Determinants of Capital Structure among *Shariah* Compliant Industrial Product and Services Firms Listed on Ace Market, Bursa Malaysia

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Abstract

The importance of capital structure management has been the issue of intense attention. Firms need to manage their capital structure to ensure that their operations continue to be profitable and further growth in shareholders fund. The aim of this paper is to provide the evidence on the determinant's capital structure among Malaysia *Shariah* compliant industrial products and services firms in Ace Market of Bursa Malaysia. Secondary data from year 2011 until 2018 was analyzed using Eviews software. Result of random effect shows that profitability, non-debt tax shield and liquidity are the determinants that have significant influenced on debt ratio for trading firms in Malaysia Ace Market. The result fills up the gap in this area and creates an important implication for investors, managers as well as policy makers in order for them to make strategic investments and financial decisions

Keywords: Ace Market, capital structure, profitability, liquidity, non-debt tax shield

1. Introduction

Financial management is one of the crucial part's that need to be managed in any organization. The right financial decision will help the firm to succeed and grow rapidly because the firm is able to manage their operations smoothly. In order to maintain the financial sustainability of the firms, it is the responsibility of the manager to have an adequate knowledge in steering their financial management. The manager must be able to make financial decisions in order to deal with financial distraction. One of the ways is through restructuring the capital allocation to ensure the organization can adapt with any financial challenges.

Capital structure is referring to how the firm's finances its overall operation and growth by using difference sources of funds. It is an integral part in firm's financial framework which can change the ownership of the firm and its involvement with debt and equity of the firm. The decision will have an effect on the proportion of shares in the company and the dependency of the company towards debts. The ideal composition of capital structure will help to minimize the cost of capital and can maximise the firm's value. Besides that, successful management of capital structure comes from good managerial decisions of the manager to strengthen the firm's financial position and the viability of the firm. In addition, financial leverage may also impact the performance through proper management of capital structure that can generate better returns for the firms. Capital structure can be categorized into two factors which are debt and equity financing. The contribution portion of each division will change the management of the firms. The manager must know the level of risk that will be exposed by the firms when the decision is made. For example, if the firms choose to have debt as the sources of funding, the firms must ready to take the risk of winding up. The firms may be exposed to winding up proceeding when the firms are unable to pay the payment. Even though,

the firms are exposed to the risk of winding up, the debt source of financing can help the firms to expand the firms' operation. Past researcher found several firms using debt as the source of funds in their capital structure because leverage is more suitable for the firms in running the business for debt funding is easier to obtain as compared to equity (Mohamad Nizam et al., 2017; Harrison and Widjaja, 2013). Besides that, if the firms choose debt term of financing, the firms can obtain tax advantages where the firms are excluded from paying certain amount of tax. This kind of financing can help the firms to reduce expenses and increase the level of profit gain in the firms. The firm also has an alternative to choose equity financing as the source to operate the firms. This can be done through preferred stock or common stock as their investment instruments to gain dividend from the firms. The investors will be a part of the firms as shareholders if the investors invest in the firm's equity instruments. In contrast, equity financing will not order the firms to repay the investors since there is no obligation to make interest payment to borrowed capital. Equity financing is a lower in risk investment and high liquidity instruments which ensures the firms to be more secure and stable. Nevertheless, the firms incurred high cost than debt capital and the firms' key persons may lose their authority because investors in the firms are considered as shareholders to the company.

Therefore, it is important to examine the determining factors of firms' capital structure to ensure that the firms can sustain in the long term. Even though many researchers have conducted studies in this area, few have focused on the factors affecting firms' leverage position in developing countries especially among the *Shariah* compliant firms (Ramly and Haron, 2017). Besides, the previous findings are still inconclusive. This statement has been supported in the previous study by Salim and Yadav (2012) where there is no specific methodology to achieve an optimal capital structure decision. There is no mutual consensus among the researchers on specific variables to explain the good decisions for capital structure of the firms. It is the objective of this study to investigate the determinants of capital structure strategies among the Industrial Product and Services firms listed on Ace Market of Bursa Malaysia. There is an economic benefit in understanding these factors based on different firm portfolio, because different type of firms has different management structures in place. Established and preferred industry firms have easy access to capital through external financing. Conversely, newly set up firm have limited access to external financing. As a result, different policies are implemented to manage the capital structure in different industries. Therefore, recognizing these causes that affect the capital management of these firms can assist the firm managers in obtaining an efficient capital structure, which further enhances the firm value.

1.1   The Important of the Industrial Product and Services Sector in Malaysia

Industrial products and services sector have been known as the next engine of growth for Malaysia. This is possible when the manufacturing sector lost its ability to strengthen its export-led growth. Companies that involve in trading and services sector may have difficulty in sustaining and securing their funds throughout their operation because of its activities that are based on intangible products. However, the performances of trading and services companies have been proven as the key for economy development during the Second Industrial Master Plan (IMP2). The robustness of trading and services sector in the Third Industrial Master Plan (IMP3) is one of the positive initiatives from the Malaysian government to build a stronger and dynamic services sector. This initiative will guarantee that the trading and services sector will be the next prime sector for Malaysian economy (Ahmad and Aris, 2015).

Besides that, trading and services have become the key contributors towards Malaysian economy. This trend can be seen when the percentage of trading and services sector are increasing and contributing to the Malaysian's GDP since year 2012 to 2016. Figure 1.0 demonstrates the trend of percentage of the GDP from the trading and services sector.
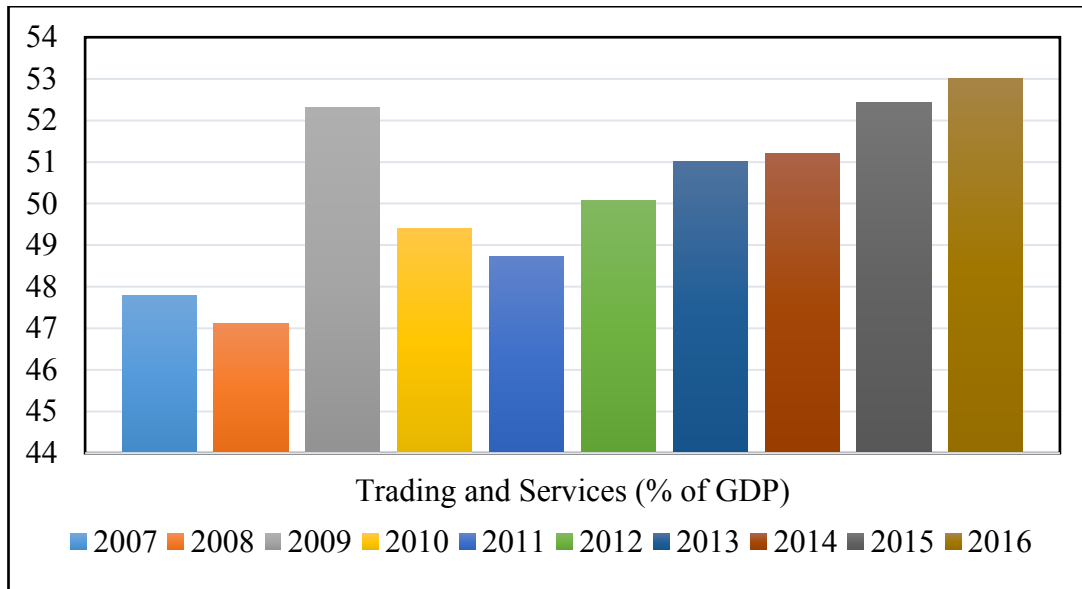
Figure 1: Trend Percentage of Malaysia's GDP from Trading and Services Sector
Source: The World Bank Report (2017)

1.2 Malaysia ACE Market Economy

Malaysia Access, Certainty and Efficiency (ACE) market was officially launched in 3 August 2009 and replaced the role of Malaysian Exchange of Securities Dealing and Automated Quotation (MESDAQ) market. ACE market is a platform for start-up companies and new firms which are run by entrepreneurs who are looking for more capital by listing their companies in the ACE market (Capital.com.my, 2016). These firms can issue bonds or share to attract more investors in order for them to gain more capital to start-up or expand their business.

ACE market is an alternative sponsor-driven market which focuses on several business sectors such as manufacturing, trading and services and construction that have excellent growth potential. The companies listed in ACE market can only be done through a "Sponsor" which is usually from an investment bank. Bursa Malaysia also delegates the responsibility to the "Sponsor" in examining the ACE market's listing application to ensure the company's suitability. ACE market can be the platform to a robust economic development in Malaysia. Therefore, this paper will focus on exploring the determinants of capital structure among trading and services firms that been listed in Malaysia ACE market.

2. Literature Review

There are many theories that discuss capital structure decision however there are three major main theories of capital structure namely trade-off theory (Modigliani and Miller, 1958), agency cost theory (Jensen and Meckling, 1976) and pecking order theory (Myers and Majluf, 1984). Capital structure has been defined as the mix of debt and equity taken by the firms (Zutter and Gitman, 2011). According to Md-Yusuf et al. (2013), total debt ratio is an indicator to assess the firms' capital structure by measuring the total debt ratio that includes both short-term and long-term liabilities.

Leverage or debt management policy is an important aspect of capital structure management, as the success of the business depends heavily on the ability of managers to effectively manage their level of debt ratio (Nabilah et al., 2012). Previous empirical study by Larry and Silvia (2019) demonstrated that capital structure management is important through their analysis of the optimum debt ratio policies of 1709 firms in the Australia. Furthermore, a study done by De Jong et al. (2008) revealed that there are significant differences in the adoption of debt ratio policy across different industries. The study also found that there is a positive relationship between capital structure measures and the firms' profitability. Furthermore, many researchers such as Wahab et al. (2012) and Ahmad and Ismail (2012) have proven that capital structure significantly affects the firms' profitability. Hence, firms can increase their profits when they effectively and efficiently manage its working capital. Therefore, the managers must identify those factors that should be considered in capital structure management.

Additionally, previous studies on the determinants of capital structure indicate that the firm's characteristics are the most influential determinants of capital structure. In a study conducted by Mohamad Nizam et al. (2017), firm size, profitability, growth opportunity, non-debt tax shield and liquidity ratio are identified as internal factors that significantly influence the firms' debt ratio.

Numerous studies have been conducted in relation to the firm size as the independent variable towards debt (Ramly and Haron, 2017; Jamal et al., 2013; Thippayana, 2014; Hussain and Miras, 2015). Trade-off theory and agency theory has stated that firm size is positively significant with debt ratio when larger firms tend to attain more debts. These theories are supported by Ibrahim and Masron (2011), Ahmad and Ismail (2012), Jamal et al. (2013), Albaity and Chuan (2013) and Thippayana (2014). In contrast, past studies also have proven that size of the firms have negative indication towards debt ratio. There are several researches conducted by Ting and Lean (2011), Pontoh and Ilat (2013), Md-Yusufet et al. (2013), Saarani and Shahadan (2013b), Hussain and Miras (2015) and Acaravci (2015) that found negative significant results of firm size and debt ratio. Md-Yusuf et al. (2013) also discovered negative relationship between firm size and debt ratio because they found that larger firms tend to use less debt finances due to limited approval of loan borrowing from the banks and creditors.

There are positive relationship found on profitability and debt ratio of the firms. Wahab et al. (2012) and Ahmad and Ismail (2012) found that profitability is a positive and statistically significant correlation with the debt ratio of the firms. This result has been supported by trade-off theory and agency theory which indicate a positive relationship between profitability and debt ratio of the firms. Nevertheless, usually profitability will have negative relationship with the debt ratio of the firm. This is supported by Ibrahim and Masron (2011), Ting and Lean (2011), Nadaraja et al. (2011), Albaity and Chuan (2013) and Jamal et al. (2013). Jamal et al. (2013) suggested that firms that have higher profitability should use retained earnings as the source of finance to the firms because it can be beneficial in term of cost effectiveness and there will be no interference from outside people into the firms' management.

Growth opportunity is also one of the determinants that would influence the capital structure of the firms. Growth is an "investment opportunity or project that has the potential to grow significantly, bringing profit to the companies" (Ross et al., 2011). Generally, firms that have significant future growth opportunities tend to face financial distress raised from debt financing. This is because intangible assets are unable to be collateralized. The agency theory and the trade-off theory suggest that there is a negative relationship between growth opportunity and debt ratio. This is consistent with studies by Ali (2011), Harrison et al. (2011), Ahmed Sheikh and Wang (2011) and Morri and Artegiani (2015). Besides, pecking order theory has contradicting suggestion whereby the growth opportunities should have positive relationship with debt level. It is because the theory estimated that there exists an asymmetrical information problem among the firm managers and investors. The previous studies that have similar results as proposed by pecking order theory are Khademi (2013), Saarani and Shahadan (2013) and Youssef and El-Ghonamie (2015).

Liquidity works as the key financial indicator which measures whether the firm can fulfil its debt commitment without undesired losses (Ghasemi and Ab Razak, 2016). Empirical studies found that there is a positive relationship between liquidity and debt. For instance, a study by Khademi (2013) and Putek et al. (2014) found that liquidity have positive correlation to total debt. They stated that the firms which have higher liquidity prefer using more cash to invest in a long-term investment and finance the short-term debt. In contrast, Lipson and Mortal (2009) demonstrated that highly-liquid firms have less debt due to the internal cost of capital for liquid firms is lower than the cost for debt and equity. It is consistent with the suggestion proposed by the pecking order theory where internal fund is the first source that should be considered by the firms in choosing the capital structure. This theory is also aligned with the agency theory. This finding is also similar with the studies by Mazur (2007), Antoniou et al. (2008), Akdal (2010), Harrison and Widjaja (2014) and Ghasemi and Ab Razak (2016). Another determinant that might give impact to decision of capital structure in the firms is non-debt tax shield.

To summarize, in developing effective capital structure policies, firms must consider their own unique internal variables that affect the capital management.

3. Objectives of the study Empirical methodology and measurement of the variables

3.1 Research Methodology

In order to carry out this research, descriptive analytical research designs were employed. Both descriptive and analytical research design were used. The study used secondary data collection methods where the data were obtained from the annual report of firms listed in ACE market of Bursa Malaysia. There are 31 *Shariah* compliant companies listed under the trading company sector in the ACE market of Bursa Malaysia. The analysis extends from 2011 until 2018. To determine the relationship between each independent variable and dependent variable, a model was developed based on empirical findings using the Eviews 9.0. Therefore a model of capital structure in this study can be expressed as follows:-

$$Yit = \beta0 + \beta1Xit + \beta2Xit + \beta3Xit + \beta4Xit + \beta5Xit + \varepsilon i, t \qquad (1)$$

Where,

Y_{it}= Debt Ratio (DEBT)
X_1 = Firm Size (SIZE)
X_2 = Profitability (PROF)
X_3 = Growth Opportunity (GROW)
X_4 = Non-Debt Tax Shield (NDTS)
X_5 = Liquidity (LIQD)

Firms' debt ratio is calculated by total debt over total assets. Firms specific variables consists of firm size, firm profitability, grow opportunity, non-debt tax shield and liquidity. A firms' size is measured by Natural log of total assets. Meanwhile, profitability can be measured by net profit over total assets. Sales growth of a firm is used as a proxy for growth opportunity. Sales growth is calculated as sales for the current year minus sales for the previous year, which is then divided by sales from the previous year. In this study, Non-Debt tax shield is measured by depreciation over total assets. The proxy for liquidation is total current assets over total current liabilities.

4. Results and Discussion

Table 1 presents a summary of the statistics for variables used in the analysis. Total observations in this study were comprised of 31 companies listed on the Ace Market of Bursa Malaysia stock exchange. 23% of a firm's total assets are financed by debt. The average firms in ACE market is 4.6 which is considered as medium size, while mean growth opportunity is 22.28% with the standard deviation of 0.901. Firm performance as measured by return on assets is represented by a -62% return on each dollar on assets invested. Meanwhile, the average Non debt tax shield is 0.152. Finally, the mean for liquidity is 6.20 which is good.

Table 1: Descriptive Statistics

	DEBT	SIZE	ROF	ROW	NDTS	LIQD
Mean	0.2336	4.6446	-0.6241	0.2200	0.1525	6.2095
Median	0.1201	4.6403	0.0264	0.0394	0.0202	2.5971
Maximum	2.2171	5.9911	0.5386	0.8230	6.7619	54.2671
Minimum	0.0010	1.6232	-42.0238	-108.3559	-0.0358	0.00319
Std. Dev.	0.3026	0.6714	4.2941	0.9015	0.8151	9.4758
Skewness	3.3301	-1.3926	-8.3203	-10.7782	6.6141	3.2906
Kurtosis	19.3234	9.1571	76.3474	117.4483	47.3778	14.5622
Jarque-Bera	1554.032	228.3387	28283.80	67815.47	10721.94	884.9936
Probability	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Sum	28.0268	557.3556	-74.8963	-110.6404	18.3059	745.1446
Sum Sq. Dev.	10.8941	53.6447	2194.354	11666.77	79.0754	10685.11
Observations	120	120	120	120	120	120

4.1 Likelihood Ratio Test

The Likelihood Ratio Test is applied in this study to choose the best model between Pooled Ordinary Least Squares (POLS) model and Fixed Effects Model (REM). The hypotheses under Likelihood Ratio Test are as follows:

H_0 = POLS model is preferred

H_1 = Fixed Effects Model is preferred

Table 2: Likelihood Ratio Test

Effects Test	Statistics (p-value) at 1% significance
Cross-section F	9.292134 (0.0000)***
Cross-section Chi-square	99.995974 (0.0000)***

Based on Table 2, p-value of cross-section F and cross-section Chi-Square statistics were 0.0000. Thus, the results showed that it is statistically significant since the p-value is less than $\alpha = 0.01$. This can be concluded that the null hypothesis in the Likelihood Ratio Test is rejected and that the Fixed Effects Model (FEM) is preferred.

4.2   Hausman Test

The Hausman specification test was conducted to compare fixed effects and random effects estimations in selecting the most appropriate model estimation (Baltagi, Bresson and Pirotte, 2003; Hsiao, 2007). As the random effects model assumes the exogeneity of all of the regressors and the random individual effects, the fixed effects model allows for endogeneity of all of the regressors, as well as the individual effects (Mundalk, 1978). Therefore, Hausman and Taylor (1981) introduced a model in which some of the regressors are correlated with individual effects. This indicates that the individual means of the strictly exogenous regressors are used as instruments for the time invariant regressors, which are correlated with the individual effects. Therefore, the choice of exogenous regressors is a testable hypothesis.

The hypotheses statements are as follows:
H_0 = Random Effects model is preferred
H_1 = Fixed Effects model is preferred

Table 3: Hausman Test

Test Summary	Statistics (P-Value)
Cross-section random	3.7823 (0.5812)

According to Table 3, the p-value for cross-section random statistics for *Shariah* compliant construction companies was 0.5812. Since the p-value exceeds $\alpha = 0.05$, then the alternate hypothesis was rejected and the null hypothesis is accepted. This indicates that the random effects estimation is a better estimation than the fixed effects estimation. Therefore, the individual effects and the regressors have no relationship, and exogeneity between the individual effects and regressors is assumed. As a result, the interpretation of results will be based on the random effects model.

Table 4: Random Effect Model

Variables	Coefficient	t-statistics	(P-Value)
SIZE	-0.070818	-1.298086	(0.1969)
PROF	-0.065265	-6.730114	(0.0000)***
GROW	0.000296	0.186834	(0.8521)
NDTS	-0.145922	-2.431867	(0.0166)**
LIQD	-0.007854	-3.652316	(0.0004)***
F-Statistics		37.40658***	
Adjusted R-Squared		0.604694	
Durbin Watson		1.204154	

Note: ***, ** denotes significance at 1%, 5% respectively

Referring to Table 4 of the random effects' estimation, three out of five independent variables are significantly correlated with the debt ratio. A firm's profitability, NDTS and liquidity were significantly and negatively correlated with the leverage ratio. However, this study lacked the evidence to prove that both size and growth opportunity will affect debt ratio, as both variables were not significantly correlated with the firms' leverage.

Firm size (SIZE) which is represented by total assets of the company is not statistically significant with the firms' debt ratio. The result is in contradiction with the hypothesis made earlier but it supported previous study by Chen (2004) and Qiu and La (2010) which stated that there is no significant effect of the firm size on capital structure.

Firm profitability (PROF) has negative effect on debt ratio at 0% significant level. This indicates that the Industrial products and services companies in Malaysia ACE market have high profitability level and tend to have lower debt ratio. This study proved that debt ratio can be impacted by profitability gain from the company. This finding is parallel with the pecking order theory in capital structure where the trading and services companies in Malaysia ACE market prefer to used internal financing rather than external financing. The result is similar with the results from previous studies done by Ibrahim and Masron (2011), Ting and Lean (2011), Nadaraja et al. (2011), Albaity and Chuan 2013), Jamal et al. (2013), Saarani and Shahadan (2013b), Thippayana (2014), Serghiescu and Vaidean (2014), Nejad and Wasiuzzaman (2015), Hussain and Miras (2015) and Acaravci (2015) when they discovered the negative relationship of profitability and debt ratio.

Besides that, the result found in this study on non-debt tax shield (NDTS) has a significant effect with negative coefficient toward debt ratio at 5% significant level. This indicates that the firms that have low level of non-debt tax shield prefer to use debt financing. The negative relationship of non-debt tax shield on debt ratio is in line with the pecking order theory and trade-off theory. The result is also consistent with previous study conducted by Wahab et al. (2012).

Furthermore, the random effect analysis proved that liquidity (LIQD) has negative effect on debt ratio at 1% significant level. The coefficient of liquidity is negative which means that the trading and service companies in Malaysia ACE market have a higher liquidity with lower debt. This finding is consistent with the pecking order theory where the company with a higher liquidity on their asset will prefer to minimize their borrowings. The result is parallel with the previous researches by Ahmad and Ismail (2012), Jamal et al. (2013), Serghiescu and Vaidean (2014), Hussain and Miras (2015) and Nguyen et al. (2017).

Nevertheless, growth (GROW) is found to be insignificant on debt ratio. The result found from this study contradicts with the hypothesis made earlier. This can be supported by previous studies that obtained similar insignificant relationship results of growth on debt ratio such as Ting and Lean (2011), Nadaraja et al. (2011) and Thippayana (2014). Therefore, the result may be insignificant between growth opportunity and debt ratio because of time horizon that had been used when conducting the study was rough (Nadaraja et al., 2011). To summarise, three out of the five firm-specific internal variables have a significant relationship with the debt ratio. This study is unable to provide a sufficient evidence to prove that there is a significant correlation between a firm's growth and size with the debt ratio. The results in this section were derived from an analysis of the determinants of capital structure of 31 trading firms listed on the ACE Market of Bursa Malaysia stock exchange.

5. Policy Implication and Conclusions

Capital structure management is important to all firms, as it affects both profitability and liquidity. Hence, firm managers must manage the working capital efficiently in order to ensure that firms can be sustained profitably in the long term. The firms must also consider determinant factors that affect capital structure decision. Using panel data analysis, the Hausman test proved that the random effects estimation was preferable to the Pooled OLS and fixed effects estimations in identifying the determinants of capital structure of Industrial and Services firms listed on ACE Market of Bursa Malaysia. The result of this study shows that a firm's profit, liquidity, and Non-Debt Tax Shield were considered in managing debt ratio of its capital structure. Despite this, the study does not yield sufficient evidence to prove that growth and size are determinant factors of debt ratio. This provides some valuable understanding for managers of firms in Malaysia on certain areas of particular importance when making decisions regarding capital structure management. This study has research implications. First, despite the ACE firms being small in market capitalization, the findings of this study suggest that factors affecting large firms (main market listed firms) are equally important to the ACE firms. Secondly, the outcomes from this research contribute to enrich the existing knowledge especially on financing pattern among *Shariah* compliant firm context. Future researches should consider other industries of *Shariah* compliant firms, or sampling and method of analysis.

Nevertheless, the study has several limitations. Firstly, there are 34 industrial product and services companies listed on Ace Market bursa Malaysia. However, research sample excluded 3 companies due to not meeting our research criteria'. Secondly, the research period is limited to eight years. Longer periods would possibly offer more conclusive results. Thirdly, the sample of study is also considered small which may not reflect the overall pattern of all *Shariah* compliant firms listed on ACE market. Finally, the findings relied on quantitative analysis (regressions) which is insufficient for overall picture of *Shariah* compliant firms. Therefore, more qualitative analysis is required (interviews with key decision-makers) to understand the position of capital structure in the *Shariah* compliant firms.

References

Acaravci, S. K. (2015). The Determinants of Capital Structure: Evidence from the Turkish Manufacturing Sector. *International Journal of Economics and Financial Issues*, 5(1), 158-171.

Ahmad, N., & Aris, Y.B.W. (2015). Does Age of the Firm Determine Capital Structure Decision? Evidence from Malaysian Trading and Service Sector. *International Business Management*, 9(3), 200-207.

Ahmad, N., & Ismail, A. (2012). Determinants of Capital Structure-An Empirical Investigation on Malaysian Property PLCs. The 3rd International Conference on Technology and Operations Management, 401-408.

Albaity, M., & Chuan, A. H. S. (2013). Internationalization and Capital Structure: Evidence from Malaysian Manufacturing Firms. *Asian Journal of Finance & Accounting*, 5(2), 329-342.

Alipour, M., Mohammadi, M. F. S., & Derakhshan, H. (2015). Determinants of Capital Structure: An Empirical Study of Firms in Iran. *International Journal of Law and Management*, 57(1), 53-83.

Al-Najjar, B., & Taylor, P. (2008). The Relationship between Capital Structure and Ownership Structure: New Evidence from Jordanian Panel Data. *Managerial Finance*, 34(12), 919-933.

Al-Qaisi, K. M. (2011). The Economic Determinants of Systematic Risk in the Jordanian Capital Market. *International Journal of Business and Social Science*, 2(20), 85-95.

Ampenberger, M., Schmid, T., Achleitner, A. K., & Kaserer, C. (2013). Capital Structure Decisions in Family Firms: Empirical Evidence from a Bank-Based Economy. *Review of Managerial Science*, 7(3), 247-275.

Asteriou, D., & Hall, S. G. (2015). Applied Econometrics. London: Palgrave Macmillan.

Baltagi, B. H., Bresson, G. and Pirotte, A. (2003). Fixed Effects, Random Effects or Hausman-Taylor: A pretest estimator. *Economics Letters*, 79, 361-369.

Biase, P. D., & D'Apolito, E. (2012). The Determinants of Systematic Risk in the Italian Banking System: A Cross-Sectional Time Series Analysis. *International Journal of Economics and Finance*, 4 (11), 152-164.

Black, K. (2010). Business Statistics for Contemporary Decision Making (Sixth edition). New Jersey: John Wiley & Sons.

Borgia, D., & Newman, A. (2012). The Influence of Managerial Factors on the Capital Structure of Small and Medium-Sized Enterprises in Emerging Economies: Evidence From China. *Journal of Chinese Entrepreneurship*, 4(3), 180-205.

Brooks, C. (2002). Introductory Econometrics for Finance. Cambridge: Cambridge University Press.

Buferna, F. M., Bangassa, K., & Hodgkinson, L. (2005). Determinants of Capital Structure: Evidence from Libya. Retrieved from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.136.5311&rep=rep1&type=pdf

Capital.com.my. (2016). ACE Market – Bursa Malaysia. Retrieved from https://capital.com.my/investors-funds/public-listing-ipo/ace-market-bursa-malaysia/

Chakraborty, I. (2010). Capital Structure in an Emerging Stock Market: The Case of India. *Research in International Business and Finance*, 24(3), 295-314.

Cheema, M. H., Mahboob, H., Farooq, N., & Yousaf, A. (2017). Capital Structure Impact on Financial Performance of Sharia and Non-Sharia Compliant Companies of Pakistan Stock Exchange. International Journal of Business and Management Review, 5(1), 54-70.

Chen, J. J. 2004. Determinants of Capital Structure of Chinese-Listed Companies. *Journal of Business Research*. 57(12), 1341-1351.

Deakins, D., Whittam, G., & Wyper, J. (2010). SMEs' Access to Bank Finance in Scotland: An Analysis of Bank Manager Decision Making. *Venture Capital*, 12(3), 193-209.

DeAngelo, H., & Masulis, R. W. (1980). Optimal Capital Structure under Corporate and Personal Taxation. Journal of Financial Economics, 8(1), 3-29.

Deesomsak, R., Paudyal, K., & Pescetto, G. (2004). The Determinants of Capital Structure: Evidence from the Asia Pacific Region. *Journal of Multinational Financial Management*, 14(4), 387-405.

De Jong, A., Kabir, R., & Nguyen, T.T. (2008). Capital Structure around the World: The Roles of Firm- and Country-Specific Determinants. *Journal of Banking & Finance*, 32 (9), 1954-1969.

Department of Statistic Malaysia. (2017a). The Revenue for Services Sector Increased 9.3 Per Cent or RM387.8 Billion in the Third Quarter 2017. Retrieved from https://www.dosm.gov.my/v1/index.php?r=column/cthemeByCat&cat=398&bul_id=eFVhVzlUZEdsUmFTTTh1d0w2L1R0QT09&menu_id=b0pIV1E3RW40VWRTUkZocEhyZ1pLUT09

Department of Statistic Malaysia. (2017b). Gross Domestic Product Third Quarter 2017. Retrieved from https://www.dosm.gov.my/v1/index.php?r=column/cthemeByCat&cat=100&bul_id=M3ZGdXNNYTA4SExGWEhvb2F4T3ZEQT09&menu_id=TE5CRUZCblh4ZTZMODZIbmk2aWRRQT09

Department of Statistic Malaysia. (2018). Volume Index of Services recorded a growth of 7.0 per cent to 157.3 points in first quarter 2018. Retrieved from https://www.dosm.gov.my/v1/index.php?r=column/cthemeByCat&cat=314&bul_id=MGxUQXNaS0wzK3Z1K3pIMGJXaUZZZz09&menu_id=b0pIV1E3RW40VWRTUkZocEhyZ1pLUT09

Gill, A., Biger, N., Pai, C., & Bhutani, S. (2009). The Determinants of Capital Structure in the Service Industry: Evidence from United States. *The Open Business Journal*, 2(1), 48-53.

Gravetter, F. J., Wallnau, L. B., & Forzano, L.-A. B. (2016). Essentials of Statistics for the Behavioral Sciences. Belmont: Cengage Learning.

Gujarati, D. N. (2009). Basic econometrics. Tata McGraw-Hill Education.

Hitt, M. A., Hoskisson, R. E., & Kim, H. (1997). International Diversification: Effects on Innovation and Firm Performance in Product-Diversified Firms. *Academy of Management Journal*, 40(4), 767-798.

Hussain, S. S., & Miras, H., (2015). The Determinants of Capital Structure for Malaysian Food Producing Companies. *International Journal of Accounting & Business Management*, 3(1), 138 – 161.

Ibrahim, H., & Masron, T. A. (2011). Capital Structure and the Firm Determinants: Evidence from Small and Medium Enterprises (SMEs) in Malaysia. *International Conference on Economics, Trade and Development*, 7, 1-3.

Iqbal, M. J., & Shah, S. Z. A. (2012). Determinants of Systematic Risk. *The Journal of Commerce*, 4(1), 47-56.

Irwin, D., & Scott, J. M. (2010). Barriers Faced By SMEs in Raising Bank Finance. *International Journal of Entrepreneurial Behaviour and Research*, 16(3), 245-259.

Jamal, A. A. A., Karim, M. R. A., Arokiadasan, C. G., Mohidin, R., & Lim, T. S. (2013). Capital Structure Decisions: Evidence from Large Capitalised Companies in Malaysia. *International Journal of Contemporary Research in Business*, 5(5), 30-49.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics*, 3(4), 305-360.

Kemsley, D., & Nissim, D. (2002). Valuation of the Debt Tax Shield. *The Journal of Finance*, 57(5), 2045-2073.

Kraus, A., & Litzenberger, R. H. (1973). A State Preference Model of Optimal Financial Leverage. *Journal of Finance*, 28(4), 911-922.

Malaysia External Trade Development Corporation. (2017). Services Sector to Drive Malaysian Economy. Retrieved from http://www.matrade.gov.my/en/146-press-releases/press-releases-2016/3720-services-sector-to-drive-malaysian-economy

Md-Yusuf, M., Yunus, F. M., & Supaat, N. Z. L. M. (2013). Determinants of Capital Structure in Malaysia Electrical and Electronic Sector. *International Journal of Social, Management, Economics and Business Engineering*, 7(6), 676-681.

Ministry of Finance Malaysia. (2010). Malaysia's Government Procurement Regime. Retrieved from http://www.treasury.gov.my/pdf/lain-lain/msia_regime.pdf

Modigliani, F., & Miller, M. H. (1958). The Cost of Capital, Corporation Finance and the Theory of Investment. *The American Economic Review*, 48(3), 261-297.

Mohamad Nizam, J., Amirul Afiff, M., Ismail, A., & Sharifah Faigah, S.A. (2017). Determinants of Capital Structure: Empirical Evidence from Shariah Compliant Plantation Firms in Malaysia. *Journal of Emerging Economies & Islamic Research,* 5(4), 1 – 9.

Mohamad Nizam, J., Amirul Afiff, M., Hairulnizam, H., Ismail, A., & Sharifah Faigah, S.A. (2017). An Empirical Investigation of Picking Order Theory on Hybrid Securities: Evidence from Islamic Capital Market of Malaysia. *International Journal of Advanced and Applied Sciences*, 4(3), 87-93.

Montgomery, D. C., Jennings, C. L., & Kulahci, M. (2015). Introduction to Time Series Analysis and Forecasting. John Wiley & Sons.

Myers, S. C., & Majluf, N. S. (1984). Corporate Financing and Investment Decisions When Firms Have Information That Investors Do Not Have. *Journal of Financial Economics*, 13(2), 187-221.

Nabilah, A. S., Salwani, A., & Wan, M. (2012). Capital Structure of Property Companies in Malaysia Based on Three Capital Structure Theories. *South East Asian Journal of Contemporary Business. Economics and Law*, 1, 131-136.

Nadaraja, P., Zulkafli, A. H., & Masron, T. A. (2011). Family Ownership, Firm's Financial Characteristics and Capital Structure: Evidence from Public Listed Companies in Malaysia. *Economia Seria Management*, 14(1), 141-156.

Nejad, N. R., & Wasiuzzaman, S. (2015). Multilevel Determinants of Capital Structure: Evidence from Malaysia. *Global Business Review*, 16(2), 199-212.

Nguyen, N. T. P., Nguyen, L. P., & Dang, H. T. T. (2017). Analyze the Determinants of Capital Structure for Vietnamese Real Estate Listed Companies. *International Journal of Economics and Financial Issues*, 7(4), 270-282.

Ortqvist, D., Masli, E. K., Rahman, S. F., & Selvarajah, C. (2006). Determinants of Capital Structure in New Ventures: Evidence from Swedish Longitudinal Data. *Journal of Developmental Entrepreneurship*, 11(04), 277-296.

Pontoh, W., & Ilat, V. (2013). Determinant Capital Structure and Profitability Impact (Study of Listed Company in Indonesian Stock Exchange). *Research Journal of Finance and Accounting*, 4(14), 43-50.

Proença, P., Laureano, R. M., & Laureano, L. M. (2014). Determinants of Capital Structure and the 2008 Financial Crisis: Evidence from Portuguese SMEs. *Procedia-Social and Behavioral Sciences*, 150, 182-191.

Qiu, M. & La, B. 2010. Firm Characteristics as Determinants of Capital Structures in Australia. International *Journal of the Economics of Business*, 17(3), 277-287.

Rachev, S. T., Hoechstoetter, M., Fabozzi, F. J., & Focardi, S. M. (2010). *Probability and Statistics for Finance*, 176, John Wiley & Sons.

Rajan, R. G., & Zingales, L. (1995). What Do We Know About Capital Structure? Some Evidence from International Data. *The Journal of Finance*, 50(5), 1421-1460.

Ramli, N.E. & Haron, R. (2017). Debt Determinants of Shariah Approved Firms. *Journal of Islamic Finance* (Special Issue) (2017), 188 – 204.

Saarani, A. N., & Shahadan, F. (2013a). The Comparison of Capital Structure Determinants between Small and Medium Enterprises (SMEs) and Large Firms in Malaysia. *International Journal of Economics and Finance Studie*s, 5(1), 64-73.

Saarani, A. N., & Shahadan, F. (2013b). The Determinant of Capital Structure of SMEs in Malaysia: Evidence from Enterprise 50 (E50) SMEs. *Asian Social Science*, 9(6), 64-73.

Salim, M., & Yadav, R. (2012). Capital structure and firm performance: Evidence from Malaysian listed companies. *Procedia-Social and Behavioral Sciences*, 65, 156-166.

Sanusi, N. A., & Taha, R. (2015). An Empirical Analysis of Capital Structure Decisions in Malaysian Listed Companies. *Journal of Sustainability Science and Management*, 10(2), 65-73.

Seddighi, H. (2013). Introductory Econometrics: A Practical Approach. Oxon: Routledge.

Sekaran, U., & Bougie, R. (2016). Research Methods for Business: A Skill Building Approach. John Wiley and Sons.

Serghiescu, L., & Vaidean, V. L. (2014). Determinant Factors of the Capital Structure of a Firm-An Empirical Analysis. *Procedia Economics and Finance*, 15, 1447-1457.

Shim, J. K. (2000). Strategic Business Forecasting: The Complete Guide to Forecasting Real World Company Performance. Florida: CRC Press.

Securities Commission Malaysia. (n.d). Definitions and Interpretation. Retrieved from https://www.sc.com.my/wp content/uploads/eng/html/resources/guidelines/prospectus/130104/definitions_interpretation.pdf

The World Bank (2017). Services, etc., Value Added (% of GDP). Retrieved from https://data.worldbank.org/indicator/NV.SRV.TETC.ZS?end=2016&locations=MY&start=2007

Thippayana, P. (2014). Determinants of Capital Structure in Thailand. *Procedia-Social and Behavioral Sciences*, 143, 1074-1077.

Thomas, D. E., & Eden, L. (2004). What Is The Shape Of The Multinationality-Performance Relationship?. *Multinational Business Review*, 12(1), 89-110.

Ting, I. W. K., & Lean, H. H. (2011). Capital Structure of Government-Linked Companies in Malaysia. *Asian Academy of Management Journal of Accounting and Finance*, 7(2), 137-156.

Titman, S., Keown, A. J., & Martin, J. D. (2011). Financial Management: Principles and Applications, 11th Edition. Pearson International Edition.

Trochim, W., & Donnelly, J. P. (2006). The Research Methods Knowledge Base. Cincinnati: Cengage Learning.

Wahab, R. A., Amin, M. S. M., & Yusop, A. K. (2012). Determinants of Capital Structure of Malaysian Property Developers. *Middle East Journal of Scientific Research*, 11(8), 1013-1021.

Wahab, S. N. A. A., & Ramli, N. A. (2014). Determinants of Capital Structure: An Empirical Investigation of Malaysian Listed Government Linked Companies. *International Journal of Economics and Financial Issues*, 4(4), 930-945.

Yang, C. C., Lee, C. F., Gu, Y. X., & Lee, Y. W. (2010). Co-Determination of Capital Structure and Stock Returns—A LISREL Approach: An Empirical Test of Taiwan Stock Markets. *The Quarterly Review of Economics and Finance*, 50(2), 222-233.

Zutter, C. J., & Gitman, L. J. (2011). Principles of Managerial Finance, Brief. Pearson Higher Ed.