0057	0.0050
		1.401	.492	.279
[-15,+15]		-0.0368	0.1994***	-0.0281
		-1.609	4.635	-1.116
[-30,+30]		-0.0515	0.1644***	-0.0882
		-1.092	3.233	-2.403
[-1,+3]		0.0072*	0.0058	0.0058
		1.964	1.082	.675
[-3,+1]		0.0070	-0.0126***	0.0044
		1.574	-3.386	.571
[-2,+4]		0.0078	-0.0098	0.0025
		1.152	-1.376	.269
[-4,+2]		0.0053	0.0011	0.0052
		.987	.191	.527
[-3,+5]		0.0198**	-0.0084	0.0059
		2.357	-1.073	.482
[-5,+3]		0.0128	-0.0063	0.0145
		1.652	-.758	1.208
[-3,+7]	Asymmetric event windows	0.0134	-0.0030	0.0085
		1.468	-.306	.515
[-7,+3]		0.0129	0.0045	0.0096
		1.225	.503	.773
[-4,+10]		-0.0038	0.0010	-0.0025
		-.231	.065	-.124
[-10,+4]		-0.0074	0.0024	0.0018
		-.755	.246	.142
[-10,+20]		-0.0228	0.0520***	-0.0347
		-1.034	2.611	-1.244
[-20,+10]		-0.0717*	0.1558***	-0.0324
		-1.787	3.609	-1.528
[-20,+40]		-0.1406**	0.1396***	-0.0408
		-2.497	3.236	-.994
[-40,+20]		-0.0418	0.2414***	-0.0969***
		-.931	4.362	-2.889

Note: t-statistics are in parentheses, *Significant at 10%, **Significant at 5%, ***Significant at 1%
Source: Author's calculation

The excellent rating shows that before the crisis, the market responds positively and significantly to the short events, but negatively and significantly to the long events. These situations show early reactions to avoid the risk of negative news. Before the crisis, the best result is at the asymmetric event [-3,+5] and the worst result is on the [20,+40] event. Thus, the number of sukuk issuance by excellent rating decrease after the crisis. The sukuk investors moved to invest in the high-quality rating after the crisis. The excellent rating shows more positive and significant results during the crisis. The best result of the excellent rating during the crisis is on asymmetric event [-40,+20], and the worst is on the [-3,+1]. After the crisis, only one event react positively and negatively with significant results. The excellent rating shows a delay reaction after the crisis with more positive and significant results during the crisis, showing that there are overreactions because the market anticipated the negative returns but overreacted to the negative news.

Table 4. *CAAR Estimations by Ratings, Based on FTSE KLCI (Good Rating).*

Event Window	Types of Events	Cumulative Average Abnormal Return (CAAR)		
		Good Rating A, A-, BBB+		
		2004-2006	2007-2008	2009-2011
[-1,+1]	Symmetric event windows	-0.0046	-0.0143	-0.0186***
		-1.166	-1.599	-3.006
[-2,+2]		-0.0182**	-0.0412**	-0.0024
		-2.769	-2.112	-.383
[-3,+3]		0.0065	-0.0434	-0.0076
		.619	-1.618	-1.395
[-7,+7]		-0.0472**	-0.0607	-0.0010
		-2.197	-1.472	-.079
[-15,+15]		0.0523	0.0389	-0.0226
		1.347	.683	-1.158
[-30,+30]		0.0983	-0.0358	0.0185
		1.564	-.542	.198
[-1,+3]		0.0152	-0.0393*	-0.0079
		1.457	-2.054	-1.495
[-3,+1]		-0.0132**	-0.0182	-0.0183***
		-2.061	-1.354	-3.772
[-2,+4]		-0.0210	-0.0326	-0.0007
		-1.591	-1.622	-.094
[-4,+2]		-0.0085	-0.0359*	-0.0096
		-1.319	-1.951	-.978
[-3,+5]		-0.0337*	-0.0355	-0.0116
		-1.939	-1.666	-1.322
[-5,+3]		-0.0033	-0.1041*	-0.0132*
		-.254	-1.982	-2.027
[-3,+7]	Asymmetric event windows	-0.0299*	-0.0360*	-0.0068
		-1.906	-2.053	-.878
[-7,+3]		-0.0107	-0.0678	-0.0018
		-.769	-1.461	-.149
[-4,+10]		-0.0135	-0.0644**	-0.0072
		-.628	-2.542	-.512
[-10,+4]		-0.0170	0.0025	-0.0011
		-.720	.057	-.100
[-10,+20]		0.1003**	0.0216	-0.0361*
		2.271	.417	-2.091
[-20,+10]		-0.0132	-0.0049	0.0128
		-.412	-.102	.604
[-20,+40]		0.1003*	-0.0436	0.0866
		1.720	-.872	.961
[-40,+20]		0.0997*	-0.0038	-0.0748**
		1.889	-.052	-2.894

Note: t-statistics are in parentheses, *Significant at 10%, **Significant at 5%, ***Significant at 1%
Source: Author's calculation

Also, before the crisis, the best results after the issuance of sukuk on the good rating is on the asymmetric event [-20,+40]. The shorter events react to negative CAARs while long events respond to positive CAARs. The worst event before the crisis was on the symmetric event [-7,+7]. During

the crisis, the symmetric event [-15,+15] showed the best result, while the worst result was the asymmetric event [-5,+3]. These results show there are delay reactions on the market by the good rating after the sukuk announcement. After the crisis, the best results on asymmetric events was on [-20,+40] and the worst was on [-40,+20], at -0.0748 with a 5 % significance. Stock prices changed immediately and could not be predicted for a long time after the announcement.

Table 5 shows that sukuk issuances by the excellent rating are the best, followed by good rating and highest quality rating. The table shows the high-quality rating as having the lowest number of issuances, but the number of issuances of the high-quality and excellent ratings after the crisis was the same, at 39 sukuk issuances each. These results determine an increased number of sukuk issuances for the high-quality rating from nine issuances during the crisis to 39 issuances after the crisis. Excellent and good ratings show a decrease of sukuk issuances after the crisis.

Table 5. *Summary of Sukuk Issuances by Ratings.*

Summary of Sukuk Issuances by Ratings (2004-2011)							
Years		**No. of Issuances by Ratings**					
		High Quality Rating (AAA, AAA-, AA+)	**Total**	**Excellent Rating (AA, AA-, A+)**	**Total**	**Good Rating (A, A-, BBB+)**	**Total**
	2004	0		4		13	
Before Crisis	2005	2	5	8	44	5	29
	2006	3		32		11	
During Crisis	2007	6	9	29	65	14	22
	2008	3		36		8	
	2009	15		8		8	
After Crisis	2010	8	39	10	39	1	17
	2011	16		21		8	
Total		53		148		68	
Total no. of Issuances		269					

Source: Author's calculation

During the crisis, the number of sukuk issuances of excellent rating declines from 65 issuances to 39 issuances after the crisis. Good rating records 22 issuances during the crisis and decreases to 17 issuances after the crisis. These findings come from the selected companies issuing sukuk indicate that the excellent rating is not affected by the crisis and will recover after the crisis. In conclusion, the findings suggest that the best sukuk rating is the excellent rating.

6. Conclusion and Future Recommendations

The study reviews how the stock market behaves to sukuk issuances based on different rating pre, during and post the recent 2008 financial crisis in Malaysia. The findings indicate that there are positive, significant and asymmetric market reactions in the case of the highest quality, excellent and good ratings sukuk announcement in individual events. Thus, the findings suggest that the best sukuk rating is the excellent rating. The positive market reactions can be described in two approaches. First, the market can readily identify the news. Second, there are confidence effects that shareholders wealth will be raised within the issuance of these sukuk ratings. Hence, this study recommends to future research to notice the reaction of stock markets among other structures or tenures of sukuk issuance on different indexes. Besides, factors that move sukuk markets can also be investigated using regression analysis to get more accurate results of cumulative average abnormal return.

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