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Conventional vs Islamic Bond Announcements: The Effects on Shareholders' Wealth

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Abstract

In this study the impact of Islamic bond and conventional bonds announcement on shareholder wealth was investigated. Data was employed from firms that listed in Bursa Malaysia for the period 2001 to 2006. A standard event study methodology with beta refinement using Blume's method is employed to achieve the objective. The results indicate that there is a wealth effect by the announcement of Islamic bond issues. This is consistent with Mikkelson & Partch (1986) that states certain types of debts lead to abnormal return. The bond offering size appears to have a mild negative impact on the cumulative abnormal return.

Keywords: Conventional bond, Islamic bond, Abnormal return, Blume's method

1. Introduction

Typical financing decisions of a firm are to determine how much and what type of debt and equity should be issued to raise the required capital so that it can maximize the value of the firm, which will eventually maximize the wealth of the shareholders. Whether a firm's capital structure affects its stock price is not purely academic, it also has practical implications. If capital structure does not matter (Modigliani & Miller, 1958), then management should not devote much time in choosing the firm's financing strategy. But if it does matter, management should seek the optimal capital structure, one that maximizes the firm's value.

During the financial crisis, banking institutions were strapped with liquidity problems due to non-performing loans. These problems have resulted in firms acquiring their financing needs from bond markets instead of using bank loan financing and equity financing. This situation makes the domestic private debt securities (PDS) market an important avenue for Malaysian firms to raise new funds. Under these circumstances, when firms announce debt financing, will this be perceived favorably or otherwise by the investors?

Many studies have been carried out to examine the wealth effects of bond announcements. Thus far the results obtained are mixed and inconclusive. For instance, Harvey *et. al*. (2003) provided evidence that debt creates shareholder value for firms that face potential high managerial agency costs. Arshanapalli *et. al*. (2004) found that firms experienced

negative abnormal returns around the time of the announcement of convertible bonds. This result contradicts with the findings of Kang & Stulz (1996) and Roon & Veld (1998. Their results showed that announcements of convertible bonds were associated with positive but insignificant abnormal returns. Burlacu (2000) investigates the relation between announcements' effect of convertible bonds and equity components for 141 French convertible bond issues. The results indicate that convertible bond issue announcements implied significant negative market responses. Ammann *et al.* (2004) studied the announcements and issuance effects of offering convertible bonds and exchangeable bonds for the Swiss and German market during January 1996 to May 2003 and found significant negative average abnormal returns on the announcement day for the complete sample and observed no significant effects on the issuance day.

In view of the mixed and inconclusive results obtained thus far, this study aims to provide additional empirical evidence on the effects of bond announcement on stock returns. However, this study is unique and differs from other studies in that it focuses on the difference between conventional bond and Islamic bonds announcements. Furthermore, this study also attempts to validate the results suggested by Mikkelson & Partch (1986), which states that certain types of debts lead to abnormal return. Conventional bond is proxy by straight bond financing as it is purely debt rather than other bonds that have half features of equity (convertible bond and bond with warrant). Islamic bonds have different features due to Shari'ah compliance. In addition, the growth of Islamic PDS in Malaysia has been very encouraging.

In a niche mainstream financial industry, Islamic debt instrument account for a large proportion of the Malaysia PDS market. Demand for Islamic debt instrument, which accounted for only 7% of total bonds raised in 1999, grew to 25% in 2000 and subsequently to 76% in 2005 primarily due to awareness of alternative funding sources. No fewer than 45% of all Malaysian domestic bonds are now *Shari'ah* compliant, especially the larger issues, and the proportion continues to grow. Islamic bonds have becoming increasingly popular and now they are the focus of government. Islamic bonds provide investors, especially Muslim investors to invest in *Shari'ah* compliant investments. This has resulted in better access to a larger investor base, as well as providing lower pricing to issuers via the wider investors pool from the participations of large Islamic investors. Does the growth of the Islamic bond create wealth to the shareholder compare to conventional bond of the issued company?

Investigating this issue could provide additional insights and perhaps different evidence on the debt announcements effects on stock returns in an emerging capital market like Malaysia. The evidence obtained is especially useful to international investors who wish to invest in an emerging capital market. It is a well-known fact that familiarity helps to reduce investment risk. As more and more foreign funds intend to diversify their portfolios, the results of this study should help them to achieve their objectives. Furthermore, the results of this study would provide better insights to managers and the government on this issue. The results of this study can also assist policy-makers to implement new sets of policies regarding the administration of the financial market in Malaysia.

2. Data

Corporate debt announcements gain using the database compiled by Bursa Malaysia from year 2001 to 2006. We then screen the sample to include only firms offering straight bonds and Islamic bond, which are listed in Bursa Malaysia. In addition, the sample of bond offering must have data availability on size of the bond offering, length of bond maturity, a firm's debt ratio and a firm's total assets. To ensure the effect purely from bond announcement, we excluded sample that bundled with other corporate proposals announcements within seven days after the announcement date (Jothee, 2005).

3. Event Study Methodology and Results

3.1 Event Study Methodology

We use market model event study methodology to calculate abnormal returns around each announcement of bond issue. The abnormal return is used to measure the performance of stock prices of firms on certain days (which also reflects the investors' reaction to the event)**,** and is calculated as $AR_{it} = R_{it} - (\alpha_i + \beta_i R_{mt})$, where AR_{it} is the abnormal returns on stock *i* at period *t*, R_{it} is the observed returns on stock *i* at period t, R_{mt} is the returns on market portfolio in period t, α_i is the constant average return of stock *i* and β_i is the beta estimate of stock *i*.

The announcement day (day 0) is defined as the day the bond offering was first make known to the public. The return on the Kuala Lumpur Composite Index (KLCI) is used as a proxy of market returns (Pandey et al., 2000; Annuar & Shamsher, 1993). Sixty-one days (30 days before announcement day and 30 days after the announcement day) was chosen to facilitate the event window analysis in the emerging market. This time period is chosen because any period less then 61 days may not be able to test the effect of the event, as the volatility of the stock is low. For a period of more than 61 days, we cannot really see the effect of the event, as there may be other factors (not included in this study) that may trigger the effect.

The abnormal returns (AR) are then averaged across securities and cumulated over time to identify aggregate abnormal returns behavior. For each day in the event window**,** the averaged residual across firms to produce the average abnormal return (AAR) for that day t relative to the announcement day is as follows:

$$AAR_t = (\sum_{i=1}^{N} AR_{it})N$$

where N is equal to the number of firms in the sample. The AAR_t is the average estimated percentage deviation of the returns of the sampled stock from the normal relationship to the market. The t-statistic is used to analyze whether the AAR are statistically different from zero. The t-statistic test is defined as $t = AAR_t / \delta(AAR)$, where AAR_t is the average abnormal returns of period t and $\delta(AAR)$ is the standard deviation of AAR over the event window, (-30, +30).

The AAR_t is cumulated to identify the aggregate AR behavior: $CAAR_t = \sum_{t=1,\ldots,t} AAR_t$. The computation of $CAAR_t$ is to provide a more accurate figure in determining the longer term effect on share prices from bond announcements. The expected value of $CAAR_t$ is zero in the absence of abnormal performance. The t-value for the CAR_t is given as $t = CAAR_t / \delta(CAAR)$. The standard deviation of CAAR is defined as $\delta(CAAR) = \delta(AAR)\sqrt{N}$, where N is the number of days in the CAAR statistic.

3.2 Refinement of Beta Measurement

In most studies, the beta of a security comes from the regression of security returns against the market returns. However, an obvious disadvantage of the market model is that the returns will be biased if there is a run–up in prices prior to the announcement (Roon & Veld, 1998). The estimated beta is biased since it is derived from historical data and then use to predict the beta (Blume, 1975; Visicek, 1973). This may affect the empirical results and evidence. Due to this limitation, the beta needs to be adjusted to avoid biasness. This is important because the information on the value of the true beta for security is important to forecast the future beta for a security in order to estimate its market risk for a future time period (Mansor & Kim Lian, 2000). Linear regression method is the simplest and most common method used in beta estimation. The beta is estimated by using returns from 120 trading days (Harvey *et. al.*, 2003) prior to the announcement date, excluding the 61 days event window. Then the linear regression beta value is used to compute adjusted betas to get the true beta or unbiased beta in the forecast period. Adjusted beta was computed by using Blume's method so that the results are more accurate. It was the best beta forecasting method for the overall Malaysian market (Mansor & Kim Lian, 2000). In addition, Blume's method is generally appropriate for any conditions arising in the market. It was utilised linear regression beta for two consecutive non-overlapping time periods as shown in Diagram 1.

Linear regression for beta is $\beta_{i2} = a + b\beta_{i1} + \varepsilon_{i2}$ where β_{i1} is the beta of security *i* in time period 1, β_{i2} is the beta of security *i* in time period 2 and ε_{i2} is the error term. The formula above is used to calculate the beta in time period 2. Betas in time period two (first 60 day prior to announcement, excluding the 30 day event window)**,** are regressed on the corresponding betas in time period one (second part of 60 days). The regression coefficient *a* and *b* is then utilized in the following equation to obtain the ex-ante betas in time period 3, β_{i3} (event window), by using the ex-post betas (β_{i2}) in time period 2 as $\beta_{i3} = a + b\beta_{i2}$. The β_{i3} obtained is used to forecast the corresponding "true" betas in time period three. The reason why several time periods to measure the beta is used is because it continually changes overtime (Blume, 1975), which can result in a biased beta. So, if the true beta follows a linear time trend, it can be easily shown that the estimated beta is unbiased so that the results are more accurate.

3.3 Results

Table 1 shows the summary of average abnormal returns on day –1, day 0 and day+1 of bond announcement. The average abnormal returns for Islamic bonds are 0.9598% for day –1, 0.5685% for announcement date and 0.9384% for day +1. The positive abnormal return on a day before announcement is significant at 10%. Meanwhile the announcement of Islamic bonds has not resulted significant positive effect on the stock returns during announcement day and a day after. This can be observed in the t-test statistics of 0.9169% for day 0 and 1.5135% for day +1. This could be due to the fact that information of Islamic bonds offering often leaks out to the market before the announcement (as we can see on day-1) is made by the firm. However, none of day surrounding conventional bonds announcement have any significant effect on stock return. These reveal in Table 1, where the AARt of conventional bonds from day -1 to day +1 are 2.221% (t-statistic = 1.723), 0.882% (t-statistic = 0.684) and 0.064% (t-statistic = 0.050). However, none of these results are significant at 5%. Hence, the announcement of conventional bonds normally carries no surprise to the market.

The summary results of cumulative average abnormal return (CAARt) for the whole sample shows in Table 2. Using the conventional event window of day (-1, +1), the evidence shows that there is wealth effect to the shareholders of firm offering Islamic bonds. The cumulative return for that period is 1.5069% and significant at 1%. Meanwhile, cumulative return for event window (0, +1) is 0.9384% which is significant at 5%. This finding generally validate the results suggested by Mikkelson & Partch (1986), which states that certain types of debts lead to abnormal return. Conversely, no wealth effect found during the event window of conventional bond announcement. However when the event window is extended to day (0, +7) the CAAR of conventional bond announcement is 9.7964% and it is significant at 5%. In addition, this wealth effect is larger than Islamic bond announcement that only 2.8177% and significant at 10%.

Figure 1 and Figure 2 depicts the movement of CAR over the event windows of –30 and +30 for better view the effect of bond announcement. From Figure 1, it can be observed that the CAARt has fickle trend throughout the entire event window (-30, +30). As indicated, there is a small upward movement at days –2 and –1. This can be due to leakage of information but not widespread yet. When the news is announced (day 0), the CAR starts to show further upward movements until about one week when it reaches almost the peak. After that the CAR starts to move downwards. The figure appears to indicate that the investors over-reacted first then start to adjust themselves. It also appears to show that the market is not efficient in semi-strong form. The slow reaction to stock returns may indicate that the investors require the some time, probably a week or so to digest the information content of this announcement. Though slow, investors appear to response positively to this announcement.

On the other hand, it can be observed from Figure 2 that the CAARt of conventional bond announcement has an upward trend throughout the entire event window (-30, +30). The return for the whole CAARt for the conventional bond announcement is 47.739% which is much larger than Islamic bond (0.0200%). However the larger positive value insignificant. The CAARt of conventional bonds are inconsistently positive for the entire event window except for the day -27 due to -4.796% of AARt, which is significant at 0.05 level. The positive return but insignificant evidence shows that there is no announcement effect on straight bond offering. This result is in line with the findings by Yen (2002), where he found that in the Malaysian market, straight bond offering announcement day has an insignificant positive impact on stock return.

The overall result in this study suggests that on average, the investors in the Malaysian market do react to Islamic bond announcement that further provides wealth effect. However, investors do not react to conventional bonds announcements. Thus, this is a good justification why the Islamic bond offering became more popular for firms in Malaysia as tool of debt financing.

4. Regression Analysis & Results

4.1 Regression Analysis

To examine the relationship between the characteristics bonds and CAR, a regression analysis is used. Ordinary Least Square (OLS) analysis which the results were resolved from heteroskedasticity problem was used to get the result of regression. To examine whether bond offering size, maturity of the bond, debt ratio and a firm's total assets of the bond issuer affect the CAAR (-1, +1), the following regression equation is established:

$$CAAR(-1,+1) = aOFR + bMAT + cDBT + dSZE + \varepsilon$$

where: *OFR* is ratio of size of bond offering divided by total asset for the period prior to the announcement, *MAT* is bond maturity, *DBT* is ratio of total debt to total asset for the period prior to the announcement date, *SZE* is the logarithm of the difference in a firm's total asset before and after announcement of bonds offerings and ε_{it} is error term.

The respective variables used for the cross sectional analyses are explained below.

1) Relative bond offering size (*OFR*) is different for each firm. Based on the Pecking Order theory, debts are better than equity because of their low costs. When a firm uses debt as a financing tool, it signals good news to investors. Thus, *OFR* is positively related to the CAAR.

2) Maturity (*MAT*) is the length of time until the bond issuer returns the par value to the bondholder and terminates the bond. Generally, the longer the term, the higher the coupon is to compensate the bondholders for the additional risk of tying up money for a longer period. In this respect *MAT* would have a negative relationship with CAAR.

3) Debt ratio (*DBT*) measures a firm's financial leverage which indicates the extent to which the business relies on debt financing. According to the Pecking Order theory, postulates a negative relationship between profitability and debt ratio. Hence, debt ratio would have a negative relationship with the CAAR.

4) According to Stein, 1992**,** firm size (*SZE*) could be used as a proxy for the degree of information asymmetry. For instance, large firms are more likely to have greater coverage, draw more attention and undergo greater scrutiny by stock analysts and institutional investors. We expect the abnormal return to be positively related to firm size.

4.2 Results of Regression Analysis

The results of firm that announce Islamic bonds are generally inline with expectations. This can be observed from the all variable coefficients are not significant except for *OFR*. However, we did not get the expected sign for *OFR*. Results in Table 3 shows that the coefficient of *OFR* is –0.0027 and significant at 5%. This significant negative coefficient means that the bigger the offer size of Islamic bonds, the smaller the CAAR. This is explaining the small positive and significant (Table 2) wealth effect of Islamic bond announcement.

In addition, we also reveal relationship between CAAR of conventional bond announcement and OFR. But its sign is following the expected sign. The coefficient value of OFR is 0.004 and statistically significant at 1%. Result indicates that the relative size offering has positive impact on the abnormal return. This may suggest that investors perceived bigger conventional bond issue as an indicator of credible signals of improved performance. Thus it is consistent to the

Signaling Theory. Furthermore, Table 3 shows that firm size is positive and highly significant (at 1%) relate to return of conventional bonds announcements. This indicates that if the firm size of conventional bond issuer is large, the abnormal return would be bigger. This may be seen by investors as a positive move by bigger firms. The firms are utilizing their benefits of size and public attention to further leverage their earnings. Bigger firms are known for their better assets, better management and better corporate governance. The result is in line with Billingsley & Smith (1996).

5. Conclusion

This study has investigated the effect of Islamic and conventional bond announcements on stock return in Malaysia. Mainly, it attempts to validate the results suggested by Mikkelson & Partch (1986), which states that certain types of debts lead to abnormal return. We find that there is a wealth effect on the Islamic bond issues announcement. However, no wealth effect on the conventional bond announcement. This finding is similar to previous studies on conventional bond announcements effect in Malaysia (Yen, 2002). Where, he found no wealth effect on straight bond announcements. The diverse effect on of Islamic bond and conventional bond in Malaysia could be explained by the different characteristic of both bonds. Where, the foremost characteristic of Islamic bond issues are have to comply with *Shari'ah* that approved by Shariah Advisory Council (SAC) of the Securities Commission Malaysia. Thus, it is contrary to the study done by Muhammad & Muhammad, 2001; where they suggest that Islamic bond in Malaysia is still having controversy on legal acceptability or compliance with *shari'ah* due to the characteristic of Islamic bonds in Malaysia are not much different with conventional bonds.In addition, we examine abnormal stock return determinant on bonds announcement. The bond offering size demonstrates as significant factor of stock return on Islamic and conventional bond announcement, but the sign for Islamic bond announcement is negative that contrary to conventional bond which follow the expected sign. Islamic bond issue could not gain much on tax deductibility since do not have coupon features. Thus, Islamic bond issues are not really a low cost of capital investment. The bigger issue of Islamic bond will increase firm's default risk without trade off on low cost of capital investment. Another significant factor of stock return on conventional bond announcements is firm size. Investors are confident on conventional bond issue by bigger firm due in believing that they can afford the obligation of bond issue to finance another investment or project that can make higher return.

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Table 1: Summary of the Average Abnormal Return

Sector	Day-1	Day 0	Day+1
Islamic bonds	0.9598*	0.5685	0.9384
	(1.5480)	(0.9169)	(1.5135)
Conventional bonds	2.2207	0.8820	0.0642
	(1.7228)	(0.6842)	(0.0498)

Note: t-statistics are in parentheses, * Significant at 10%

Table 2: Summary of the Cumulative Average Abnormal Return

Sector	Day(-1,+1)	Day (-1,0)	Day(0,+1)	Day(0,+7)
Islamic bonds	1.5069	0.5685	0.9384	2.8177
	(3.9542)***	(1.4527)	(2.5366)**	(1.7470)*
Conventional bonds	0.9462	0.8820	0.0643	9.7964
	(0.5017)	(0.6588)	(0.0785)	(2.8750)**

Note: t-statistics are in parentheses,* Significant at 10%, ** Significant at 5%, *** Significant at 1%

Table 3: Results of Regression Analysis for the Sample

	Islamic Bonds		Conventional Bonds	
Variable	Coefficient	T-statistic	Coefficient	T-statistic
Constant	0.0195	0.2870	-5.7516	-1.3211
OFR	-0.0027[b]	-2.1645	0.0042	3.2080[c]
MAT	-0.0006	-0.4077	-0.1278	-0.2713
DBT	0.0033	0.0731	0.5093	1.3299
SZE	0.0025	0.1666	6.35E-06	4.0472[c]
R-squared	0.0947		11.9988	
F-statistic	0.2355		0.8955	

Notes: [a] Significant at 10%, [b] Significant at 5%,[c] Significant 1%

Diagram 1: Beta Estimated Using Returns from 120 Trading Days Prior to the Announcement Date

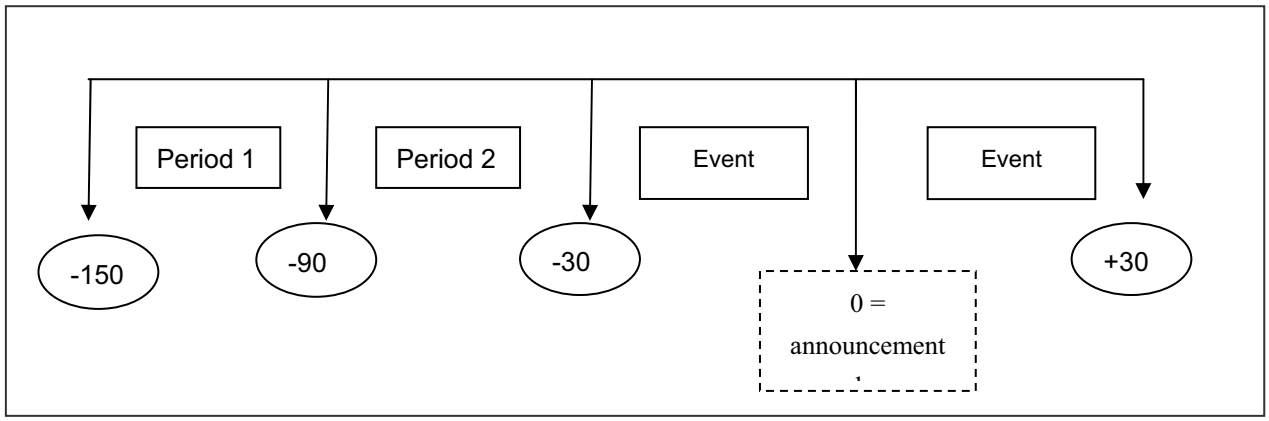

Figure 1: Cumulative Average Abnormal Return for Islamic Bonds

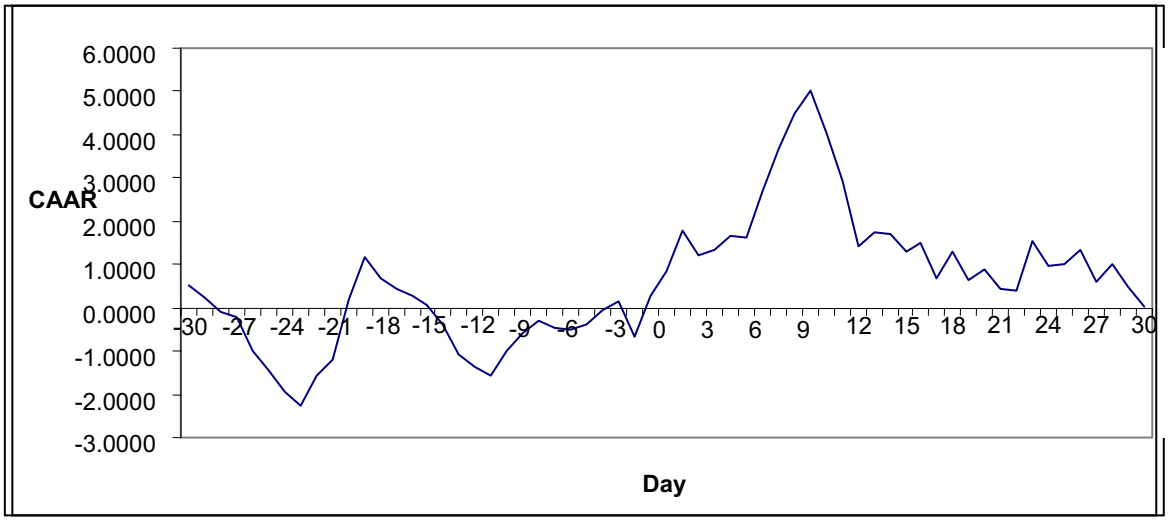

Figure 2: Cumulative Average Abnormal Return for Conventional Bonds