CAAR Estimations by Sectors of Sukuk Issuance

Nursilah Ahmad, and Syazwani Abd Rahim

Abstract—The aim of the paper is to examine whether different announcement of the sukuk sectoral issuance carry any new information to market for the period 2004-2011 in Malaysia. Data are collected from the Securities Commission Malaysia (SC) and Bloomberg databases. The study employs event study methodology using cumulative average abnormal return (CAAR) on symmetric and asymmetric events based on the reaction of the FTSE Kuala Lumpur Composite Index (FTSE KLCI) to the announcement of sukuk issuance. The three sectors are; construction, services and industrial products. The findings indicate that the best sector is the services sector. This study would be useful to issuers, investors and decision-makers in assessing the credit risk of sukuk issuance.

Keywords— Sukuk, Islamic finance, event study, CAAR

I. INTRODUCTION

MALAYSIA was the largest market for sukuk raising USD5.5billion from 54 issues in 2008 [1]. During the 2008 financial crisis, the global amount of sukuk issuance decreased sharply by 54.5 percent to reach USD15.1 billion, as compared to USD33.1 billion in 2007. The decline in sukuk issuance was due to the credit crunch that forced investors to step aside from the money markets, hence exhausting resources for sukuk as well. The number of global sukuk issuance had weakened in the first half of 2008 and remained lower than the 2007 record. Despite the decline, the prospects for the sukuk market were still positive because of the existing demand.

Besides, sukuk has a specific form in the structure of Islamic finance. Firstly, sukuk embarked as a benchmark for bond in the conventional system where the bond market increased rapidly in the last several years. The appearance of sukuk in Islamic finance can attract the economic world. Second, sukuk rose significantly, when the condition of financial industries was in a serious crisis and the debt (interest base) was recognized as the main factor causing the financial crisis. Therefore, sukuk as an alternative to conventional bonds can help in stabilizing financial markets [2].

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Thus, this paper examines whether different sectors of sukuk issuers' announcements contain pricing relevant information for sukuk. This is motivated by three key factors affecting the sukuk market. First, the industry regained market confidence after the restructuring of the higher profile sukuk default in Dubai after the 2008 financial crisis. Second, investors are avoiding the riskiest markets of the United States and Europe. Third, positive economic growth and favorable debt dynamics in the two most important sukuk issuing regions of the Gulf and Malaysia has attracted investors to the Islamic capital market. Most previous studies focused on the price impact of rating changes, upgrades and downgrades, but the present study considers the possibility of asymmetric reactions of the market after announcements of sukuk issuances by different sectors.

The paper contributes to the literature since the empirical work on sukuk issues by sectors is relatively few. The remainder of the paper is organized as follows. Section II discusses the related literature and provides a brief background on recent development of sukuk in Malaysia. Section III discusses the theoretical framework. Section IV highlights the research method. Section V discusses the findings and the final section concludes the paper.

II. LITERATURE REVIEW

A. Definition of Sukuk

According to the Accounting and Auditing Organization for Islamic Institution (AAIOFI), 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" [3].

The Securities Commission Malaysia [4] defines sukuk as "a financial document or certificate which represents the value of an asset evidencing an undivided pro rata ownership of an underlying asset".

B. Sukuk Development in Malaysia

The sukuk market has become an increasingly important component of the development of the global sukuk market [5]. Recently, there has been an increase in the issuance of Islamic capital market securities (sukuk) by corporate and public sector entities amidst growing demand for alternative investments [6]. Although the size of the market is modestly by global standards, the sukuk market is experiencing remarkable growth, increasing at an average rate of growth of 40 percent per annum [7].

The sukuk market is the fastest growing and a promising segment of Islamic finance. Indeed, the issuance of Sukuk is

increasing considerably worldwide, especially in Malaysia, United Arab Emirates (UAE) and Saudi Arabia [8]. The global value of sukuk issues exceeds 109 billion dollars in 2012. Figure 1 shows the evolution of sukuk global issues between 2001 and 2012. There was an increasing trend of sukuk issuance from 2009 onwards.
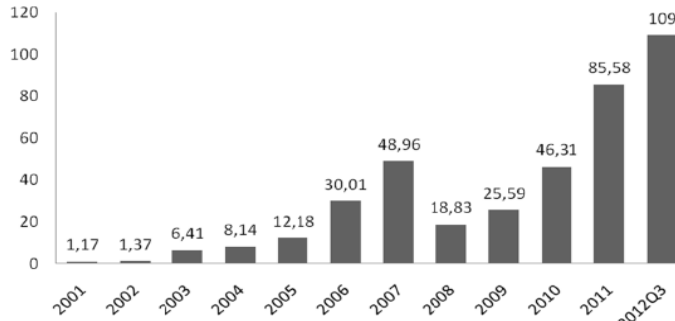

Fig. 1 Evolution of Sukuk Global Issues between 2001 and 2012 in billion ($).

The Malaysian capital market has significant growth prospects. The Securities Commission (SC) Malaysia estimates the size of Malaysia's capital market (comprising stock market capitalization and debt securities) to more than double from RM2.0 trillion in 2010 to RM4.5 trillion by 2020. Further analysis indicates there are strong upside prospects for the Malaysian capital market. Based on benchmarks for regional financial centers, it is estimated that the internationalization of the stock market can increase the potential size of the Malaysian capital market by another 30 percent to RM5.8 trillion in 2020. The most important effect of achieving critical mass is the facilitation of volume strategies and higher efficiency of increased economies of scale [9].

Sukuk contribute approximately 90 percent to the Islamic capital market. The Malaysian sukuk market took off in 1990, when the world's first sukuk was issued by a non-Islamic corporation, Shell MDS, RM125 million of al-Bai' Bithaman Ajil. The market faced a liquidity crunch not only from the global financial crisis and the debate on the compliance of some of the sukuk structures with Islamic law. Despite the challenging market environment, Malaysia continued to be the top world issuer [10].

Despite the significant drop in sukuk volume in Malaysia in 2013, the country still dominates value and volume of sukuk globally. Malaysia issued USD54.33 billion sukuk in the first nine months of 2013, followed by Saudi Arabia (USD8.69 billion), UAE (USD5.17 billion) and Indonesia (USD5.03 billion). Malaysia stood out in terms of domestic market issuance in Asia, followed by Indonesia. Pakistan also suffered from a significant drop in sukuk volume compared to last year. TABLE I shows the global aggregate sukuk issued breakdown by country (Jan 96 – Sept 13).

TABLE I
GLOBAL AGGREGATE SUKUK ISSUED BREAKDOWN BY COUNTRY
(JAN 96 – SEP 13)

Country	Number of Issues	Amount Issued ($ Million)
Malaysia	2438	324,576.9
UAE	73	47,876.4
Saudi Arabia	64	39,296.0
Indonesia	216	19,924.1
Qatar	19	19,245.6
Bahrain	273	13,918.5
Pakistan	57	6,348.9
Turkey	9	5,469.7
Brunei Darussalam	95	4,980.7
Kuwait	22	2,992.4
Singapore	9	984.2
United States	3	765.7
United Kingdom	5	279.1
China	3	274.7
Yemen	2	251.5
Sudan	3	220.9
Germany	2	190.9
Gambia	242	149.2
Iran	4	132.8
Jordan	1	120.3
Japan	1	100.0
Kazakhstan	1	73.3
France	1	0.7
GRAND TOTAL	3,543	488,172

Source: Thomson Reuters Zawya 2014

Fig. 2 shows global sukuk issued in last three years breakdown by issuer type (Jan 10 - Sep 13)

Despite socio-political unrest in the Middle East, Arab governments have kept up their sukuk momentum; Bahrain leads, followed by Saudi Arabia, Qatar and UAE. They mostly focused on the Eurobond market, except Bahrain which enjoys an active local sukuk market. Sovereign and quasi-sovereign issuers from Malaysia, Indonesia and Pakistan maintained high issuance volumes mostly in their domestic markets. However, despite the growth in the number of sukuk, there is a slight drop in value issued due to Malaysia's larger-than-normal issuances last year. For the first nine months of 2013, around 70 per cent of sukuk issued were from government institutions (compared to 65 percent in 2012) while power and utilities beat the financial sector with 9.2 percent compared to 3.7 percent last year. Financial sector issuance dropped to 9 percent compared to 12 percent last year and the transport sector also plunged to 2.3 percent from 11.2 percent, mostly due to unfavorable market conditions. TABLE II below shows the global aggregate sukuk issued a breakdown by sector (Jan 96 – Sep 13).

TABLE II
GLOBAL AGGREGATE SUKUK ISSUED BREAKDOWN BY SECTOR
(JAN 96 – SEP 13)

Sector	Number of Issues	Amount ($ Million)	Market Share (%)
Agriculture	92	3,492	0.72
Conglomerates	14	2,723	0.56
Construction	400	14,307	2.93
Consumer Goods	39	751	0.15
Education	5	64	0.01
Financial Services	396	61,927	12.69
Food and Beverages	35	2,313	0.47
Government Institutions	1,356	280,523	57.46
Health Care	29	544	0.11
Industrial Manufacturing	64	1,536	0.31
Information Technology	7	29	0.01
Leisure and Tourism	5	1,361	0.28
Mining and Metals	10	442	0.09
Oil and Gas	109	14,613	2.99
Power and Utilities	366	33,342	6.83
Real Estate	182	24,949	5.11
Retail	16	167	0.03
Services	36	3,672	0.75
Telecommunications	74	6,039	1.24
Transport	308	35,377	7.25
GRAND TOTAL	3,543	488,172	100

Source: Thomson Reuters Zawya 2014

C. Stock Market Reactions to Sukuk Issuance

The recent studies on stock market reactions to sukuk issuance who found that the market reaction is significantly positive during event windows [-3, 0] and [-3, 3] for the period 2000-2006 in Malaysia. The finding implies that the positive reaction is not due to investors' preference for Islamic compliant activities, but it is due to similar factors found in studies on conventional bonds. Ameer and Othman (2010) find significant negative abnormal returns near the announcement days and the responses are asymmetrical to different types of bonds issuance announcements in Malaysia over the period 2001-2007 [11].

Modirzadehbami and Mansourfar [12] report a significant negative abnormal return occurs one day before the announcement date in a sample of 45 listed companies on Bursa Malaysia involved in issuing of Islamic debts during 2005 to 2008. Meanwhile, Mohd Ashhari, Sin-Chun and Md Nassir [13] indicate that there is a wealth effect of the announcement of Islamic bond issues for the period 2001 to 2006 in Malaysia. In short, empirical evidence shows that stock market reactions to sukuk issuance are mixed and inconclusive.

Abdul Qoyum [2] said a significant positive market reaction just prior to the firms' positive surprise earnings announcements. When a firm announced positive surprise earnings, investors appeared to perceive a positive signal about the firm's future, which caused an increased in the firm's stock price. Ahmad and Rahim [14] found that there was 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 generate positive responses for all calculations for all event windows.

Godlewski et al. [15] investigated the reaction of Malaysian market investors to the announcements of sukuk and conventional bond issues. The stock market is neutral to announcements on conventional bond issues, but it reacts negatively to announcements of sukuk issues. They assigned this result to the great demand for Islamic investment certificates and to the adverse selection promoting sukuk issuance by lower-quality debtor firms.

D. Sectors of Sukuk Issuers

The issuers are also separated according to these sectors: construction, industrial and services. This study only focuses on these sectors because of the limited data of listed companies that issue sukuk. The sukuk issuers in the construction sector include (construction, property development, manufacturing, construction and materials). The sukuk issuers in services sector include (trading services, oil equipment, services, health care equipment and services, fixed line telecommunications and transportation). The sukuk issuers in industry sector include (automotive, industrial engineering, industrial products - oil and gas, consumer products, general industrials). The sukuk issuances by different sectors separated to three periods, which are; before the crisis, during the crisis and after a crisis. TABLE III below shows the summary of sukuk issuances by sectors.

TABLE III
SUMMARY OF SUKUK ISSUANCES BY SECTOR

Summary of Sukuk Issuances by Sectors (2004-2011)			
Years		No. of Issuances by Sector	
		Construction	Services	Industries
Before Crisis	2004	0	3	9
	2005	4	6	2
	2006	12	0	18
During Crisis	2007	14	15	7
	2008	20	18	4
After Crisis	2009	1	23	6
	2010	2	5	4
	2011	0	27	8
Total		53	97	58

Source: Author's calculation

III. THEORETICAL FRAMEWORK

Event studies are an important tool in finance, which concern with the valuation of firms and the changes in firm value resulting from, for example, changes in capital structure. In general, the value of a firm is difficult to measure. However, if there is an efficient market for the firm's stock, the impact of decisions of this type can be measured by the change in stock price around the time when the decision becomes public knowledge. Although such events can be studied in many different ways, the empirical finance literature has taken a particular approach based on statistical tests of the significance of abnormal stock returns around event dates [16]. Fig. 3 shows the reaction of stock prices in the stock market to news around the events.
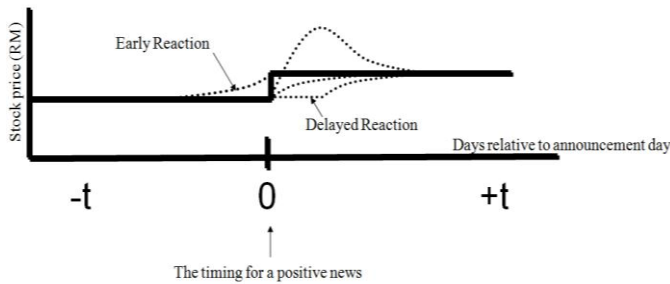
Fig. 3 Reaction of stock prices to news.

In event study, there are very important to test for evidence of under reaction, overreaction, early reaction and delayed reaction around the event. If the market is "semi-strong-form efficient", the effects of an event will be reflected immediately in security prices. Thus a measure of the event's economic impact can be constructed using security prices observed over a relatively short time period [17].

IV. RESEARCH METHODOLOGY

A. Sample and Data Collection

The sukuk issuances are collected and separated by sectors (2004-2011). The sukuk data that are collected in this study are the listed companies that issue sukuk in Malaysia. The estimation period for the study is three years based on the FTSE KLCI index as a proxy data on closing prices from the indexes are collected based on daily date from the DataStream database.

B. Method

For the purpose of the study, the market is hypothesized to react positively to the announcement of sukuk issues. This is due to firstly, cheaper financing costs since sukuk has higher liquidity due to a wider investor base encompassing of both Muslims and conventional investors. Second, there is higher demand for Shari'ah compliant stocks since 85 percent of total securities listed on Bursa Malaysia are Shari'ah compliant. Third, funds raised from the Islamic debt instruments are used to finance new activities.

The performance of stock prices of firms on certain days is measured using (1):
$$AR_{it} = R_{it} - (\alpha_{it} + \beta_i R_{mt}) \tag{1}$$

Where; AR_{it} = Abnormal returns for firm i at time period t

R_{it} = Actual returns for firm i at time period t

R_{mt} = Returns on market portfolio in period t

α_i = The constant average returns of stock i

β_i = Beta estimate of stock

and β are estimated using 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 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 at (2); where N is equal to the number of firms in the sample:

$$AAR_t = \frac{1}{N} \sum_{t=1}^{N} AR_{it} \tag{2}$$

The t-test for AAR_t is estimated as (3)

$$\text{t-test} = CAAR / \delta (CAAR) \tag{3}$$

where; AAR_t = Average abnormal return of period t

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

To observe the cumulative effects, the cumulative abnormal returns ($CAAR_{t,+t2}$) are computed as (4) below:

$$CAAR_{(-t1,+t2)} = \sum_{=t1}^{=t2} AAR \tag{4}$$

$CAAR_t$ is a more precise representation of the long term effect on share prices from bond offering announcements. The standard deviation of CAAR is defined as (5); where N is the number of days in the CAAR statistics:

$$\delta(CAAR) = \delta(AAR)\sqrt{N} \tag{5}$$

T-test is a parametric test. They refer to statistical tests in which assumptions are made about the underlying distribution of the observed data. Parametric tests are more robust and for the most part require less data to make a stronger conclusion than nonparametric tests.

V. RESULTS

The study defines returns using this formula: Return = [P(t)-P(t-1)]/P(t-1)], where P is the stock market daily price at closing using a FTSE KLCI index. We examine all symmetric and asymmetric events of 3-day, 5-day, 7-day, 9-day, 11-day, 15-day, 31-day and 61-day event windows and calculate average abnormal daily returns. The paper also compares the reactions between symmetric and asymmetric event windows.

In an efficient market, the closing price of stock market fully reflects all available information. The stock prices should approximately follow a random walk, that is, future changes in stock prices should be unpredictable. The cumulative average abnormal returns (CAARs) are calculated by summing daily excess returns over the respective event windows. The announcement date is the issue date of sukuk. The statistical significance of $CAAR_t$ is based on t-test. TABLE IV shows results for the construction sector.

The construction sector showed only two significant results before the crisis. The maximum CAAR before the crisis was on [-40,+20] and the minimum CAAR was on [-20,+10]. The construction sector is important to the market as it contributes to the Malaysian economic growth. The market shows that the maximum CAAR during the crisis was on [-40,+20], at 0.2986 with a 1 % significance. The minimum CAAR during the crisis was on [-7,+7], at -0.0630 with a 5 % significance.

The market slowly absorbed the negative news. The CAARs were significantly positive after the announcement date, suggesting that the market had already anticipated a negative return but overreacted to the negative news. After the crisis, the construction sector shows that the market slowly recovered. The maximum CAAR was in [-30,+30] and the minimum CAAR was on [-40,+20]. There was no significant result after the crisis. This study expected small companies with fewer institutional investors to have a stronger price

reaction, either in the form of a delayed price reaction or an initial overreaction followed by a price reversal. TABLE V shows results for the services sector.

TABLE IV
CAAR ESTIMATION BY CONSTRUCTION SECTOR FOLLOWING SUKUK ISSUANCES (FTSE KLCI)

No	Event Window	Types of Events	Cumulative Average Abnormal Return (CAAR) Construction		
			2004-2006	2007-2008	2009-2011
1	[-1,+1]	SYMMETRIC EVENT	0.0027 0.59	-0.0007 -0.127	0.0072 1.26
2	[-2,+2]		-0.0201*** -3.618	-0.0117** -2.241	0.0054 0.192
3	[-3,+3]		-0.0011 -0.11	-0.0204*** -3.13	-0.0134 -0.672
4	[-7,+7]		0.0124 0.404	-0.0630** -2.561	-0.052 -0.908
5	[-15,+15]		0.0957 1.413	0.2817*** 3.577	-0.1756 -2.043
6	[-30,+30]		0.1214 0.847	0.1964* 2.015	0.352 0.624
7	[-1,+3]	ASYMMETRIC EVENT	0.0013 0.341	0.0001 0.022	0.0214 1.483
8	[-3,+1]		0.0003 0.028	-0.0213*** -5.48	-0.0276 -2.256
9	[-2,+4]		-0.002 -0.158	-0.0256*** -3.255	-0.0074 -0.318
10	[-4,+2]		-0.0064 -0.448	-0.0074 -0.995	-0.0119 -0.505
11	[-3,+5]		0.0289 1.434	-0.0440*** -5.821	-0.0626 -2.321
12	[-5,+3]		-0.026 -1.278	-0.0442 -1.695	-0.0038 -0.82
13	[-3,+7]		0.0243 1.11	-0.0464*** -5.772	-0.0456 -1.283
14	[-7,+3]		-0.0129 -0.498	-0.0366 -1.369	-0.0198 -0.476
15	[-4,+10]		-0.0154 -0.494	-0.0469*** -4.206	-0.0784 -1.796
16	[-10,+4]		0.0096 0.418	-0.0341 -1.374	-0.0363 -1.113
17	[-10,+20]		0.1493** 2.434	-0.0089 -0.265	-0.1075 -1.663
18	[-20,+10]		-0.1047 -0.983	0.2253*** 2.921	-0.1175 -1.291
19	[-20,+40]		0.1065 0.687	0.2367*** 3.307	0.2497 0.41
20	[-40,+20]		0.1517 1.17	0.2986*** 2.96	-0.1777 -1.122

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

In addition, before the crisis, the services sector showed only two positive and significant reactions. The maximum event was on the asymmetric event [-1,+3] and the minimum was on the symmetric event [-30,+30]. This sector showed the highest number of negative significant results compared to the other sectors. During the crisis, only two events indicated negative significant results while the other events reacted positively. These results suggest that the market takes a longer time to absorb crisis information.

TABLE V
CAAR ESTIMATION BY SERVICES SECTOR FOLLOWING SUKUK ISSUANCES (FTSE KLCI)

No	Event Window	Types of Events	Cumulative Average Abnormal Return (CAAR) Services		
			2004-2006	2007-2008	2009-2011
1	[-1,+1]	SYMMETRIC EVENT	0.0040*** 6.569	-0.0022 -.745	-0.0166*** -4.887
2	[-2,+2]		-0.0166** -2.353	0.0068 .915	-0.0177** -2.037
3	[-3,+3]		-0.0067 -.947	0.0111 1.558	-0.0173* -1.774
4	[-7,+7]		-0.0961 -1.817	0.0623*** 4.777	-0.0280** -2.363
5	[-15,+15]		-0.0684 -.832	0.1536*** 7.819	-0.0547*** -3.311
6	[-30,+30]		-0.2142* -2.053	0.1526*** 5.024	-0.1402*** -6.901
7	[-1,+3]	ASYMMETRIC EVENT	0.0129** 2.443	0.0093 1.504	-0.0221** -2.517
8	[-3,+1]		-0.0155 -1.525	-0.0004 -.077	-0.0116** -2.524
9	[-2,+4]		-0.0394* -1.998	0.0062 .535	-0.0164* -1.693
10	[-4,+2]		-0.0055 -.385	0.0072 .906	-0.0197** -2.256
11	[-3,+5]		-0.0786* -2.047	0.0223** 2.125	-0.0217** -2.331
12	[-5,+3]		-0.0203** -3.117	0.0034 .270	-0.0197** -2.039
13	[-3,+7]		-0.0560 -1.773	0.0404*** 3.427	-0.0225** -2.137
14	[-7,+3]		-0.0467** -2.912	0.0329*** 2.818	-0.0227** -2.155
15	[-4,+10]		-0.0144 -.284	0.0614*** 3.666	-0.0319** -2.252
16	[-10,+4]		-0.1137* -2.283	0.0303* 1.759	-0.0254** -2.335
17	[-10,+20]		-0.1053 -1.322	0.1767*** 9.975	-0.0652*** -3.763
18	[-20,+10]		-0.0705 -.858	0.0993*** 3.347	-0.0509*** -3.303
19	[-20,+40]		-0.1919* -1.972	0.1066*** 3.674	-0.0704*** -3.290
20	[-40,+20]		-0.1240 -1.356	0.2236*** 5.580	-0.1429*** -6.854

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

The sukuk investors showed confidence in investing in the services sector. Thus, the maximum CAAR was on the asymmetric event [-40,+20] while the minimum CAAR was at the symmetric event [-1,+1]. There was an increased number of sukuk issuances during the crisis and this show contradictory results of negative reaction to bad news. The maximum CAAR after the crisis was on [-3,+1] and the minimum CAAR was on [-40,+20]. Although all events changed to negative and significant reactions after the crisis, the investors still showed confidence in the services sector as seen by the increasing number of issuances. TABLE VI shows results for industrial sectors.

TABLE VI
CAAR ESTIMATION BY INDUSTRIAL SECTORS FOLLOWING SUKUK ISSUANCES (FTSE KLCI)

No	Event Window	Types of Events	Cumulative Average Abnormal Return (CAAR) Industrial		
			2004-2006	2007-2008	2009-2011
1	[-1,+1]	SYMMETRIC EVENT	-0.0069 -1.399	-0.0146 -1.124	-0.0053 -.799
2	[-2,+2]		-0.0018 -.226	-0.0094 -.674	-0.0208 -1.685
3	[-3,+3]		-0.0059 -.898	-0.0122 -.575	-0.0196 -1.196
4	[-7,+7]		-0.0258** -2.726	-0.0527 -1.248	-0.0368 -1.497
5	[-15,+15]		-0.0290* -1.863	-0.0669 -.928	-0.0791** -2.610
6	[-30,+30]		-0.0043 -.176	-0.1127 -1.550	-0.0919** -2.659
7	[-1,+3]	ASYMMETRIC EVENT	-0.0014 -.197	-0.0158 -.936	-0.0130 -.885
8	[-3,+1]		-0.0114 -1.683	-0.0111 -.699	-0.0119 -1.375
9	[-2,+4]		-0.0144* -1.712	-0.0125 -.647	-0.0177 -1.082
10	[-4,+2]		-0.0012 -.205	-0.0183 -.954	-0.0213 -1.676
11	[-3,+5]		-0.0187** -2.101	-0.0100 -.397	-0.0219 -1.314
12	[-5,+3]		0.0040 .423	-0.0231 -.963	-0.0130 -.747
13	[-3,+7]		-0.0289*** -4.500	-0.0272 -.868	-0.0420* -2.065
14	[-7,+3]		-0.0029 -.263	-0.0380 -1.283	-0.0144 -.777
15	[-4,+10]		-0.0122 -1.218	-0.0868 -1.485	-0.0529* -1.940
16	[-10,+4]		-0.0136 -1.101	0.0003 .008	-0.0275 -1.379
17	[-10,+20]		0.0075 .448	-0.0621 -.911	-0.0914** -2.439
18	[-20,+10]		-0.0370** -2.107	-0.0799 -1.151	-0.0608** -2.157
19	[-20,+40]		-0.0430* -1.902	-0.2009* -1.962	-0.0960*** -3.026
20	[-40,+20]		-0.0109 -.440	-0.1282 -1.531	-0.1122** -2.847

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

Furthermore, before the crisis, the industrial sector shows no positive significant results for all periods and the maximum result was on [-10,+20]. Only two events showed positive results before the crisis, indicating low confidence among investors to invest in the industrial sector. During the crisis, all events showed negative results except the maximum, which was on the asymmetric event [-10,+4]. These results showed early reactions with negative results during the crisis, but this may also have been because of overreactions and weak-form efficiency in the market. After the crisis, all events showed negative reactions.

The maximum CAAR was on the short symmetric event [-1,+1] and the minimum CAAR was on the long asymmetric event [-40,+20]. There were also overreactions and underreactions in the market. The results showed a weak-form efficiency market because almost all events reacted negatively before, during and after the crisis.

The highest number of sukuk issuances is the services sector, followed by the industrial and construction sectors. The construction and industry sectors showed a decrease in sukuk issuances, affected by the global financial crisis. The services sector showed an increase in issuances and recorded the highest number of issuances even after the crisis. It also showed higher confidence among investors to invest in sukuk in the services sector during the crisis. In conclusion, the results suggest that the best sector is the services sector.

VI. CONCLUSION

The paper investigates how the stock market reacts to sukuk issuances based on different sectors of sukuk issuers before, during and after the recent 2008 financial crisis in Malaysia. The findings indicate that there are positive, significant and asymmetric market reactions in the case of a service sector announcement in certain events. The positive market reactions can be interpreted in two ways. First, the market can readily distinguish the news. Second, there are confidence effects that shareholders wealth will be increased through the issuance of these sectors. This is because, sukuk being neither debt, nor shares are true to the calling of Islamic economics whereby the issue reflects the economic strength of the company and hence the real economic activities underlying the issuance. By doing so, this study shows the best sector of sukuk issuers is the services sector. However, future research might want to distinguish the reaction of stock markets among other structures of sukuk, for instance wakalah and other hybrid sukuk. In addition, factors that move sukuk markets can also be explored using regression analysis and extended CAPM to get more accurate results of cumulative average abnormal returns.

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CAARt is a more precise representation of the long term effect on share prices from bond offering announcements. The standard deviation of CAAR is defined as (5); where N is the number of days in the CAAR statistics: