Islamic Bond Announcement: Is There Any Effect on Returns?

by Fitriya Fitriya

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Fitriya Fauzi[1]
Dani Foo[2]
Abdul Basyith[3]

Abstract

This article investigates the effect of Islamic debt announcement on stock returns. Using data from 80 Malaysian firms and 20 Indonesian firms, which span from 2000 to 2009, an event study analysis is employed in this study; hence, the data of the daily closing stock prices for 2 years prior and 1 year after the announcement date are required in order to calculate the abnormal return using the abnormal return benchmark (mean adjusted return, market adjusted return and market model return). The findings for the event study analysis, using three benchmarks, reveal that there is a negative and significant impact for both average abnormal returns (AAR) and cumulative average abnormal returns (CAAR) for Malaysia. In contrast to the findings for Malaysia, the impact of Islamic debt announcement, using three benchmarks, is positive and significant for both AAR and CAAR for Indonesia. The unit root test result for Malaysia indicates that the market is efficient in the context of weak form efficiency, which suggests that the price movements are unpredictable. In contrast to Malaysia, the unit root test result for Indonesia indicates that the market is inefficient in the context of weak form efficiency, which suggests that the price movements are predictable.

Keywords

Islamic bonds, event study, announcement date and returns, price movements, weak form market efficiency, Islamic debt, *sukuk*, *takaful*

Introduction

The market reactions to new issues of securities were of much interest in the last few decades. Most empirical investigations found that announcements of new equity issuance tend to have a negative

[1] Faculty of Business, Department of Finance and Banking, Curtin University Sarawak, Malaysia.
[2] Department of Accounting, Waikato Management School, University of Waikato, Hamilton, New Zealand.
[3] Independent Consultant of Finance, Indonesia.

Corresponding author:
Fitriya Fauzi, Faculty of Business, Department of Finance and Banking, Curtin University Sarawak-Malaysia, CDT 250, Senadin 98009, Malaysia.
E-mails: fitriya.fauzi@ymail.com; fitriya.fauzi@curtin.edu.my

average effect, while new debt issue announcements tend to have a positive average effect on stock prices. While most of the studies focused on conventional debt issuance, this study differs by focusing on the impact of Islamic debt issuance on stock price.

Islamic debt, known as *sukuk*, has emerged to become a significant part of conventional corporate capital structure, currently trading in the secondary markets. The development of *sukuk* is supported by many factors, including the development of Islamic banking (*takaful*) and an increasing demand for Islamic products in the debt markets. The development of *sukuk* in its various manifestations and forms is the subject of many discussions and ongoing debates among scholars of Islamic law.

Generally, recent innovations in Islamic finance have changed the dynamics of the Islamic finance industry, especially in the Islamic debt markets. *Sukuk* became increasingly popular as companies sought to raise funds by offering corporate *sukuk*. It *is becoming a* significant means for raising funds in the

Table 1. Global Sukuk Issuance by Year

Year	Value in USD Billon	Number
1996	0.05	1
1997	0.9	1
1998	–	–
1999	0.2	4
2001	1.6	16
2002	2.9	23
2003	4.2	32
2004	3.5	50
2005	7.8	96
2006	19.5	99
2007	34.3	130
2008	15.5	174

Source: Zawya Sukuk Monitor (2009).

Table 2. Global Sukuk Issuance by Country in 2009

Country	Value in USD Billion	Value in %
Malaysia	31.5	43.67
Bahrain	5.2	7.21
Indonesia	0.3	0.42
UAE	21.7	30.08
Pakistan	1.5	2.08
Brunei Darussalam	0.7	0.97
Kuwait	1.8	2.50
Saudi Arabia	7.5	10.40
Qatar	1.3	1.80
UK	0.2	0.28
Sudan	0.13	0.18
USA	0.16	0.22
Germany	0.14	0.19
Total	**72.13**	**100**

Source: Zawya Sukuk Monitor (2009).

international capital markets that is acceptable as compliant with Islamic *shariah*. A market activity in this segment is becoming increasingly robust all over the world, especially in Malaysia, UAE and Saudi Arabia. In 1996, the total *sukuk* issued was USD 0.05 billion rising to a total of USD 15.5 billion by the end of 2008. The most significant amount was in 2007 with more than 130 issues valued at USD 34.3 billion. The trend is apparent in Table 1 that profiles these issuances which show a rapid expansion by value up to the global financial crisis ('GFC') in 2008.

Even in 2009, Malaysia accounted for 43.7 per cent of *sukuk* issues followed by UAE with 30.1 per cent and Saudi Arabia representing 10.4 per cent. The size of offering by country for 2009 is shown in Table 2.

The two main forms of *sukuk* are *murabahah* and *istisna*. In the early years of *sukuk*'s emergence as a financial instrument, *murabahah* and *istisna* were the most significant forms of issuance. These, respectively, accounted for 62.5 and 19.5 per cent. This changed between 2002 and 2007 when two new variants of *sukuk* emerged, namely, *musyarakah* and *ijarah*. Th quickly became the most popular types of issues. They, respectively, accounted for 36.3 and 28.3 per cent of the total market. In 2008–2009, the popularity ranking reversed with *ijarah* and *musyarakah* accounting for 43.4 and 20.8 per cent, respectively, as shown in Table 3.

The increase in th e size from year to year indicates that *sukuk* is becoming increasingly more popular. The markets for both the *sukuk* issuer and the *sukuk* holder have become increasingly lucrative ce receiving more support than ever before. Regulatory and control supports have now been instituted in the form of market surveillance and regulation to oversee markets, encourage market participants and to ance transparency.

This study focuses generally on the development of Is ic debt markets in both Malaysia and Indonesia. Specifically, we focus on how these instruments add value to a firm and increase the wealth of a fir owner.

The objective of the study is to investigate:

1. The reaction of the market price of a firm generally to an announcement of an issue of Islamic debt.
2. Whether the post-announcement price movements are predictable.

The second section of this article provides a literature review of previous empirical studies. The third section explains the methodology employed in this study. The fourth section provides empirical findings with relevant discussions. The fifth section concludes the article.

Literature Review

Islamic Debt Announcement Impact on Stock Return

The impact conventional debt issuance announcements on stock prices has been widely documented in both the United States and other Western countri Most of these conventional studies focused on straight debts and convertible debts, and to date only a few studies examined the imp of Islamic debt announcements on stock prices (Ahmad & Radzi, 2011; Ashhari, Chun & Nassir, 2009; Godlewski, Turk-Ariss & Weill, 2010; Ibrahim & Minai, 2009; Modirzadehbami & Mansourfar, 2011). Further, there is no a priori consensus amongst academics and practitioners as to how the market should react to these conventional securities. So to specifically investigate the impact of Islamic debt issue on stock

Table 3. Global Sukuk Issuance by Structure Type

Year	Type of Structures	Value in USD Billion	Value in %
Phase I	*Murabahah*	1.6	62.5
(1996–2001)	*Al Salaam*	0.16	6.3
	Istisna	0.5	19.5
	Ijarah	0.25	9.8
	Mudarabah	0.05	2.0
	Musyarakah	–	–
	Al Istithmar	–	–
	Hybrid	–	–
	Other	–	–
	Total	**2.56**	**100.0**
Phase II	*Murabahah*	4.9	6.8
(2002–2007)	*Al Salaam*	1.9	2.6
	Istisna	4.1	5.7
	Ijarah	20.5	28.3
	Mudarabah	8	11.0
	Musyarakah	26.3	36.3
	Al Istithmar	2.9	4.0
	Hybrid	2.8	3.9
	Other	1	1.4
	Total	**72.4**	**100.0**
Phase III	*Murabahah*	4	12.8
(2008–2009)	*Al Salaam*	0.05	0.2
	Istisna	0.08	0.3
	Ijarah	13.6	43.4
	Mudarabah	2.5	8.0
	Musyarakah	6.5	20.8
	Al Istithmar	3.5	11.2
	Hybrid	0.075	0.2
	Al Wakalah	1	3.2
	Total	**31.305**	**100.0**

Source: Zawya Sukuk Monitor (2009).

price (as against conventional debt issue) and to construct the hypothesis for this study, we will first examine existing conventional empirical studies that have investigated the impact of debt issue on stock price. The following studies are selected, namely, Masulis (1978), Mikkelson (1981), Dann and Mikkelson (1984), Korwar (1982) and many others, who show a statistically significant decrease in the price of firms' common stock at the earliest public announcement of certain types of capital structure changes. Further, under the assumption of asymmetric information, Miller and Rock (1985) and Myers and Majluf (1984) proposed that stock price is negatively correlated to the issuance of new securities.

In contrast, several other studies found no significant effect of debt issue on the stock price (Dann & Mikkelson, 1984; Eckbo, 1986; Mikkelson & Partch, 1986; Shyam-Sunder, 1991). The stock price reaction can be potentially negative, positive or even null. In a more recent study, a significant positive price reaction was recorded (Martel & Padron, 2006). As mentioned before, there has been little discussion about Islamic debt instruments. Most of the studies on Islamic debt financing, to date, have tended to focus on the legal aspects of Islamic debt, and not many studies have examined the wealth

impact of Islamic debt on stockholders. Some of the few studies available on Islamic bond effects are the investigations by Ashhari et al. (2009), Ibrahim and Minai (2009), Godlewski et al. (2010) and Modirzadehbami and Mansourfar (2011).

Ashhari et al. (2009) concentrated on the difference between conventional bond and Islamic bond announcements and they attempted to show that certain types of debts lead to abnormal returns, in accordance with the claim by Mikkelson and Partch (1986) that certain types of debts led to abnormal returns. Ashhari et al. (2009) found that there was a positive reaction on the Islamic bond issues announcement; however, no wealth effect was associated with the conventional bond announcement. Similar to Ashhari et al. (2009), Ibrahim and Minai (2009) found a significant positive market reaction of –3, 0 and 3 surrounding the announcement of Islamic debt issuance. In contrast, Godlewski et al. (2010) and Modirzadehbami and Mansourfar (2011) found a negative significant abnormal return surrounding the event date. This may indicate that there was adverse selection behaviour from the market participants towards the Islamic debt during the research study.

It is to be noted that a new debt issue is likely to be more predictable than a new equity issue because principal repayments are fixed and are more predictable than equity earnings (Smith, 1986). Besides, debt is viewed as a substitute device in reducing agency or asymmetric information problems because debt payments not only reduce the amount of free cash flow under management control but also give managers an incentive to avoid unprofitable new projects. Further, debt payments provide an indication of a firm's future earnings and its quality (Jensen, 1986; Johnson, 1995; Ravid & Sarig, 1991).

Smith (1986) and Magennis, Watts and Wright (1998) suggested that the announcements of debt and equity securities, respectively, have different impacts on stock returns. The impact of debt issues announcement can be classified into three categories of impact: first, the zero impact hypotheses category; second, the positive impact hypotheses category; and third, the negative impact hypotheses category.

The zero impact hypotheses category was proposed, among others, by Modigliani and Miller (1958) and Miller (1977), who asserted that the leverage has no effect on a firm's market value—under their eponymous 'MM propositions'. This category implies that the debt and/or equity issues announcement generates no abnormal returns.

The positive impact hypotheses category was proposed, among others, by Modigliani and Miller (1963), Kraus and Litzenberger (1973), Brennan and Schwartz (1978), DeAngelo and Masulis (1980) and Leland and Pyle (1977). The category generally affirmed that debt has a positive impact on a firm's market value. This category is consistent with the asymmetric information model, that is, the debt issues announcement increases shareholders' wealth (Myers &Majluf, 1984). Debt, in particular the conversion ratio of convertible debt, may serve as a signal of a firm's future earnings; thus, a large conversion ratio implies lower expected earnings because it signals the desire of insiders to share risk (Kim, 1990). This is supposed to encourage positive market participation.

The negative impact hypotheses category was proposed, among others, by Myers and Majluf (1984) and Miller and Rock (1985). Free cash flow theory suggests that prices decline on the issuance of debt (Jensen, 1986). Increase in debt is seen as a diversion of the future cash flows to the bondholders and therefore shareholders might perceive it negatively (Gosh, Varma & Woolridge, 1990). Further, eventual reduction in the ownership concentration may contribute a negative price reaction to debt issues (Gosh et al., 1990). The announcement of pure equity issuance has been associated with a significantly negative impact, whereas the announcement of debt issuance has not been associated with significant price reaction (De Roon & Veld, 1998).

Apart from zero impact hypotheses, there are other factors that may affect the value of a firm, including the reputations of promoters, the management of the company, economic and political

conditions, the role of bulls and bears, government policies, etc. (Dhankar & Boora, 1996). However, the different types of debts also affect a firm's credit rating, which in turn has an impact on stock returns (Eckbo, 1986; Mikkelson & Partch, 1986; Shyam-Sunder, 1991).

Given these mixed evidence, we anchor our study by operationally assuming that the market reacts positively to the issuance of Islamic debt. This allows our data to 'speak for itself' empirically.

Asian debt markets that span the whole geographical Asian continent, on the whole, are essentially heterogeneous in terms of regulations and indifferent stages of regulatory development. These tend to impede transnational investments in the pan-Asian debt market context (Rhee, Lejot & Arner, 2006). Within these contexts, the following may be regarded as impediments to Asian debt market growth:

- Lack of liquid benchmark yield curves.
- Irregular and low frequency of issuance of benchmark government securities.
- Inadequate regulatory frameworks and market micro-structure.

All these impede Asian debt market activities, and subsequently affect the issuance process which may also influence the debt announcement effect. The impact of debt announcements on stock returns has been extensively studied in recent years with mixed empirical results. Even so, few attempts were made to investigate the impact of Islamic debt announcement on stock returns. This study should fill the gap in existing studies on the impact of Islamic debt announcement on stock returns.

As we have previously stated, while there is much work done on stock market reaction to announcements on conventional debts issues, we only found the following relating to the Islamic debt issues, mainly, perhaps, because Islamic debt financing is a relatively newcomer to the markets. The following, namely, Ashhari et al. (2009), Ibrahim and Minai (2009), Godlewski et al. (2010) and Modirzadehbami and Mansourfar (2011) are briefly discussed below.

Ashhari et al. (2009) and Ibrahim and Minai (2009) found that the announcement of the issuance of the Islamic debt conferred a positive effect on shareholders' wealth. In contrast to Ashhari et al. (2009) and Ibrahim and Minai (2009), Godlewski et al. (2010) found a significant negative stock market reaction to the announcement of Islamic debt. Similar to Godlweski, Turk-Ariss and Weill (2010), Modirzadehbami and Mansourfar (2011) also found a negative stock market reaction to the announcement of Islamic debt, but it was not to a significant degree. The inconclusive results might be an artefact of the different methods used, the different number of samples used and the different lengths of observation periods. Our study attempts to remedy these by employing a more robust method, a larger sample and a longer period of observation.

Our research setting is in the Southeast Asian markets, with focus on Malaysia and Indonesia. These two countries are chosen because the former now constitutes one of the largest and most active (if not the largest and the most active) Islamic security market in the world and Indonesia is arguably the largest Islamic nation on earth. Hence, these two countries, combined, if not individually, are highly influential in Islamic affairs and Islamic finance.

Market Efficiency

Fama (1970) was the first scholar to define three types of efficient markets. The first of these, weak form efficiency, asserts that stock prices already reflect information contained in the past. The second, semi-strong efficiency, asserts that stock prices already reflect all publicly available information. The third, strong form efficiency, asserts that stock prices reflect all relevant information, including inside

information. This study assumes the weak form market efficiency hypothesis, thus allowing us to examine whether the price movements surrounding the Islamic debt announcement are predictable at all. By assuming this form of efficiency, we are then permitted to confirm that the generation of abnormal returns, if any, is solely driven by the announcement or driven by the price trends.

Further assumptions embedded in Fama's (1970) efficient market hypotheses are nil transaction costs; all relevant information available to all market participants without cost; and total agreement on the implications of current information for the current price and the distributions of future prices. But in fact, Fama argued that transaction costs and information may not be freely available to all investors; hence, measuring these costs and informational effects on the process of price formation is the major goal of empirical studies on market efficiency (Fama, 1970).

Many previous studies on weak form efficiency focused only on the level of price movement. As Roberts (1959) once noted, financial theories maintain that only the patterns of past stock prices need to be studied although successive levels of stock prices can reveal an appearance of pattern or trend. A few studies tried to examine runs of price changes (Roberts, 1959) and the magnitude of the adjustment (Keane, 1983) in empirical and hypotheses settings. Roberts (1959) suggested that scholars should analyze price changes as well as price levels.

To date, these studies have only focused on the conventional securities issuances, and there is no study that investigates Islamic debt issues in the context of 'market efficiency'. We attempt here to address this gap by examining Islamic debt issuances in this context. That is, how price movements correlate with Islamic debt issuance, by testing the weak form efficiency of the Islamic debt market. We note that previous research in this field was limited to just the impact of announcements; we found that there was hardly any discussion in our extensive literature review on Islamic debt in this domain. Hence, we anchor our study by operationally assuming that the price movements surrounding the announcement of Islamic debt are random.

It is noted that the few studies that have investigated the impact of Islamic debt announcement using 'event study' are inconclusive. These ambivalent results may have stemmed from several factors, such as deploying inappropriate time frames and using unsuitable methods that result in a incompatible observations. Our study provides stronger evidence of the effect of Islamic debt announcement on stock return by using a larger data set than prior studies and we used more robust econometric analysis than before.

Data and Methodology

Data employed in this study were obtained from the Islamic Finance Information Service (IFIS) database. The sampling period is from 2000 to 2009, which is 10 years. The quality of our data is constrained by availability of the data, which in turn were affected by the size of the offering, the maturity length, the history of the issuance and availability of other accounting information. Even so, 80 Malaysian firms and 20 Indonesian firms were examined for use in this study.

We follow the conventional event study analysis by using the average abnormal return (AAR) and cumulative average abnormal return (CAAR) as our variable of interest. Average abnormal return is the average abnormal return across the candidate firms, while CAAR is the cumulative average abnormal return across these firms. 'Abnormal return' is defined as the difference between the expected return and the actual return on investment. Abnormal return may be either positive or negative. We can calculate the 'normal return' from a list of three conventionally accepted abnormal return benchmarks, namely, (i) mean adjusted return, (ii) market adjusted return and (iii) market model return.

According to Castillo (2004), who examined the impact of bond and equity announcement, the market corrected model and the market model minimize the variance of the abnormal return by removing the portion of the returns related to the market movements; hence, this widens the possibility to detect the event effect. We therefore use the abnormal return benchmark that has a mean adjusted return, along with the market model in this study. The mean adjusted return is given as follows (Binder, 1998; MacKinlay, 1997; Peterson, 1989):

$$A_{it} = R_{it} - \overline{R}_i$$

where A_{it} is the abnormal return, R_{it} and $\overline{R}_i$ are the period t returns on security i and the average returns, respectively.

Similarly, the market adjusted return is given as follows (Binder, 1998; Brown & Warner, 1985; Peterson, 1989):

$$A_{it} = R_{it} - R_{mt}$$

where R_{it} and R_{mt} are the period t returns on security i and the market portfolio, respectively; this method only requires the return market.

The market model is formulated as follows (Ashhari et al., 2009; Binder, 1998; Ibrahim & Minai, 2009; MacKinlay, 1997; Martel & Padron, 2006; Modirzadehbami & Mansourfar, 2011; Peterson, 1989; Shyam-Sunder, 1991):

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it}$$

Given the following assumptions,

$$E(\varepsilon_{it} = 0) \qquad Var(\varepsilon_{it}) = \sigma^2_{\varepsilon_i}$$

where R_{it} and R_{mt} are the period t returns on security i and the market portfolio, respectively, ε_{it} is the zero mean disturbance term. α_i, β_i and $\sigma^2_{\varepsilon_i}$ are the parameters of the market model. The beta is estimated using Blume's method (Blume, 1975).

We use event study methodology to examine whether the market reacts favourably to a firm announcing an issue of Islamic debt as Saravanakumar (2011) employed to investigate the impact of dividend announcement on Indian Bourses.We accept that Brown and Warner (1985) revealed a series of problems with daily returns, such as non-normality of the returns, non-synchronous trading affects the reliability of the ordinary least square (OLS) estimates, autocorrelation in daily excess returns and variance increases on the days around an event. We feel that the daily stock return is acceptable in this study because it best captures the effect of the announcement date surrounding the event date with acceptably low distortion. This is further supported by the fact that daily returns are more powerful than those using monthly returns (Peterson, 1989).

Typically, the estimation window is about 250 days for daily data; however, certain discretion is allowed for us to vary the estimation window size, depending on the characteristics and circumstances of the data set (Thomson, 1995). For our purpose, we used a 120-day estimation window, a 31-day event window and a 120-day post-estimation window. The 120-day estimation window will allow us to capture signalling effect of the Islamic debt issuance before the event window. We used a 15-day 'before the event' date as the event window because, technically, the Malaysian Securities Commission typically

grants its approval for Islamic debt (*sukuk*) proposal issuance within 14 working days, as prescribed in the Malaysian Securities Commission Guidelines, 2009. Figure 1 illustrates the typical estimation window.

Furthermore, the aggregation of the time series distribution of returns at the time length of an event examines whether mean abnormal returns for periods around the event are equal to zero (equation [2] or [3]). In estimating the performance measure over any multi-period interval (e.g., time 0 through +10), there are a number of methods for time series aggregation over the period of interest. The cumulative average residual (CAR) method uses as the abnormal performance measure the sum of each month's average abnormal performance. The CAR is to accommodate a multiple period event window.

$$AR_t = \frac{1}{N}\sum_{i=1}^{N} e_{it} \tag{1}$$

$$CAR_i = AR_{i,t1} + \cdots + AR_{i,t2} \tag{2}$$

$$CAR_i(\tau_1, \tau_2) = \sum_{\tau=\tau_1}^{\tau_2} AR_{i\tau} \tag{3}$$

Under the null hypothesis, H_0, that the event has no impact on the behaviour of returns (mean or variance) in observation length of the event window (MacKinlay, 1997):

$$AR_{i\tau} \sim N(0, \sigma_i^2(AR_{i\tau})) \tag{4}$$

The variance of CAR_i is:

$$\sigma_i^2(\tau_1, \tau_2) = (\tau_2 - \tau_1 + 1)\sigma_{\varepsilon_i}^2 \tag{5}$$

The distribution of the CAR under H_0 is no abnormal return, then:

$$CAR_i(\tau_1, \tau_2) \sim N(0, \sigma_i^2(\tau_1, \tau_2)) \tag{6}$$

The aggregation is calculated through time and across securities:

$$AAR_t = AR_{i,t1} + \cdots + AR_{i,t2} \tag{7}$$

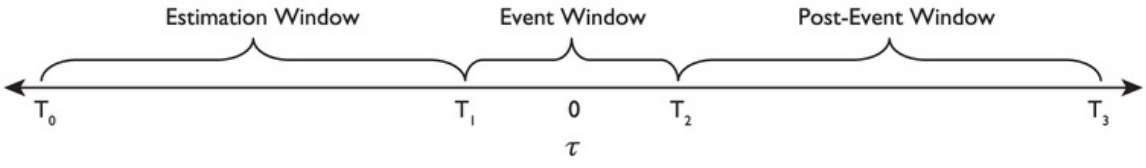

Figure 1. Estimation Window

Source: Kothari & Warner (2006).

Notes: τ = 0 as the event date; $\tau = T_1 + 1$ to T_2 as the event window; $\tau = T_0 + 1$ to T_1 as the estimation window; and $\tau = T_2 + 1$ to T_3 as the post-estimation window.

$$AAR_t = \frac{1}{N}\sum_{i=1}^{N} AR_i \tag{8}$$

$$CAAR_t = \sum_{t=t1}^{t2} AAR_t \tag{9}$$

The variance of $CAAR_i$ is:

$$\sigma_i^2(\tau_1, \tau_2) = (\tau_2 - \tau_1 + 1)\sigma_{\varepsilon_i}^2 \tag{10}$$

The distribution of the CAAR under H_0 is no abnormal return, then:

$$CAAR_i(\tau_1, \tau_2) \sim N(0, \sigma_i^2(\tau_1, \tau_2)) \tag{11}$$

A test statistic is typically computed and compared to its assumed distribution under the null hypothesis that mean abnormal performance equals zero. The null hypothesis is rejected if the test statistic exceeds a critical value, typically corresponding to the 5 per cent or 1 per cent tail region (i.e., the test level or size of the test is 0.05 or 0.01). The test statistic is a random variable because abnormal returns are measured with error. Two factors contribute to this error. First, predictions about securities' unconditional expected returns are imprecise. Second, individual firms' realized returns at the time of an event are affected for reasons unrelated to the event, and this component of the abnormal return does not average to literally zero in the cross section. For the CAR shown in equation (2) or (3), a standard test statistic is the CAR divided by an estimate of its standard deviation.Many alternati ways to estimate this standard deviation have been examined in the literature (MacKinlay, 1997). The test statistic is given by:

$$\frac{CAR(t_1 t_2)}{[\sigma^2(t_1 t_2)]^{1/2}} \tag{12}$$

where, $\sigma^2(t_1 t_2) = L\sigma^2(AR_t)$. (13)

The test statistic in Equation (12) provides the variance of one-period mean abnormal re n and Equation (13) assumes time series independence of one-period mean abnormal return. $\sigma^2(AR_t)$ is the variance of the one-period mean abnormal return.

After testing the power of AAR and CAAR, this study tested for randomness to examine whether the price movements are predictabl not. There are a few methods that can be used to test randomness, such as run test, variance ratio test, autocorrelation test, t root test and autoregressive conditional heteroskedasticity (ARCH) test. This study employed the unit root test. The early and pioneering work on testing for a unit root test in time series was done by Dickey and Fuller (1979). The basic objective of the test is to test whether the series is random. This test is employed to support the event study analysis; therefore, a broader insight can be provided.

Empirical Results

This section presents the empirical results of the market reaction towards the Islamic debt issue announcement for Malaysia and Indonesia. As previously noted, Malaysia is referred to as group 1 and Indonesia is referred to as group 2. This part has three sections: first, the result of the event study

analysis; second, the result for the unit root test; third, a summary of the results. The first section is divided into two parts: first, results for AAR and CAR and second, the *t*-test results for CAAR. The second section provides the results for the unit root test. After examining the evidence of the existence of abnormal returns surrounding the announcement date and the event date, this study investigates whether the price movements are predictable or not.

Event Study Analysis Results

Average Abnormal Return and Cumulative Average Abnormal Return

AAR and CAAR on the Announcement Date, 1 Day Prior to and after the Announcement Date

Two different time frames were used to observe the impact of the event date when firms announced their issuance of Islamic debt: the first is 3 days (–1 to +1), and the second is 31 days (–15 to +15). Tables 4 and 5 provide the result for the 3-day time span, and Tables 6 and 7 provide the result for the 31-day time span. For each span, the results provided are for groups 1 and 2. Furthermore, for each group, there are three different results provided according to the abnormal return benchmarks used in this study (mean adjusted return, market adjusted return and market model return.

Table 4 shows the impact of the Islamic debt announcements using the mean adjusted return, market adjusted return and market model return for group 1. The effect of the announcement is negative and significant for both AAR and CAAR. Furthermore, the result for 1 day prior to the announcement is positive but not significant, and 1 day after the announcement is negative and significant. Using the market adjusted return for group 1,the effect of the announcement is negative and significant for both AAR and CAAR. Furthermore, the result for 1 day prior to and 1 day after the announcement is positive and significant. Using the mean adjusted return for group 1, the effect of the announcement is negative and significant for both AAR and CAAR. Further more, the result for 1 day prior to the announcement is positive and significant, and 1 day after the announcement is positive but not significant.

Overall, a negative and significant finding obtained at the announcement date using three benchmarks return model for group 1 supports the negative impact hypothesis, proposed by the likes of Miller and Rock (1985), Myers and Majluf (1984) and Covitz and Harrison (1999). According to this theory, the announcement of risky debt should have a negative impact on a firm's market value. Islamic debt is claimed as more secure than conventional debts since most of the contract is based on the underlying assets or partnership; however, this gives no guarantee that the Islamic debt is free from the risk of being defaulted. Moreover, since Islamic debt is viewed as a new instrument, the markets have a lack of experience in utilizing it and they therefore lack a strong belief that they will earn profits. Furthermore, there might be an adverse selection mechanism which favours the use of Islamic debt by lower-quality debtor companies (Godlewski et al., 2010).

In addition, this negative finding is similar to the study by Godlewski et al. (2010) which finds a negative and significant stock market reaction to the announcement of Islamic debt issuance. In addition, Modirzadehbami and Mansourfar (2011) also find that at the announcement date of Islamic debt issuance, the return is negative; however, their result is not significant. Although this finding supports the negative impact hypothesis, this finding is in contrast with the finding of Ashhari et al. (2009) which found that Islamic debt announcement has a positive and significant impact on shareholders' wealth. In addition, Ibrahim and Minai (2009) also found a positive but not significant impact. The different results obtained may be due to the different periods of observation time employed and the different number of samples used.

Table 4. Group 1

Day	Mean Adjusted Return				Market Adjusted Return				Market Model Return			
	AAR	*t*-value	CAAR	*t*-value	AAR	*t*-value	CAAR	*t*-value	AAR	*t*-value	CAAR	*t*-value
–1	0.0009	0.989	0.0009	0.9891	0.0017	16.779	0.0017	16.779	0.0020	20.198	0.0020	20.198
0	–0.0043	–59.488	–0.0034	–47.527	–0.0024	–34.968	–0.0006	–0.9381	–0.0023	–34.123	–0.0003	–0.4974
1	0.0016	17.627	–0.0018	–19.381	0.0025	29.363	0.0018	21.708	0.0011	11.575	0.0007	0.7899

Source: Authors' own.

Table 5. Group 2

Day	Mean Adjusted Return				Market Adjusted Return				Market Model Return			
	AAR	*t*-value	CAAR	*t*-value	AAR	*t*-value	CAAR	*t*-value	AAR	*t*-value	CAAR	*t*-value
–1	–0.0068	–74.828	–0.0068	–74.828	0.0032	27.924	0.0032	27.924	–0.0055	–69.447	–0.0055	–69.447
0	0.0135	126.455	0.0066	62.256	0.0083	85.134	0.0115	118.625	0.0122	133.129	0.0066	72.478
1	0.0054	245.262	0.0120	545.466	0.0017	59.595	0.0132	474.296	0.0024	96.192	0.0090	359.052

Source: Authors' own.

Table 5 shows the impact of the Islamic debt announcements using the mean adjusted return for group 2. The effect of the announcement is positive and significant for both AAR and CAAR. Furthermore, the result for 1 day prior to and 1 day after the announcement is positive and significant. In addition, this finding for group 2 is in contrast with group 1 in that it yields a negative finding. Using the market adjusted return for group 2, the effect of the announcement is positive and significant for both AAR and CAAR. Furthermore, the result for 1 day prior to and 1 day after the announcement is positive and significant. In addition, this finding for group 2 is in contrast with group 1 in that it yields a negative finding. Using the market model return for group 2, the effect of the announcement is positive and significant for both AAR and CAAR. Furthermore, the result for 1 day prior to the announcement is negative and significant, and 1 day after the announcement is positive and significant. In addition, this finding for group 2 is in contrast with group 1 in that it yields a negative finding.

Overall, a positive and significant finding obtained at the announcement date using three benchmarks return model for group 2 supports the positive impact hypothesis, proposed by the likes of Modigliani and Miller (1963), Kraus and Litzenberger (1973), Brennan and Schwartz (1978), DeAngelo and Masulis (1980), Myers (1977), Jensen and Meckling (1976) and Leland and Pyle (1977). According to this theory, the announcement of debt has a positive impact on a firm's market value. The positive impact might be (i) the result of a tax shield generated by debt that makes the value of the company increase with the proportion of debt over assets (Modigliani & Miller, 1963), (ii) the trade-off between a tax advantage and a cost of financial distress (Brennan & Schwartz, 1978; DeAngelo & Masulis, 1980; Kraus & Litzenberger, 1973), (iii) the trade-off between a tax advantage of debt and agency costs and adverse managerial effects of debt (Myers, 1977), (iv) the trade-off between agency costs of debt and agency costs of equity (Jensen & Meckling, 1976) or (v) information asymmetries where managers have superior information relative to the investors (Heinkel, 1982; Leland & Pyle, 1977).

AAR and CAAR on 15 Days Prior to and 15 Days after the Announcement Date

This section discusses the impact of the announcement for the longer time frame of 31 days (–15 to +15). Table 6 shows the impact of Islamic debt announcement using the mean adjusted return model. The effect of the announcement is negative and significant for AAR and CAAR on the event day. As noted previously, the 31-day span of the event window ranges between –15 and +15, and during this time span, only –14 day and +12, +13 and +15 days are not significant. One day before and after the announcement, the AAR is positive and significant, but this is not the case for CAAR. However, the AAR is a negative start from the second day after the announcement until day five, and this may be caused by the pessimistic reaction of the market towards this new type of debt, hereafter the AAR fluctuates. The individual days prior to and following the announcement and their respective CARs are significant from zero; therefore the null hypothesis can be rejected. The significant results of the CAAR from –15 to +15 may suggest that the issuance information was leaked to the market prior to the announcement on the stock exchange. The positive return prior to the announcement date continues to record a positive return after the announcement date until day one.

Using the market adjusted return model, the effect of the announcement is negative and significant for AAR but positive and significant for CAAR on the event day. The span of the event window ranges between –15 and +15, and during this span, only –11 day and +11 day are not significant. One day before and after the announcement, the AAR and CAAR are positive and significant. However, the AAR is a negative start from the second day after the announcement until day five, and this may be caused by the pessimistic reaction of the market to this new type of debt, hereafter the AAR fluctuates. The individual days prior to and following the announcement and their respective CARs are significant from zero, therefore the null hypothesis can be rejected. The significant results of the CAAR over –15 to +15 may

Table 6. Group 1

Day	Mean Adjusted Return				Market Adjusted Return				Market Model Return			
	AAR	*t*-value	CAAR	*t*-value	AAR	*t*-value	CAAR	*t*-value	AAR	*t*-value	CAAR	*t*-value
−15	−0.0013	−25.986	−0.0013	−25.986	0.0009	24.280	0.0009	24.280	−0.0007	−13.365	−0.0007	−13.365
−14	0.0009	14.829	−0.0004	−0.6036	0.0032	66.218	0.0041	84.016	0.0031	61.332	0.0024	47.117
−13	−0.0032	−62.209	−0.0035	−69.674	−0.0021	−51.418	0.0020	49.681	−0.0018	−63.987	0.0005	19.148
−12	−0.0028	−46.714	−0.0063	−105.512	−0.0006	−12.318	0.0014	27.539	−0.0020	−51.060	−0.0014	−36.898
−11	−0.0039	−56.991	−0.0103	−149.282	−0.0023	−27.950	−0.0010	−11.472	−0.0026	−51.155	−0.0040	−78.974
−10	0.0018	21.083	−0.0085	−100.456	0.0024	36.430	0.0014	21.621	0.0030	45.322	−0.0010	−15.219
−9	−0.0056	−151.405	−0.0141	−382.162	−0.0028	−65.567	−0.0014	−32.828	−0.0045	−211.072	−0.0056	−258.294
−8	0.0014	25.342	−0.0127	−228.285	0.0036	78.610	0.0022	47.963	0.0022	61.316	−0.0034	−96.831
−7	−0.0025	−30.307	−0.0151	−185.702	−0.0011	−17.270	0.0011	16.015	−0.0017	−26.093	−0.0051	−78.602
−6	−0.0006	−12.477	−0.0158	−307.434	0.0008	16.079	0.0019	36.908	0.0009	27.303	−0.0041	−119.515
−5	0.0005	0.6286	−0.0153	−198.011	0.0035	43.570	0.0054	66.999	0.0018	31.372	−0.0024	−42.337
−4	0.0021	26.586	−0.0132	−167.137	0.0047	64.922	0.0101	138.303	0.0038	66.940	0.0014	24.901
−3	0.0018	13.728	−0.0114	−87.595	0.0029	24.619	0.0130	110.366	0.0044	37.620	0.0058	49.785
−2	−0.0012	−14.043	−0.0126	−150.344	−0.0015	−28.002	0.0115	210.900	0.0000	0.0537	0.0058	122.155
−1	0.0009	0.9891	−0.0117	−134.328	0.0017	16.779	0.0132	127.012	0.0020	20.198	0.0077	80.013
0	−0.0043	−59.488	−0.0160	−221.930	−0.0024	−34.968	0.0108	158.722	−0.0023	−34.123	0.0055	81.354
1	0.0016	17.627	−0.0144	−155.187	0.0025	29.363	0.0133	158.884	0.0011	11.575	0.0065	71.694
2	−0.0023	−19.003	−0.0167	−137.170	−0.0003	−0.3141	0.0130	147.264	0.0001	0.1324	0.0066	77.680
3	−0.0038	−69.317	−0.0205	−370.393	−0.0002	−0.3309	0.0128	238.679	−0.0035	−76.934	0.0032	69.916
4	−0.0019	−19.058	−0.0224	−224.661	−0.0007	−0.6830	0.0121	118.556	−0.0001	−0.1602	0.0030	34.686
5	−0.0039	−53.430	−0.0263	−360.375	−0.0017	−19.810	0.0105	124.168	−0.0026	−38.471	0.0005	0.6904
6	0.0016	23.763	−0.0247	−360.886	0.0032	58.946	0.0137	252.635	0.0025	51.911	0.0029	61.479
7	−0.0072	−118.655	−0.0318	−527.749	−0.0055	−118.384	0.0082	176.310	−0.0087	−101.003	−0.0058	−66.895
8	−0.0015	−19.462	−0.0334	−420.530	0.0013	19.520	0.0095	139.477	−0.0001	−0.1060	−0.0058	−96.688
9	−0.0033	−56.778	−0.0367	−629.781	−0.0022	−41.112	0.0073	134.494	−0.0016	−35.896	−0.0074	−166.547
10	0.0027	23.686	−0.0340	−296.895	0.0051	50.479	0.0124	122.561	0.0041	43.621	−0.0033	−35.616
11	−0.0024	−23.793	−0.0364	−358.658	−0.0012	−15.158	0.0111	137.340	−0.0008	−0.9776	−0.0041	−53.240
12	0.0554	0.2400	0.0190	0.0824	0.0574	0.2360	0.0685	0.2818	−0.0037	−76.604	−0.0078	−160.688
13	−0.0151	−12.233	0.0040	0.3222	−0.0119	−11.801	0.0567	56.325	−0.0009	−28.282	−0.0088	−263.189
14	−0.0017	−17.921	0.0023	23.554	0.0004	0.4676	0.0570	699.866	−0.0013	−14.660	−0.0101	−110.447
15	−0.0025	−21.384	−0.0003	−0.2425	−0.0001	−0.0889	0.0569	456.985	−0.0009	−0.9040	−0.0111	−107.580

Source: Authors' own.

suggest that the issuance information was leaked to the market prior to the announcement on the stock exchange. The positive return prior to the announcement date continues to record a positive return after the announcement date until day one.

Using the market model return, the effect of the announcement is negative and significant for AAR but positive and significant for CAAR on the event day. The event window spans from –15 to +15, and during this span, only +5 day is not significant. One day before and after the announcement, the AAR and CAAR are positive and significant. However, the AAR is a negative start from the third day after the announcement until day five, and this again may be caused by the market's pessimistic reaction to this new type of debt, hereafter the AAR fluctuates. The individual days prior and following the announcement and their respective CARs are significant from zero, therefore the null hypothesis can be rejected. The significant results of the CAAR from –15 to +15 may suggest that the issuance information was leaked to the market prior to the announcement on the stock exchange. The positive return prior to the announcement date continues to record a positive return after the announcement date until day one.

Overall, a negative and significant finding obtained at the announcement date using three benchmarks return model for group 1 supports the negative impact hypotheses proposed by scholars, such as Miller and Rock (1985), Myers and Majluf (1984) and Covitz and Harrison (1999). The negative result is caused by the asymmetric information where uninformed investors will ask for a discount to hedge against the risk of buying an overvalued security. However, CAAR is positive which may suggest the positive impact hypotheses at work. This theory suggests that an issuance of debt should generate a positive abnormal return.

Table 7 shows the impact of Islamic debt announcement using the mean adjusted return for group 2. The effect of the announcement is positive and significant for AAR but negative and significant for CAAR on the event day. The event window spans from –15 to +15, and during this span only –10, –9, +2 and +5 are significant for AAR, while +12 and +15 were significant days for CAAR. One day before the announcement, the AAR is negative and significant, while the day after the announcement, the AAR is positive and significant. For CAAR, the day before and after the announcement is negative and significant. However, the AAR is a negative start from the third day until one day before the announcement, and this may be caused by the pessimistic market reaction to this new type of debt as two days after the announcement the AAR fluctuates. All the days for CAAR are negative and mostly significant except +12 and +15. The individual days before and after the announcement and their respective CARs are significant from zero; therefore the null hypothesis can be rejected. The significant results of CAAR from –15 to +15 may suggest that the issuance information was leaked to the market prior to the announcement on the stock exchange. The positive return prior to the announcement date continues to remain positive after the announcement date until day one.

Using the market adjusted return for group 2, the effect of the announcement is positive and significant for AAR but negative and significant for CAAR on the event day. The event window spans from –15 to +15, and during this span, only days +12 and +14 are not significant for CAAR. One day before and after the announcement, the AAR is positive and significant; one day before and after the announcement, the CAAR is negative and significant. However, the AAR is a negative start from the third day until the second day before the announcement, and this may be caused by the market's pessimistic reaction to this new type of debt. Two days after the announcement day, the AAR fluctuates. The majority of the CAAR is negative and mostly significant except for days +12 and +14. The individual days before and after the announcement and their respective CARs are significant from zero; therefore the null hypothesis can be rejected. The significant results of CAAR from –15 to +15 may suggest that the issuance information was leaked to the market prior to the announcement on the stock exchange. The positive

Table 7. Group 2

Day	Mean Adjusted Return				Market Adjusted Return				Market Model Return			
	AAR	*t*-value	CAAR	*t*-value	AAR	*t*-value	CAAR	*t*-value	AAR	*t*-value	CAAR	*t*-value
−15	−0.00	−78.984	−0.0011	−78.984	−0.0055	−103.771	−0.0055	−103.771	−0.0024	−185.433	−0.0024	−185.433
−14	−0.0036	−179.264	−0.0047	−234.273	0.0003	13.251	−0.0052	−223.575	−0.0012	−88.654	−0.0036	−270.442
−13	−0.0036	−114.295	−0.0083	−265.458	−0.0147	−272.127	−0.0198	−367.818	−0.0071	−177.425	−0.0107	−267.877
−12	−0.0084	−308.031	−0.0167	−611.024	−0.0073	−180.700	−0.0271	−671.483	−0.0095	−351.621	−0.0202	−746.269
−11	−0.0045	−68.777	−0.0211	−323.785	−0.0033	−42.035	−0.0304	−388.058	−0.0040	−70.045	−0.0242	−423.389
−10	−0.0004	−0.3213	−0.0215	−182.492	−0.0005	−0.3838	−0.0309	−251.677	0.0002	0.1382	−0.0241	−208.462
−9	0.0018	13.873	−0.0198	−154.670	0.0055	36.151	−0.0254	−166.951	0.0037	28.435	−0.0203	−155.833
−8	0.0061	102.206	−0.0136	−227.040	0.0094	140.991	−0.0160	−238.819	0.0053	104.503	−0.0150	−293.657
−7	−0.0041	−51.542	−0.0177	−223.187	−0.0033	−40.216	−0.0192	−237.403	−0.0061	−61.237	−0.0211	−211.668
−6	−0.0039	−142.592	−0.0216	−795.517	−0.0082	−183.435	−0.0274	−615.921	−0.0018	−58.329	−0.0229	−742.082
−5	−0.0105	−333.984	−0.0321	−102.218	−0.0028	−77.156	−0.0303	−818.997	−0.0096	−293.868	−0.0326	−991.589
−4	0.0106	91.860	−0.0215	−186.523	0.0103	74.827	−0.0199	−144.850	0.0104	113.986	−0.0221	−241.578
−3	−0.0157	−321.999	−0.0372	−761.794	−0.0144	−415.483	−0.0344	−989.847	−0.0132	−298.330	−0.0353	−799.159
−2	−0.0046	−118.627	−0.0418	−107.726	−0.0002	−0.2846	−0.0346	−547.967	−0.0036	−76.108	−0.0389	−818.804
−1	−0.0068	−74.828	−0.0486	−532.801	0.0032	27.924	−0.0313	−269.123	−0.0055	−69.447	−0.0445	−557.044
0	0.0135	126.455	−0.0352	−330.662	0.0083	85.134	−0.0230	−237.635	0.0122	133.129	−0.0323	−353.368
1	0.0054	245.262	−0.0298	−135	0.0017	59.595	−0.0214	−771.159	0.0024	96.192	−0.0299	−118,540
2	0.0005	0.4631	−0.0292	−255.225	−0.0060	−103.050	−0.0274	−468.361	0.0023	22.235	−0.0275	−261.249
3	−0.0089	−309.427	−0.0381	−132.479	−0.0034	−110.328	−0.0308	−100.542	−0.0088	−322.693	−0.0363	−133.183
4	0.0134	184.918	−0.0247	−340.270	0.0131	104.809	−0.0177	−141.827	0.0130	180.106	−0.0234	−324.157
5	0.0004	0.8015	−0.0243	−525.765	−0.0013	−17.201	−0.0190	−249.765	0.0037	90.187	−0.0196	−471.599
6	0.0071	83.649	−0.0172	−201.556	−0.0013	−16.704	−0.0203	−262.202	0.0053	53.250	−0.0143	−144.128
7	−0.0039	−42.912	−0.0211	−234.108	−0.0042	−80.298	−0.0245	−468.003	−0.0056	−68.014	−0.0199	−242.350
8	−0.0147	−96.830	−0.0358	−235.591	−0.0042	−21.964	−0.0288	−149.470	−0.0154	−109.480	−0.0353	−251.346
9	0.0058	65.987	−0.0300	−343.890	0.0000	−0.0185	−0.0288	−195.341	0.0058	69.808	−0.0295	−358.171
10	−0.0021	−54.073	−0.0321	−830.432	−0.0032	−47.707	−0.0320	−480.150	−0.0009	−17.197	−0.0304	−603.769
11	0.0051	103.817	−0.0270	−547.886	0.0005	0.7145	−0.0314	−429.878	0.0036	60.264	−0.0268	−450.314
12	0.0292	35.120	0.0022	0.2662	0.0349	34.521	0.0035	0.3414	0.0287	39.028	0.0019	0.2639
13	−0.0090	−81.723	−0.0068	−61.567	−0.0046	−43.272	−0.0012	−10.915	−0.0087	−57.055	−0.0067	−44.269
14	0.0139	53.941	0.0072	27.807	0.0038	14.062	0.0026	0.9703	0.0114	46.497	0.0047	19.164
15	−0.0072	−134.678	0.0000	0.0000	−0.0066	−76.545	−0.0041	−46.718	−0.0047	−83.281	0.0000	0.0000

Source: Authors' own.

return prior to the announcement date continues to record a positive return after the announcement date until day one.

Using the market model return for group 2, the effect of the announcement is positive and significant for AAR but negative and significant for CAAR on the event day. The event window spans from −15 to +15, and during this span, only days +12 and +15 are not significant for CAAR. One day before the announcement, the AAR is negative and significant, while one day after the announcement, the AAR is positive and significant. For CAAR, 1 day before and after the announcement is negative and significant. However, the AAR is a negative start from the seventh day until one day before the announcement, and this may be caused by the market's pessimistic reaction to this new type of debt. Two days after the announcement, the AAR fluctuates.

With the exception of days +12 and +15, all the days for CAAR were negative and significant. The individual days prior to and following the announcement and their respective CARs are significant from zero; therefore the null hypothesis can be rejected. The significant results of CAAR from −15 to +15 may suggest that the issuance information was leaked to the market prior to the announcement on the stock exchange. The positive return prior to the announcement date continues to record a positive return after the announcement date until day one.

Overall, a positive and significant finding obtained at the announcement date using three benchmarks return model for group 2 supports the positive impact hypotheses (Brennan & Schwartz, 1978; DeAngelo & Masulis, 1980; Jensen & Meckling, 1976; Kraus & Litzenberger, 1973; Leland & Pyle, 1977; Modigliani & Miller, 1963; Myers, 1977). In addition, in Indonesia there is more demand than Islamic debt supply and this triggers the higher pricing. However, the CAAR is negative, and this negative result might be caused by several factors. First, the development of Islamic finance has received minimal commitment and support from the Indonesian government at all levels. Second, there is a lack of Islamic finance legal frameworks, therefore market players are hesitant and choose to wait and see until they are sure about the government's position. Third, Islamic finance in Indonesia has no Islamic finance governance which regulates the policy and benchmark for the Islamic finance industry. Fourth, asymmetric information encourages uninformed investors to ask for a discount in order to hedge against the risk of buying an overvalued security. Finally, the market players in Indonesia tend to use a buy and hold strategy because of the thin trading.

T-test for CAAR

Table 8 provides the *t*-test for CAAR. Using the 31 days, 21 days, 11 days, 7 days and 3 days event windows, every span, apart from the 21-day span, revealed that there is no effect on wealth of the shareholders of firms offering Islamic debt. This result supports the unit root test result that the market is efficient. In contrast with group 1, every span apart from the 3-day span revealed that the announcement of Islamic debt had a significant impact. However, the effect is one that sees the reduction of the wealth of shareholders of firms offering Islamic debt. This result supports the unit root test result that the market is inefficient in the context of weak form.

Unit Root Test

After examining the impact of Islamic debt announcement on the event date, the next section investigates whether the price movements are solely random or predictable. Table 9 shows the unit root test results

Table 8. *t*-test for CAAR

Interval (days)	Group 1 CAAR	Group 1 *p*-value	Group 2 CAAR	Group 2 *p*-value
From –15 to +15	–0.0041	0.2696	–0.0230	0.0000***
From –10 to +10	–0.0133	0.0106***	–0.0034	0.0855*
From –5 to +5	–0.0068	0.2959	–0.0089	0.0049***
From –3 to +3	–0.0069	0.3481	–0.0139	0.0010***
From –1 to +1	–0.0037	0.5144	0.0036	0.5327

Source: Authors' own.
Notes: *sig. at 10% level, **sig. at 5% level, and ***sig. at 1% level.

for groups 1 and 2. For a longer horizon, which is 120 days prior to the announcement, the result for group 1 is significant for lag 0 and lag 1, which means the null hypotheses can be rejected. The result for a shorter horizon is also similar to the longer horizon, which is significant for lag 0 and lag 1. These two results indicate that the market is efficient in the context of weak form hypotheses, suggesting that the price movements are unpredictable (have no trend). In contrast to the result for group 1, the result for group 2 for longer and shorter horizons is not significant for lag 0 and lag 1, which means the null hypotheses cannot be rejected. This suggests that the market is inefficient in the context of weak form hypotheses. Therefore, the price movements are predictable (have a trend). This predictability for group 2 may be due to several reasons, such as group 2 having thin trading compared to group 1. Other reasons may also include insider trading and high levels of information asymmetries. In addition, group 2 has a small sample, although this finding is consistent with previous work done by Fitriya (2009) which examines the market efficiency of Indonesian Stock Exchange in the context of weak form hypotheses. This previous study had found that the Indonesian Stock Exchange is inefficient.

Conclusion

The findings for event study analysis using three benchmarks reveal that there is a negative and significant impact for both AAR and CAAR for group 1. This negative finding supports the negative impact hypothesis. However, the findings for 1 day prior to and after the announcement date for three benchmarks are slightly different. For the mean adjusted return, the result for 1 day prior to the announcement is positive but not significant, and 1 day after the announcement is negative and significant. For the market adjusted return, the result for 1 day prior to and 1 day after the announcement is positive and significant. For the market model return, the result for 1 day prior to the announcement is positive and significant, and 1 day after the announcement is positive but not significant. This difference might be due to the different method of calculation employed. The mean adjusted return emphasizes the book value while the market adjusted return and market model return emphasize the market value.

In contrast to the findings for group 1, the impact of Islamic debt announcement using three benchmarks is positive and significant for both AAR and CAAR for group 2. This positive finding supports the positive impact hypothesis. However, the findings for 1 day prior to and after the announcement date for three benchmarks are slightly different. For the mean adjusted return, the result for 1 day prior to and 1 day after the announcement is positive and significant. In addition, this finding for group 2 is in contrast with group 1 in that it yields a negative finding. For the market adjusted return, the result for 1 day prior to and 1 day after the announcement is positive and significant. In addition, this

Table 9. The Unit Root Test Results

	Group 1		Group 2	
	Lag 0	Lag 1	Lag 0	Lag 1
120 days	−10.9620***	−7.2720***	−0.0150	−0.0950
p-value	(0.0000)	(0.0000)	(0.9572)	(0.9499)
14 days	−3.6210***	−2.4650*	−0.0920	−0.5580
p-value	(0.0054)	(0.0924)	(0.9502)	(0.8801)

Source: Authors' own.
Notes: *sig. at 10% level, **sig. at 5% level, and ***sig. at 1% level.

finding for group 2 is in contrast with group 1 in that it yields a negative finding. For the market model return, the result for 1 day prior to the announcement is negative and significant, and 1 day after the announcement is positive and significant. In addition, this finding for group 2 is in contrast with group 1 in that it yields a negative finding.

Furthermore, the impact of the announcement for the event window spanning 31 days (from −15 to 15) is varied for the three benchmarks returns used in this study. The results for this window span reveal that the majority of AAR and CAAR are negative and significant. Furthermore, the results for AAR and CAAR in group 1 are almost similar to results found in group 2.

The unit root test result for group 1 indicates that the market is efficient in the context of weak form efficiency, which suggests that the price movements are unpredictable. In contrast to group 1, the unit root test result for group 2 indicates that the market is inefficient in the context of weak form efficiency, which suggests that the price movements are predictable.

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