

FIRM CHARACTERISTICS' INFLUENCE ON THE WEALTH EFFECT OF DEBT ISSUE ANNOUNCEMENTS IN MALAYSIA

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Abstract

This paper investigates the influence of firm characteristics which represent proxy for financial distress costs, interest tax savings, agency costs, and information asymmetry on the wealth effect of debt issue announcements. A total of 136 debt issues during the period February 2001 to October 2009 are considered in the sample of this study. Results indicate significant positive abnormal returns surrounding the debt issue announcements and that the wealth effect is influenced positively by managerial ownership but negatively influenced by asset tangibility, existing leverage and the level of free cash flows.

Keywords: corporate finance, capital structure, wealth effect, event study, information asymmetry.

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This paper investigates the influence of firm characteristics which represent proxy for financial distress costs, interest tax savings, agency costs, and information asymmetry on the wealth effect of debt issue announcements. A total of 136 debt issues during the period February 2001 to October 2009 are considered in the sample of this study. Results indicate significant positive abnormal returns surrounding the debt issue announcements and that the wealth effect is influenced positively by managerial ownership but negatively influenced by asset tangibility, existing leverage and the level of free cash flows.

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1. INTRODUCTION

Capital raising activity represents one of the main and important economic activities of the business organizations. In 2010 alone, the gross private sector financing in Malaysia is RM 803.5 billion (Bank Negara Malaysia, 2011). It has been observed that the financing activities of Malaysian companies have undergone remarkable changes since the 1997 Asian financial turmoil. One such change is the shift from the over-reliance on financing by financial institutions, namely bank loans, to an increased sourcing of debt fund from the capital market through the issuance of private debt securities or bonds, which is patronized by the government initiatives in promoting the capital market development, specifically the Islamic bond market (Ibrahim & Minai, 2009). Furthermore, analysis of Bank Negara Malaysia data for the year 2001

to 2008 shows the increasing dominance of debt financing over equity financing. Among all the emerging markets in the worlds, Malaysia is found to have the highest ratio of corporate bonds issued per dollar of GDP, which is 37.3% (Mohamad et al., 2007).

Another noticeable change in the financing structure of Malaysian companies is the increasing popularity of Islamic debt securities as an alternative source of financing. Malaysia is now the largest Islamic capital market in the world (Parker, 2009a). At the end of 2008, 62 percent of global outstanding Islamic bonds (sukuk) were from Malaysia. At the end of July 2009, outstanding Islamic bonds to total outstanding corporate bonds are 58.2 percent, increased from 57 percent in 2008. Outstanding Islamic bond at the end of July 2009 totaled 167.73 billion ringgits compared with 152.8 billion ringgits in 2008 (Parker, 2009b).

The information described above clearly shows the success of the government initiatives for the development of the debt market in Malaysia. Nonetheless, the ultimate goal of a financial decision is increasing firm value and shareholders wealth; hence it is vital to examine financing activities of Malaysian companies in light of this objective. More important is to investigate the factors that influence the wealth effect of financing decisions since this has both theoretical and practical implications. From theoretical perspective, the determinants of firm performance following debt issuance can enlighten the application of existing capital structure theories and possible new explanations in the Malaysian context. As for the businesses, the findings can guide them in their financing decision-making.

However, most prior capital structure studies, including those in Malaysia, mainly focused on the determinants of capital structure (Harris & Raviv, 1991) itself, keeping practically more useful question about determinants of the wealth effect of capital structure changes scant and

inconclusive (Masulis, 1983; Myers, 2001; Carpentier, 2006; Rahim et al., 2009). The limited focus and inconclusive results to such research questions are reflected in the description of empirical literature in the following section.

Particularly for Malaysian context, no study is found with a comprehensive focus on the capital structure theory based determinants of the wealth effect of debt issues. Thus, the study of the wealth effect of debt issues and its determinants in Malaysian context with the focus on the capital structure theories is necessary for understanding the applicability of these theories in Malaysian context.

This paper is organized as follows. The next section describes the theoretical and empirical literature. The third section explains and develops the theoretical framework of the study, the fourth section discusses the data and method of analysis, followed by the discussion of the empirical results in the fifth section. The final section summarizes and concludes.

2. LITERATURE REVIEW

2.1. Theoretical Literature

Most capital structure theories center on the effect of capital structure change on firm value. Since, long term external financing normally results in the change of capital structure, except in the case of refinancing by issuing similar type of securities, firms' performance following a debt issuance could be explained by the capital structure theories. In addition, some recent developments like market timing theory and behavioral finance theories can also provide some degree of explanation.

The capital structure theory evolves from the famous Modigliani and Miller (1958) proposition I, where, under the assumption of perfect complete market, the market value of any firm in an equivalent return class is independent of its capital structure. As far as real world application is concerned, when corporate tax (Modigliani & Miller, 1958; 1963), or personal tax (Miller, 1977) is introduced, the irrelevance proposition does not hold.

The journey toward the real world capital structure is initially contributed by several scholars. The discussions on the theory are grouped into three; the optimal capital structure argument, the agency cost argument and the signaling argument.

The Optimal Capital Structure Arguments

DeAngelo and Masulis (1980) articulate the static trade-off theory of capital structure. According to this theory, increasing debt does not only provide tax saving benefit but also incur some costs in the form of higher probability of bankruptcy and of other financial distress costs, and the trade-off between the two results in an optimal capital structure.

Practically, the financing decision and its costs and benefits to the firm are not confined to one point in time. Myers (1984) identifies this fact and postulates that firms set a target capital structure based on the trade-off between costs and benefits and gradually move toward the target. Kane et al. (1984), and Brennan and Schwartz (1984) analyze the multi-period or dynamic trade-off models with uncertainty, taxes, and bankruptcy costs, but without transaction costs. Although they assert immediate rebalancing of capital structure, Fischer et al. (1989) consider the transaction costs and put forward a slow and discrete adjustment of capital structure with a significant drift over time.

Agency Cost Arguments

Jensen and Meckling's (1976) propose the agency theory which argues that the ownership of the firm remains equally concentrated if the firm chooses debt over equity, which helps the firm to avoid higher agency cost of dispersed ownership under the equity financing alternative.

As part of further theoretical development, Jensen (1986) advances the free cash flow hypothesis which claims that debt issuance results in obligatory payment of interest and principal, which reduces the free cash flow available for the managers to serve their own interest.

Signaling Arguments

Apart from the costs and benefits, according to the signaling theory by Ross (1977), firms may issue debt just to signal the market about its profitability, be it false or true. True signal can be associated with higher expected profit and market value, whereas false signal can be understood by the market which would result in decreasing market value in the long run.

Myers and Majluf (1984) use information asymmetry to provide theoretical foundation for the pecking order theory (Myers, 1984). The reason for the preference for debt financing in the pecking order is the information asymmetry between external investors and the management of the firm. Issuance of equity is presumed by the investors to be an attempt to time the overvalued market. As a result, equity issuance can reduce the market value of the firm. To avoid this, managers prefer debt financing.

Information asymmetry is also considered as the basis for Baker and Wurgler's (2002) market timing theory. According to this theory, present capital structure is the cumulative outcome of the past attempts of timing the equity market. To put it briefly, if the choice of equity financing is

a response to overvalued market, debt financing must be the response to undervalued market, which can be expected to correct in the long run by superior stock return performance.

The above cited theories suggest that the wealth effect surrounding bond issuances depends on the information content related to the extent of tax saving, agency cost and bankruptcy cost increase or decrease anticipated from the activities, which arguably depends on selected firm characteristics.

2.2. Empirical Literature

The literature on the short run wealth effect of debt issuance does not provide conclusive results. Some studies focused only on the convertible debts. For example, Arshanapalli et al. (2004), Burlacu (2000), and Ammann et al. (2004) found negative abnormal returns following the issuance of convertible debts. On the other hand, contrasting evidence is found in Kang and Stulz (1996), Roon and Veld (1998).

Chaplinsky and Hansen (1993), in USA, found support for their argument that debt issues are not completely unanticipated and that the market reaction to debt announcements may not fully reflect the information contained in these announcements. They find negative stock returns for up to 140 days before the issue announcements.

Howton et al. (1998) investigated Jensen's free cash flow argument relating to straight bond issuance by listed companies in USA. They found that market reacts negatively to straight bond issuances made by industrial companies. The announcement day reaction is found inversely related to the level of free cash flow prior to the debt issue, which supports the free cash flow hypothesis. However, inverse relationship between the investment opportunities of the firm

measured by the marginal q and announcement effect contradicted with the hypothesis. Other variables in this study, namely, yield to maturity, debt to asset ratio, amount of debt issue, and quality dummy were used to control for the cross sectional differences in the debt issues. With regard to the free cash flow hypothesis, their results were contradictory.

Few recent studies on companies listed in Malaysian stock exchange found no or insignificant abnormal short run stock return surrounding straight debt issues (e. g., Ashhari et al., 2009; Ibrahim & Minai, 2009). Nevertheless, for Islamic debt issues, both Ashhari et al. and Ibrahim and Minai found significant positive short run abnormal return. In finding the explanation for the positive wealth effect, Ibrahim and Minai has investigated the relationships between abnormal return and following variables: log of total assets as a proxy for firm size, issue size as percentage of total asset, free cash flow, Tobin's q as a proxy for investment opportunity, level of leverage, syariah compliant status, and Securities Commission approval status. It is however shown that short run abnormal return is negatively influenced by issue size and firm size, and positively influenced by investment opportunity and SC approval. Ashhari et al. also found negative influence of issue size on the Islamic debt issues. However, they found the opposite sign for the influence of conventional bonds on short run abnormal return. They considered these results as evidences that investors consider bigger conventional bond issues as credible signal of improved performance and consider the opposite for Islamic debt issues.

3. THEORETICAL FRAMEWORK

Cumulative average abnormal return (CAR) over the analysis window surrounding the announcement date is used as the measure of wealth effect as in previous wealth effect studies

(e.g., Croci & Petmezas, 2010; Ibrahim & Minai, 2009). In understanding the effect of firm characteristics on the wealth effect of debt issuance, selected firms characteristics are modeled as the independent variables based on the review of related literature as in the following discussions.

a) Growth Opportunity

Growth opportunity is intangible and its support during financial distress is arguably very weak due to the lack of its liquidity. Moreover, expected cost of financial distress for high growth opportunity firms is higher than that of low growth opportunity firms (Myers & Majluf, 1984). According to Titman (1984), growth firms often produce unique products; as a result, possible liquidation of their business in the distress situation can adversely affect the customers. Thus the issuance of more debt by this type of firms may experience negative wealth effect.

In addition, based on the agency cost theory, and also following the arguments of Myers (1977) and Titman and Wessels (1988), flexibility of future investments makes the growing industry firms to expropriate wealth from the bond holders to the equity holders. Moreover, Jensen (1986) associates high growth firms with high free cash flow but suggests that the source of value in more debt financing by disciplining the management from discretionary use of free cash flow is not much applicable for high growth firms because they use up the free cash flow for exploiting the growth opportunities even without debt.

The link between performance and growth firms capital structure is further supported by the survey of Graham and Harvey (2001), which shows that many growth firms claim that customers might not purchase their products worrying that debt usage might cause the firm to go out of

business. Frank and Goyal (2009) is among the recent empirical evidences that find growth and leverage to be negatively related.

Therefore, following hypotheses are developed:

H1: The wealth effect of debt issuance is negatively related to debt issuers' growth opportunities.

b) Asset Tangibility

Following the argument in Myers (1984), cost of actual financial distress when financial trouble takes place depends on the tangibility of assets. Firms with more intangible assets face the lack of active secondary market where it can sell its intangible assets. In financial distress situation, firms with more tangible assets get liquidation as an additional strategic choice (Harris & Raviv, 1991) to avoid greater loss of value. Thus, if a firm with high amount of intangible portion in its asset composition issues more debt, its financial distress costs are higher than a firm with more tangible assets.

Among the recent evidences, Frank and Goyal (2009) find that firms with more tangible assets choose to use more debt financing, which can be explained by their higher borrowing capacity. Similar empirical supports are available from Baker and Wurgler (2002) and Gaud et al. (2005). Also, as Serrasqueiro and Rogao (2009) argue for their result, asset tangibility is associated with greater possibility to diversify, less probability of bankruptcy and greater level of collateral, which result the firms to use more debt. Following hypothesis follows this discussion:

H2: The wealth effect of debt issuance is positively related to debt issuers' tangibility.

c) Firm Size

As argued by Rajan and Zingales (1995), the investments of bigger firms are more diversified compared to smaller firms and, therefore, have a lower risk of default than smaller firms. Moreover, if the bankruptcy takes place in reality, the proportion lost is larger for smaller firms compared to bigger firms (Ang et al, 1982; Titman and Wessels, 1988). Expected bankruptcy costs, thus, is greater for smaller size firms while debt financing is chosen. This may explain why bigger firms are found to choose more debt financing (Booth et al., 2001; Baker & Wurgler, 2002; Frank & Goyal, 2004; Bhole & Mahakud, 2004; Gaud et al., 2005; Frank & Goyal, 2009). According to Serrasqueiro and Rogao (2009), bigger firms also raise debt capital more rapidly to reach the optimal level being confident about greater possibility to diversify, less probability of bankruptcy and greater level of collateral. Therefore, following hypothesis is developed:

H3: The wealth effect of debt issuance debt issuance is positively related to debt issuers' size.

d) Profitability

Firms with high profitability are expected to generate high cash flow that can be used for meeting the financial obligations and hence, as Frank and Goyal (2008) argue, financial distress costs are lower for firms with higher profitability. If the profitability is lower, debt issuance may increase the expected financial distress costs, which may reduce shareholders wealth. Recent

studies by Campbell et al. (2008, 2011), which empirically proves profitability to be one of the measures of long horizon financial distress, supports this relationship between profitability and expected financial distress costs. High possible financial distress cost may translate into poor stockholder wealth, which is evident in Campbell et al. (2011). Therefore, based on the trade off theory, following hypothesis is developed:

H4: The wealth effect of debt issuance debt issuance is positively related to debt issuers' profitability.

e) Business Risk

According to Myers (1984) high business risk may be associated with higher probability of financial distress. If a firm with large variation of its cash flow chooses more debt issuance for financing, it may not be able to meet the debt related financial obligations during downside variation of cash flow. Ismail's (2006) study in Malaysia can be considered as support for this argument, where she finds leverage to have negative relationship with operating risk of the business. Therefore, following hypothesis is developed:

H5: The wealth effect of debt issuance is negatively related to debt issuers' business risk.

f) Existing Leverage

If the level of leverage increases, the firm would have more financial obligations in future. More financial obligation, combined with other unfavorable elements, may contribute to make costly

distress situation more imminent for the firm (Kaplan & Strömberg, 2008). Existing leverage is often pronounced as one of the most common characteristics of financially distressed firm (Chan & Chen, 1991; Campbell et al., 2011). Any more debt issuance may further increase the level of existing leverage resulting increased financial distress costs would negatively affect the stock return performance. Therefore, following hypotheses is developed:

H6: The wealth effect of debt issuance is negatively related to debt issuers' existing leverage.

g) Debt Tax Shield

The relationship between firm value and the debt tax shield is positive in the presence of taxes (Modigliani & Miller, 1958, 1963). Debt tax shield, according to the basic trade off theory, result in higher stock return performance of debt issuance by increasing the tax deductions. More recently, Liu (2009) argues that debt, combined with net income, interest rate, and tax rate, generate additional value of the tax shield to the firm. Therefore, following hypothesis is developed:

H7: The wealth effect of debt issuance is positively related to debt issuers' debt tax shield.

h) Managerial Ownership

Jensen and Meckling (1976) argue that the agency problem of equity is less severe when managers hold a large fraction of the outstanding shares in the company. If managers hold a small fraction, they work less vigorously or consume excessive perquisites because they bear a

relatively small portion of the resulting costs. Firms with low managerial ownership, thus, would suffer high agency cost of equity. Issuance of debt can reduce the free cash flow for discretionary use by them and thereby reduce the agency cost of equity to a large extent.

Douglas (2006) argues that more debt can mitigate the possibility that manager will expropriate wealth from shareholders by making investments with highly volatile outcome and higher information asymmetry. This benefit of debt issuance is possible only to the firms with low managerial ownership. Based on the agency theory and the argument followed, it is hypothesized that:

H8: The wealth effect of debt issuance is negatively related to debt issuers' degree of managerial ownership.

i) Ownership Concentration

Concentrated ownership can increase the conflict of interest between minority shareholders and inside large shareholders (Dhnadirek & Tang, 2003; Denis & McConnell, 2003; Lins, 2003; Earle et al., 2005). The large shareholders who enjoy the control of firm may undertake unrelated and non-value-maximizing investments for their private benefits (Bena & Hanousek, 2008). This type of agency cost can be mitigated by issuing more debt. Issuance of more debt would impose control over the free cash flow (Jensen, 1986). Thus, the benefit of debt issuance in the form of reducing agency cost is more for firms with highly concentrated ownership. Therefore, following hypothesis is developed:

H9: The wealth effect of debt issuance is positively related to debt issuers' degree of ownership concentration.

j) Free Cash Flow

Issuance of more debt creates fixed financial obligations which can limit manager's scope for discretionary use of free cash flow (Jensen, 1986; Garvey, 1992; Opler & Titman, 1993). This is how additional debt can create source of value for a firm with more free cash flows by reducing agency costs. The recent study of Gangopadhyay and Yook (2009) can be considered as recent support for this argument. They show that the stock repurchase, which also increase leverage ratio of the firm, result in superior abnormal performance if the firm has high amount of free cash flow. Therefore, following hypothesis is developed:

H10: The wealth effect of debt issuance is positively related to debt issuers' free cash flow.

k) Information Asymmetry

Two theories explain the effect of information asymmetry to explain issuance behavior, namely, market timing theory (Baker & Wurgler, 2002), and pecking order theory (Myers & Majluf, 1984). According to the market timing theory, the issuance of debt or equity occurs in response to equity under or over valuation in the marketplace. On the other hand, according to pecking order theory, firms prefer internal capital to external and external debt capital to external equity. Although these two theories seem to give different approaches of explaining debt financing, according to Dittmar and Thakor (2007), their explanations come into alignment when the

investors can perceive the overvaluation of the firm in the market. However, based on the market timing theory, it can be predicted that firms issue debt when the stocks are undervalued (Korajczyk et al., 1992; and Choe et al., 1993). Thus issue of debt may signal the market about the undervalued stock followed by positive wealth effect. This effect is stronger when the degree of information asymmetry is higher. The source of value from the debt issuance is supported by the study of Bharath et al. (2009), who find firms to use more debt financing when the degree of information asymmetry is higher. Therefore, following hypothesis is developed:

H11: The wealth effect of debt issuance is positively related to debt issuers' information asymmetry.

1) Controlling Variables

The research framework also adds issue principle, issue size, and SC approval as control variables. There is no established theory for Islamic bond wealth effects but Ibrahim and Minai (2009) postulate that Islamic bonds provide additional wealth effects due to cheaper financing cost and its utilization for financing new investments.

The issue size on the other hand reflects the level of information content of an announcement, hence the larger the issue size, the more is the wealth effects, be it positive or negative.

SC approval indicates whether the debt issue has been approved by the Securities Commission prior to the first announcement in Bursa Malaysia. Ibrahim and Minai (2009) discover that several firms make their debt announcement in Bursa Malaysia only after SC approval is

granted; hence these announcements might have less information content due to information leakage during the approval process.

4. DATA AND METHODOLOGY

4.1. Measurement of Variables

Previous studies are utilized to guide the choice of most up-to-date measure of each variable in this study. The measurements of explanatory variables along with their supports are given in Table 1.

4.2. Sampling Process

Initial list of all the bond issuances during January 2001 to October 2009 period are extracted from the Securities Commission Malaysia website. This list contains the information on the date, type, size, issuer, and principle of the debt issues. The initial list of bond issues comprises a total of 720 issues. The initial list then was filtered to exclude the followings:

- i) 76 issues with convertible features since this type of security mixes the characteristics of debt and equity, and/or converts to the other type of security in near future, which may affect the results of this study,
- ii) 276 issues made by non-listed companies,
- iii) 86 issues by the firms in the banking and finance industry,
- iv) 50 issues which have no associated announcement,
- v) 47 issues with multiple announcements related to quarterly/consolidated financial results, significant amount of warrant, convertible debt, bonus share, and/or right share issues, conversion of significant number of preferred stocks into common stocks, significant amount of share buyback, restructuring of loan, joint ventures, disposal of

asset/divestment, acquisition, significant amount of share disposal by the directors, and important legal consequences.

vi) 20 issues which lack of required data for this research.

The filtering process results in a sample of 136 debt issuance announcements

4.3. Data Collection

The bond characteristics including issue principle and issue size are collected from the SC website. In addition, following data are collected from the *Datastream* database: return index, market capitalization, monthly market to book value, yearly balance sheets, yearly income statements, and yearly cash flow statements. Some missing data are collected from the annual reports. Data on managerial ownership and ownership concentration are hand-collected from the annual reports of the company. In addition, to collect the issue announcement and the announcement of the SC approval of the issue, company announcements in the BM website are thoroughly examined.

4.5. Data Analysis

For analyzing the short run stock return performance of debt issuances, this study follows the standard event study approach based on the market model demonstrated in MacKinlay (1997).

The short run abnormal return for firm i on day d is computed using following equation:

$$AR_{id} = r_{id} - (\alpha_i + \beta_i R_{md}) \quad (4.1)$$

Where, AR_{id} is the abnormal return of firm i on day d , r_{id} is the return of firm i on day d , R_{md} is the return of composite index on day d , and α_i and β_i are the parameter estimated using the market model.

Following equation shows how the average abnormal returns (AAR_d) is calculated:

$$AAR_d = \frac{\sum_{i=1}^n AR_{id}}{n_d} \quad (4.2)$$

where n_d is the number of observation on day d .

The cumulative average abnormal return (CAR_{d1d2}) is calculated for the window period between dates d_1 and d_2 as follows:

$$CAR_{d1d2} = \sum_{d=d1}^{d=d2} AAR_d \quad (4.3)$$

Significant values of AAR_d on different event days as well as that of CAR_{d1d2} for different event windows (d_1, d_2) are examined to observe significant short run stock return performance. In addition, the trend of CAR_{d1d2} is also examined for the purpose of understanding the trend of the stock return performance as well as the market reaction.

To test the relationships in the proposed theoretical framework, several variants of following regressions is tested in this study:

$$CAR_{d1d2} = \alpha + \beta_1 ISLAMIC + \beta_2 ISUSZ + \beta_3 SCAPPB4 + \beta_4 GO + \beta_5 AT + \beta_5 FS + \beta_5 PT + \beta_5 BR + \beta_5 EXSTLEV + \beta_5 DTAXSHLD + \beta_5 MO + \beta_5 OC + \beta_5 FCF + \beta_5 INFASYM + \varepsilon \quad (4.4)$$

5. FINDINGS

5.1. Descriptive Analysis

Table 2 exhibits the descriptive statistics of the variables examined in this study. The minimum and maximum values along with the mean and standard deviations are reported in this table for the purpose of understanding general characteristics of the sample.

For some of the variables, sample mean is far away from the minimum or maximum value indicating the presence of extreme values or outliers. For example, the mean value of DTS is 0.24. The maximum value of this variable is 0.88 but the minimum is -4.32, which imply the presence of extreme value(s) at the left side of the distribution.

5.2. Wealth Effect of Debt Announcement

The cumulative average abnormal return during from day -60 to day +60 is plotted in Figure 1. The market shows the evidence of a positive impact on the stock return, trend of which starts before the announcement of the debt issue. The positive trend starts about 29 days before the announcement indicating the partial ability of the market to anticipate the debt issue announcement.

A sharp increase of cumulative average abnormal return during day -5 to day +3 is also noticeable in the graph. This reaction to the announcement of debt issue indicates positive perception of average investors about new debt issues. In addition, the upward trend continues until 48 days after the announcement.

The cumulative average abnormal returns for different event windows are reported in Table 3. Results indicate the existence of significant positive cumulative abnormal returns, both at 5%

and 1% levels. Among the reported results in Table 5.2, the CAR_{did2} for following event windows are significantly positive at 1% level: (-10, +5), (-10, +3), (-3, +5), (-3, +3), (-2, +5), (-2, +3), (0, +5), and (0, +3).

In addition, following event windows exhibit significantly positive stock return performance at 5% level: (-30, +5), (-30, +3), (-30, +2), (-15, +5), (-15, +3), (-10, +2), (-5, +5), (-5, +3), (-3, +2), (-3, +1), (-2, +2), (-2, +1), (-1, +5), (-1, +3). To sum up, the stock return performance around the debt issue announcement dates are significantly positive.

5.3. The Relationship between Firm Characteristics and the Wealth Effect of Debt Announcement

Table 4 reports the results of the regressions run for the purpose of identifying the firm characteristics determining the wealth effect of debt issue announcements. Five models are reported using different window period. These models are freed from multicollinearity based on variance inflation factor (VIF) values of less than 10 for all variables. Breusch–Pagan test indicates the presence of heteroscedasticity in all of these models hence the t-statistics are reestimated based on the heteroskedasticity-robust standard errors for each of these models.

The results in Table 4 indicate that the wealth effect of debt issue announcement is influenced positively by MO but negatively influenced by asset AT, EXLV and FCF. However the relationships are only significant at 10% level, and the relationship involving AT and FCF are contrary to those hypothesized in this study. As for the other variables there is no support for their relationships with the wealth effect of debt issue announcement.

6. DISCUSSIONS AND CONCLUSIONS

This study attempts to investigate the wealth effect of debt issue announcements and its determinants in the context of Malaysia. Several firm characteristics are hypothesized to explain the wealth effect based on the capital structure theories. These characteristics are used to proxy for financial distress costs, interest tax savings, agency costs, and information asymmetry.

Results indicate significant positive abnormal returns surrounding the debt issue announcements. The positive wealth effect is found to be negatively related with asset tangibility (AT) which is contrary to what being hypothesized based on the static tradeoff theory. This finding gives indication that bankruptcy cost is not the main investors' concern in firm financing decision which might be due the low leverage ratio of firms issuing debt as reflected by the average debt ratio of 18.7%.

Interestingly, the negative signal associated with asset tangibility, also means that asset intangibility during debt issuance announcement gives a positive signal. The positive signal may indicate that asset intangibility in the Malaysian context is a proxy of growth opportunities whereby, the higher is the level of intangible asset, the higher is the growth potential associated with the issuance of debt.

As with the results related to existing leverage and FCF, the findings seem not consistent with the free cash flow hypothesis. Instead, it suggests that investors are sceptical that agency cost may increase due to excessive flow of fund when firm issue bond. The role of debt in mitigating agency cost need to be further investigated utilising both debt and equity issuers samples.

The findings related to managerial ownership consistent with the anticipation that firms with high managerial ownership that issue debt is more capable of overcoming further increase in agency cost hence wealth increase upon the announcement, consistent with the agency cost theory of Jensen (1986).

The findings from this study suggests that debt issuance benefits the shareholders if the firm has large intangible asset, low free cash flow, high managerial ownership and low leverage.

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Table 1**Summary of variable measures and symbols**

Variables	Notation	Measurement and Support
Issue principle	ISLAMIC	Dummy = 1, if Islamic debt is chosen; = 0, if equity is chosen
Issue size	ISUSZ	Natural logarithm of issue size
SC approval	SCAPPB4	Dummy = 1, if approved before the first announcement; = 0, otherwise
Growth opportunity	GO	(Total Assets – Equity Capital + Market Capitalisation) / Total Assets, following Fama and French (2002), and Ozkan (2001)
Asset tangibility	AT	Tangible Assets / Total Assets (Bennett & Donnelly, 1993; Walsh & Ryan, 1997)
Firm size	FS	Natural logarithm of the firm's market capitalization on the last trading day of the month before the announcement month (Brown et al., 2006)
Profitability	PT	EBITDA / Total Assets, as used by Bevan and Danbolt (2004), Ozkan (2001), Titman and Wessels (1988)
Business Risk	BR	Business risk measured by standard deviation of last year monthly excess returns
Existing Leverage	EXSTLEV	Debt ratio
Debt tax shield	DTAXSHLD	effective corporate tax rate as used by Lasfer (1995), and Eldomiatty and Azim (2008)
Managerial ownership	MO	Total percentage of shares directly held by non-independent executive directors, as used by Nor and Sulong (2007)
Ownership concentration	OC	Herfindahl index 5 (HI5) = squared sum of shares in the hands of the five largest shareholders, as used in Harada and Nguyen (2006) and in Khan (2006)
Free Cash Flow	FCF	Free cash flow=(EBITDA-Current taxes+change in deferred tax-int exp-preferred div-ordinary div)/Net Tangible Asset (Ibrahim & Minai, 2009)
Information Asymmetry	INFASYM	Past 11 month cumulative abnormal return over the market index as used by Lundstrum (2009)
Short run wealth effects	CAR _{d1d2}	cumulative average abnormal return of event window (d1,d2)

Table 2
Descriptive statistics of the sample (n = 136)

Specifications	Minimum	Maximum	Mean	Median	S. D.
GO	.4499	8.1708	1.3042	1.0862	1.022
AT	.0506	1.0000	.9131	.9873	.178
FS	17.4150	24.2082	19.9990	19.7259	1.577
PT	-.0576	.6973	.1074	.0981	.091
BR	.0209	.5781	.0948	.0802	.066
EXSTLEV	.0000	.9378	.1870	.1475	.171
DTAXSHLD	-4.3170	.8790	.1835	.2483	.462
MO	.0000	.9047	.2700	.2531	.246
OC	.0118	.9687	.1725	.1240	.145
FCF	-.6254	.7511	.0710	.0649	.108
INFASYM	-1.3227	2.0799	-.0334	-.0228	.397
ISUSZ	3.0910	8.4118	5.4134	5.2983	1.031

Table 3
Cumulative average abnormal returns around the announcement day

d_1, d_2	CAR_{d_1, d_2} (%)	t-Statistic	d_1, d_2	CAR_{d_1, d_2} (%)	t-Statistic	d_1, d_2	CAR_{d_1, d_2} (%)	t-Statistic
-60,+60	2.6178	0.80	-10,+5	2.1087	2.66***	-2,+5	1.7507	2.73***
-60,+5	2.5639	1.32	-10,+3	1.9781	2.67***	-2,+3	1.6201	2.69***
-60,+3	2.4333	1.28	-10,+2	1.4023	2.18**	-2,+2	1.0443	2.17**
-60,+2	1.8575	1.01	-10,+1	1.1411	1.96*	-2,+1	0.7831	2.03**
-60,+1	1.5963	0.89	-10,0	0.8221	1.43	-2,0	0.4641	1.29
-60,0	1.2773	0.70	-5,+5	1.8876	2.48**	-1,+5	1.5773	2.61**
-30,+5	2.8264	2.36**	-5,+3	1.7569	2.41**	-1,+3	1.4466	2.53**
-30,+3	2.6957	2.34**	-5,+2	1.1812	1.93*	-1,+2	0.8709	1.93*
-30,+2	2.1200	1.99**	-5,+1	0.9199	1.84*	-1,+1	0.6096	1.81*
-30,+1	1.8587	1.83*	-5,0	0.6009	1.29	-1,0	0.2907	0.99
-30,0	1.5398	1.52	-3,+5	1.8931	2.76***	0,+5	1.5011	2.69***
-15,+5	1.8943	2.06**	-3,+3	1.7625	2.71***	0,+3	1.3705	2.61***
-15,+3	1.7636	2.04**	-3,+2	1.1867	2.27**	0,+2	0.7947	1.95*
-15,+2	1.1879	1.53	-3,+1	0.9255	2.24**	0,+1	0.5335	1.90*
-15,+1	0.9266	1.29	-3,0	0.6065	1.55	+2,+60	1.0215	0.53
-15,0	0.6077	0.85						

*, **, and *** indicate 10%, 5%, and 1% level of significance respectively.

Table 4
Regression results for the determinants of wealth effect of debt issue announcements
(based on heteroskedasticity-robust standard errors)

Model DV	1 CAR(-5,+5)		2 CAR(-5,+3)		3 CAR(-5,+1)		4 CAR(0,+1)	
	Coeff.	t-ratio	Coeff.	t-ratio	Coeff.	t-ratio	Coeff.	t-ratio
const	0.0843	0.49	0.1169	0.78	0.0174	0.16	0.0419	0.69
ISLAMIC	-0.0074	-0.39	-0.0043	-0.24	-0.0057	-0.46	-0.0090	-1.29
ISUSZ	-0.0016	-0.11	-0.0014	-0.11	0.0093	1.00	0.0015	0.33
SCAPPB4	-0.0155	-0.96	-0.0153	-1.02	-0.0091	-0.90	-0.0032	-0.62
GO	0.0033	0.16	0.0030	0.17	-0.0015	-0.12	-0.0027	-0.30
AT	-0.0687	-1.29	-0.0870	-1.66*	-0.0419	-1.52	-0.0335	-1.51
FS	0.0002	0.02	0.0001	0.01	-0.0005	-0.07	0.0003	0.09
PT	-0.0715	-0.36	-0.0893	-0.52	0.0002	0.00	-0.0136	-0.16
BR	0.1820	0.98	0.1260	0.93	0.0700	0.70	-0.0085	-0.15
EXLV	-0.0418	-0.69	-0.0402	-0.80	-0.0592	-1.93*	-0.0328	-1.81*
DTS	0.0156	1.42	0.0089	0.49	0.0063	1.10	-0.0005	-0.10
MO	0.0487	1.68*	0.0209	0.79	0.0350	1.72*	0.0162	1.71*
OC	-0.0444	-0.97	-0.0356	-0.88	-0.0071	-0.25	-0.0176	-1.06
FCF	0.0069	0.08	-0.0549	-0.66	-0.0731	-1.75*	-0.0304	-0.55
IA	0.0077	0.23	0.0095	0.38	0.0100	0.56	0.0083	0.64
<i>N</i>	136		136		136		136	
<i>R</i> ²	0.084		0.080		0.101		0.103	
<i>Adj. R</i> ²	-0.022		-0.026		-0.003		-0.001	
<i>F</i>	1.17		0.917		2.86***		2.08**	

, **, and * indicate 10%, 5%, and 1% level of significance respective*

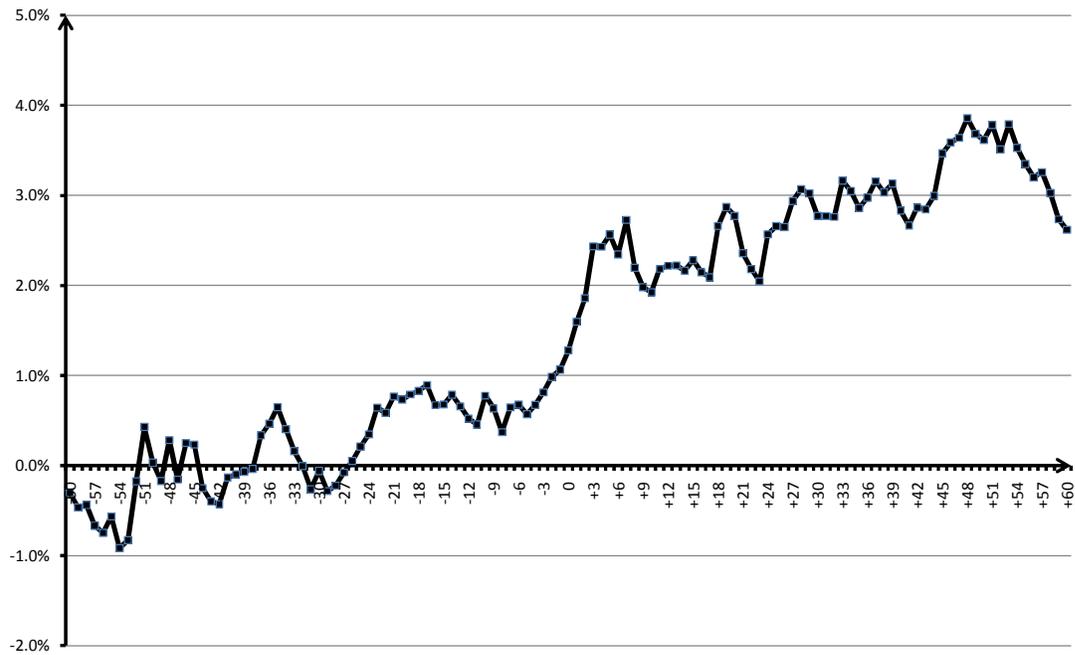


Figure 1
Trend of cumulative average abnormal return surrounding debt issue announcements