

# DEBT FINANCING BEHAVIOUR: PANEL DATA EVIDENCE ON MEDIUM ENTERPRISES

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## Abstract

*Motivated by the recent outstanding growth of Islamic Capital Market (ICM) in Malaysia, this study aims to investigate the debt financing behaviour of Shariah compliant E50 Medium Enterprises (MEs) in Malaysia covering the existence of target debt and the speed of adjustment to target debt from 2009 to 2013. The dynamic model employed and estimated using the Generalized Method of Moment (GMM) revealed the existence of target debt ratio and firms readjust when deviated. Results also showed inclination to Shariah compliant characteristics of these MEs. This study contributes to the literature and fills the gap by exploring into a relatively new area of debt financing which is the dynamic aspects and also help to enhance the understanding on debt financing behaviour of Shariah compliant MEs in Malaysia ICM.*

**Keywords:** Panel Data, Medium Enterprises, GMM

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## Introduction

The fact that the study of capital structure is still inconclusive (Haron, 2014a) and the bits and pieces are still to be explored does open up more research needs in the body of knowledge. In recent years, researchers have begun to shift their attention to Islamic Capital Market (ICM) which has been recording remarkable growth throughout the decade. Malaysia records such an impressive and phenomenal ICM growth at the rate of 10.6% per annum under the second Capital Market Master Plan to reach RM2.9 trillion by 2020. This remarkable growth of ICM and *Shariah* securities has led Malaysia to become the hub of Islamic finance in this region.

Besides that, researchers have also been looking closely at the potential of Small and Medium Enterprises (SMEs) in the economy. SMEs in total constitute a large proportion of the economic activity and considered to be an engine of growth in both developed and developing countries (Boocock and Shariff, 2005). There are also SMEs that are *Shariah* compliant especially those which are religiously inclined. A *Shariah* compliant firm should not involve in the following activities: financial services based on *riba*' (interest), *gharar* (conventional insurance), and *maysir* (gambling), production or trade of non-halal (prohibited) goods, such as alcohol and pork. A quantitative parameter is also used to

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determine the mixed contribution from halal (non-prohibited) and haram (prohibited) elements towards revenue and profit of a firm.

Looking at a good blend between SMEs and the exceptional growth of ICM in Malaysia, this study aims to investigate the financing decision of *Shariah* compliant medium enterprises (MEs) in Malaysia as the number of these firms is increasing in Malaysia (SME Corp. Malaysia, 2013). The *Shariah* compliant MEs chosen for this study are the ones which have been awarded with Enterprise 50 (E50) awards<sup>1</sup>. These E50 MEs demonstrate high potential to contribute significantly to the national economic development (Saarani and Shahadan, 2013) thus it is imperative to understand and have better insights of their financing decisions. This study will cover the existence of target debt financing and the speed of adjustment to target using a dynamic model. The rest of the study is as follows. Next is a brief review of related literature on *Shariah* compliant SMEs financing in Malaysia followed by the method used in analysing the debt financing of these firms. The findings are reported in the fourth section followed by the discussions based on the results and findings. The final section concludes the study.

### *The Performance of SMEs in Malaysia*

SMEs have demonstrated a substantial increase in performance with the Gross Domestic Product (GDP) of SMEs consistently outperforms the overall local economy. The average annual growth rate is 6.8 percent, compared with 4.9 percent for the whole economy in the period 2004 to 2010 (SME Corp. Malaysia, 2012). SMEs represent 99.2 percent of the total business establishments in the country and contributed 56.4 percent to total employment in the country (Ministry of Finance, 2010), 31.4 per cent of GDP and 22 percent of the country exports (SME Corp. Malaysia, 2010). 93.8 % of companies in the manufacturing sector are SMEs and they contributed 27.3% to total manufacturing output, 25.8 % to value-added production, own 27.6 % of fixed assets and employ 38.9% of the country's workforce. It is forecasted that by 2020, the value added products from SMEs will be worth RM120 billion or 50% of total production in the manufacturing sector. It is important to note that different countries have different definition of SMEs. This study uses the standardized definition of SMEs set by the National SME Development Council of Malaysia. The National SME Development Council has approved the definitions of SMEs which are based on two criteria, namely: number of full-time employees or annual sales turnover. Therefore, an enterprise will be classified as SMEs if it meets either the specified number of employees or annual sales turnover definition.

### *Definition of SMEs in Malaysia*

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Table 1: Definition of SMEs based on Number of Full-Time Employees

Size \ Sector	Manufacturing (including Agro-Based) & MRS*	Services Sector
Micro	< 5	< 5

Small	5 - 75	5 – 30
Medium	75 - 200	30 – 70

Table 2: Definition of SMEs based on Annual Sales Turnover

Sector \ Size	Manufacturing (including Agro-Based) & MRS*	Services Sector
Micro	< RM300,000	< RM300,000
Small	RM350,000 – < RM15million	RM300,000 – < RM3million
Medium	RM15million – RM50million	RM3million – RM20million

Source: SME Corp. Malaysia (2015); \*MRS: Manufacturing-Related Services

### *Shariah Compliant SMEs Financing*

As far as Islamic SME-financing in Malaysia is concerned, Ismail and Razak (2003) examined the pattern of debt-equity financing to the SMEs extended by the financial institutions (FIs) over the period of 1993 to 1997 and revealed that 95 percent off all financing were via debt financing which were *Ijarah*, *Bai' bithaman ajil*, and *Murabahah*. The study concluded that SMEs prefer to choose debt financing rather than equity to set up and expand their businesses. Similar finding was also reported by Manan et al.(2011) where a significant number of SMEs in Malaysia sought Islamic debt financing modes such as *Murabahah*, *Bai' bithaman Ajil* and *Ijarah* as sources of external capital.

### **Data and Methodology**

This study employs a panel data for a period from 2009 until 2013 for 41 *Shariah* compliance MEs (out of 52 E50 MEs as at 31 December 2014) listed on Bursa Malaysia where firm level data is sourced from the annual reports of each firm. Of these sample firms, 33 firms are listed in the main market while the remaining 8 in the ACE market. Following Titman and Wessels (1988), debt is defined as the ratio of total debt, long term debt and short term debt to total asset (book value). Following literature, eight firm specific factors affecting target debt financing are incorporated which are non-debt tax shield (NDTS), tangibility, profitability, business risk, firm size, growth, liquidity and share price performance.

### *Target Debt Financing*

This study postulates that a dynamic model is able to ascertain the existence of target debt financing on *Shariah* compliance MEs in Malaysia. Based on the dynamic partial adjustment model (Drobtetz and Wanzenried, 2006), this study assumes that a set of explanatory variables influence the target debt financing for a firm as in (1).

$$Lev_{it}^* = F(X_{it}, X_i, X_t) \quad (1)$$

The observed leverage of firm  $i$  at time  $t$  ( $Lev_{it}$ ) should be equal to the optimal leverage, shown in (2).

$$Lev_{it} - Lev_{it-1} = \delta_{it}(Lev_{it}^* - Lev_{it-1}) \quad (2)$$

The firm's behaviour is represented by (3) below.

$$Lev_{it}^* = \sum_{n=1}^N \beta_k X_{kit} + \varepsilon_{it} \quad (3)$$

Combining Equation (2) and (3), the following is derived,

$$Lev_{it} = Lev_{it-1} + \delta_{it}(Lev_{it}^* - Lev_{it-1}) \quad (4)$$

$$Lev_{it} = Lev_{it-1} + \delta_{it}Lev_{it}^* - \delta_{it}Lev_{it-1} \quad (5)$$

$$Lev_{it} = (1 - \delta_{it})Lev_{it-1} + \delta_{it}(\sum_{n=1}^N \beta_k X_{kit} + \varepsilon_{it}) \quad (6)$$

$$Lev_{it} = (1 - \delta_{it})Lev_{it-1} + \sum_{n=1}^N \delta_{it}\beta_k X_{kit} + \delta_{it}\varepsilon_{it} \quad (7)$$

To simplify, (7) can also be written as,

$$Lev_{it} = \lambda_0 Lev_{it-1} + \sum_{n=1}^N \lambda_k X_{kit} + \mu_{it} \quad (8)$$

## Result and Discussion

This section presents the empirical results of the dynamic capital structure model estimated based on the Generalized Method of Moments (GMM) by Arellano and Bond (1991).

Table 3: Determinants of Target Debt Financing

Independent	TD/TA	LTD/TA	STD/TA
Debt(-1)	0.1977*** [6.2179]	0.5746*** [4.9994]	-0.2138*** [-3.3459]
NDTS	1.5666 [1.1891]	-0.5295 [-0.6345]	2.2023 [1.4806]
Tangibility	-0.1198 [-1.2238]	0.2133 [1.5832]	0.3528* [1.6792]
Profitability	-0.2177** [-2.5782]	0.1108 [1.1989]	-0.0804 [-0.5236]
Business Risk	0.0009* [1.6794]	-0.0001 [-0.1620]	0.0000 [0.0010]
Firm Size	0.0701* [1.8793]	0.0218 [0.6054]	-0.0271 [-0.4889]
Growth	0.0024 [0.5933]	-0.0248*** [-3.3684]	-0.0011 [-0.0906]
Liquidity	-0.0095** [-2.5592]	0.0097 [0.8048]	-0.0259 [-1.4507]
Share Price Performance	0.0012 [0.1506]	0.0804*** [4.6360]	-0.0098 [-0.3015]
AR(1) m-Statistic	-2.0282** [-0.34456]	-1.9721** [-0.3007]	-1.3571 [-0.1539]
AR(2) m-Statistic	-0.9385 [-0.10631]	0.6898 [0.0298]	-0.9348 [0.1579]
Wald (Joint) $\chi^2$	105.8075***	180.80225***	71.3357***
J-statistic	11.3079	10.5652	4.2459

No. of Observations	[p=0.2552] 199	[p=0.1587] 199	[p=0.6434] 199
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Source: Author's own.

### *Existence and Determinants of Target Capital Structure and Speed of Adjustment*

The estimated coefficient of the debt(-1) is significant for all debt definitions ( $p=0.01$ ) and this indicates the existence of target debt financing of *Shariah* compliance E50 MEs in Malaysia. The existence of target debt ratio is agreeable with the *Shariah* scholars' opinions of having reasonable debt ratio in the capital structure rather than zero debt as pointed out by Derigs and Marzban (2008). Tangibility is found to be positively related to debt financing ( $p=0.10$ ) thus indirectly enhances *Shariah* imposition that debt must be asset-backed which means a firm operating under Islamic principles cannot have debt exceeding the tangible assets. The positive relationship between tangibility and debt also confirms the role of tangible assets in reducing the agency costs for outside investors, which in turn raises firm debt. Profitability is found to relate negatively with leverage ( $p=0.05$ ) and confirms Manan et al. (2011) where a significant number of MEs in Malaysia sought Islamic debt financing modes such as *Murabahah*, *Bai' bithaman Ajil* and *Ijarah* as alternatives when internal financing is no more sufficient.

Business risk is positively related to debt financing ( $p=0.10$ ), reconfirmed the earlier finding on *Shariah* compliant firms by Haron and Ibrahim (2012). This result reflects the legal maxim '*Al kharaj bi al daman*' highlighted by Obaidullah (2007) where it requires benefits (returns) and liabilities (risk) go together, that is, the higher the risk, the higher the return. Even though business risk is a measurement for the probability of financial distress or bankruptcy, the distress cost will be lower in the case of *Shariah* firm as debt is asset-backed thus minimizes the risks associated with debt financing (Ahmed, 2007).

The positive relationship between firm size and debt financing ( $p=0.10$ ) indicates the tendency of taking on more debt for larger MEs. These MEs also have more borrowing capacity thus the better bargaining power in seeking the lower cost of borrowing. Growth opportunities showed a negative relationship with leverage ( $p=0.01$ ) indicating lower debt ratio and this is perhaps due to a good and encouraging business during the period under study. This finding suggests that growing *Shariah* compliant MEs in Malaysia which are seeking to reduce the costs of asymmetric information would practice hierarchical financing thus, firms that have good investment opportunities but lack internal cash flow could turn to debt to fund their projects. Liquidity is found to be negatively related to debt financing ( $p=0.05$ ) and these MEs in Malaysia seem to consider these liquid assets in their debt financing decision. Share price performance appears to be positively related with leverage ( $p=0.01$ ) confirming Deesomsak et al. (2009) argument that firms whose shares are perceived to under-perform tend to issue shorter-term debt to signal their quality to the market, while firms whose shares are perceived to over-perform issue longer term debt to exploit the market mispricing.

This study reveals that *Shariah* compliance MEs adjust to long term targets debt financing from time to time at the speeds of 0.8023 (1.25 year), 0.4254 (2.35 year) and 0.2138 (4.68 year) for total debt, long term debt and short term debt respectively to be at the target debt financing ( $\delta_{it} = 1-\lambda_0; 1/\delta_{it}$ ). Such rapid adjustment towards target debt financing suggests the existence of dynamic trade-off theory (Haron, 2014b; Haron et al., 2013).

## Conclusion

*Shariah* compliant E50 MEs understudy do practice target debt ratio following *Shariah* guidelines of having reasonable debt level in their financing decisions and they do adjust to target when deviated. The significant results on certain determinants indicate inclination to *Shariah* compliant characteristics of these MEs. Rapid adjustment speeds using internal funding indicated by the negative relationship between profitability and debt showing an influence of pecking order hypothesis in deciding on the readjustment process.

This additional interest and insights yielded will distinct this study from the existing ones in the literature and the findings will contribute significantly to the body of knowledge as well as to practitioners and also perhaps to financing resources of the SMEs as to further understand the complex relationship between debt financing and firm value, especially among these SMEs as being the back bone of the economy.

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<sup>1</sup> Enterprise 50 is an annual award programme organised by the SME Corporation Malaysia (SME Corp. Malaysia) and Deloitte Malaysia, with supporting sponsorship by RHB Bank Berhad and Telekom Malaysia Berhad (TM) to celebrate and highlight the achievements of enterprising small and medium companies that are well positioned for the future. Each year, 50 winners are selected from amongst the nominations received and the evaluation is based on key financial and non-financial factors. To date, a total of 1,798 companies participated and 550 companies have come out as winners. From this pool of winners, 46 have been listed on Bursa Malaysia and 14 on ACE Market. The fact that the number of SMEs is increasing each year and the limited resources of financial assistance especially from the government have driven this study to give attention to the E50 awarded medium enterprises.