ANALYZING THE RELATIONSHIPS BETWEEN CAPITAL STRUCTURE AND BANK'S SPECIFIC FACTORS : EVIDENCE FROM MALAYSIA

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ABSTRACT

The purpose of this study is to examine the relationships of capital structure determinants against the leverage ratio and the capital structure approach adopted by all eight (8) domestic commercial banking institutions in Malaysia.

Correlation analysis is deployed to analyse the data collected from the financial statements of the domestic commercial banks in Malaysia as of January 2016. Seven variables, i.e. leverage, profitability, tangibility, size, growth, dividend and liquidity, are studied over a five-year period.

Results show that the leverage ratio is in direct relationship with profitability, growth and liquidity, whilst in indirect relationship with tangibility, size and dividend pay-out. This concludes that highly profitable banks, banks with high potential growth and high liquidity prefer debt over equity capital while larger banks, banks with high tangible assets and higher dividend pay-out ratio prefer equity over debt capital. It is further observed that all banks under review relied more on debt rather than equity capital, with Malayan Banking Berhad, the largest domestic commercial bank in Malaysia maintain the lowest leverage ratio for the entire review period.

The writer recommends that the stakeholders of commercial banking sector in Malaysia, i.e. investors, shareholders, bank's management, lenders and policy makers, would have better understanding on the factors which may influence the capital structure of the domestic commercial banks in Malaysia, and take benefit from the findings observed in making informed decision to their interest and advantage and to enhance competitiveness in Malaysian banking sector.

Keywords capital structure, commercial banks, leverage, debt capital, equity capital

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TABLE OF CONTENTS

CHAPTER 3 : METHODOLOGY

CHAPTER 4 : RESULTS AND DISCUSSION

CHAPTER 5 : CONCLUSION AND RECOMMENDATION

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

1.1 Background of Study

The most vital decisions to be made by the finance manager of any corporate entity is to determine the capital structure for the entity (Pastory et. al., 2013). Pandey (2010) described capital structure as the diverse method of financing a firm, i.e. the most reasonable proportion of debt and equity. Capital structure is a substantial managerial decision since it has significant impact to the shareholder's risk and return, as the share price may be affected by the capital structure decisions (Pandey, 2010). For managers, the importance of having strategic capital structure (Saad, 2010) is due to the long term effect it has on the performance of the company (Watson and Head, 2007). In addition, capital structure decision could directly influences the entity's earnings as the firm can receive constant funds from various means, including capital and debentures (Amjad et. al., 2013).

A company's capital structure comprises of the combination of preferred shares, debt and equity. This demonstrates the capital of the company which will be used to fund the business in the long run (Pastory et. al., 2013 and Amjad et. al., 2013). Other form of capital structure include the retained earnings from the profit earned from business activities (Anarfo, 2015 and Amjad et. al., 2013). The retained profit is the owner's funds which also a form of business reinvestment, and it is available to the business in long-term. Capital structure is significant in a company and therefore, determining the optimum level of debt and equity is an ongoing issue being discussed in literature related to financial areas. The information on capital

structure available in balance sheet of the company may assist the prospective investors in making informed decision, as such information can be the significant indicators of the company's strength. (Amjad et. al., 2013). According to Amjad et. al. (2013) further commented that, despite the company has the access to diverse financing resources, it is very crucial for the company to choose the best combination of debt and equity which will uphold its value, which is known as optimal capital structure.

1.2 Capital Structure for Banking Sector

Determinants of capital structure in non-financial institutions varied from those in financial institutions, due to the distinctive nature of banking business and operations (Ayanda et. al., 2013). The most important factors in determining the capital structure of banking institutions is the statutory liabilities which is related to legal capital regulations (Ayanda et. al., 2013). The capital regulations required the banks to hold the minimum capital ratios as the banks is required to operate in a prudential manner, and should be able to sustain in adverse economic condition (Ayanda et. al., 2013). However, banks normally maintain the level of capital above the regulatory minimum requirement as it might be very costly to issue capital in short notice (Barth et. al., 2008 and Brewer et. al., 2008).

The capital adequacy requirement of banks is governed by the Basel frameworks which were initiated by the Basel Committee, a group of eleven nations including France, Italy, Japan and many more (Balin, 2008). Basel I was created in 1988 and it was generally intended to uphold the synchronisation of regulatory and capital adequacy standards within the Basel Committee member states, which are mostly

developed countries (Balin, 2008). Basel I recommended 8% of minimum capital adequacy target and it focused only on credit risk. The recommendation was implemented by all Basel Committee members by end of 1992 (Balin, 2008).

In response to the 1990s banking crises and some loopholes of Basel I, the Basel Committee has put forth Basel II framework, a revised and more comprehensive capital adequacy accord which covers credit risk as well as operational and market risk, though the minimum capital requirement was maintained at 8% (Balin, 2008). Basel II was initially published in June 2004 and was gradually implemented in the years prior to 2008 (Ahmet, 2008). Due to intervention of financial crisis however, it was only implemented in most major economies in early 2008 (Ahmet, 2008). Upon negotiation on Basel III, the main focus was on the financial crisis and more stringent policies and standards will be gazetted and implemented in major nations, including US and Europe (Ahmet, 2008).

Studies carried out by Santos (1999), Shrieves & Dahl (1992) and Gorton & Winton (1995) exhibit that bank-specific variables are also give a great impact in defining the capital structure for banking institutions, and it is not only limited to legal liabilities on the capital adequacy requirement as regulated by Basel frameworks. Banks should make the appropriate decision and adjust the combination of capital structure that could maximize the firm's value and ensuring that they have in place the optimum capital structure and their business operations are not either too lowly geared or highly geared (Ayanda et. al., 2013) and thus, the determination of sources of raising funds and appropriate capital requirement are highly important (Ayanda et. al., 2013). According to Ayanda et. al. (2013)

and supported by Ingves (2014), leverage level in banking sector is way greater than other industry. Based on analysis by Ingves (2014) on 10 world's largest listed non-financial companies including Apple, Exxon Mobile, Google, IBM and Microsoft, he noted the average leverage ratio is 50%. This means that in general, these organisations financed the assets with the proportion of 50:50, i.e. equal proportion of debt and equity. In banking sector however, Ingves (2014) observed a common ratio of 95:5 which indicates a higher leverage ratio in comparison to non-banking firms. A higher leverage ratio for banks is common, since the banks play the key role to provide funds to those in need. In order to give credit, the bank has to borrow from household and firms that have available funds for investment, and ensure that the funds are available at all times and allocated efficiently at the lowest possible cost. The obligation to maximize these benefits for society wellness resulted to banks having high leverage (Ingves, 2014).

Ayanda et. al. (2013) identified that the key root cause of business failure is the lack of capital available to fund the firm's business. Angelides (2011) and Maxfield (2011) further agreed that excess leverage is one of the main cause of financial crisis and banks with higher leverage has higher probability of going into insolvency.

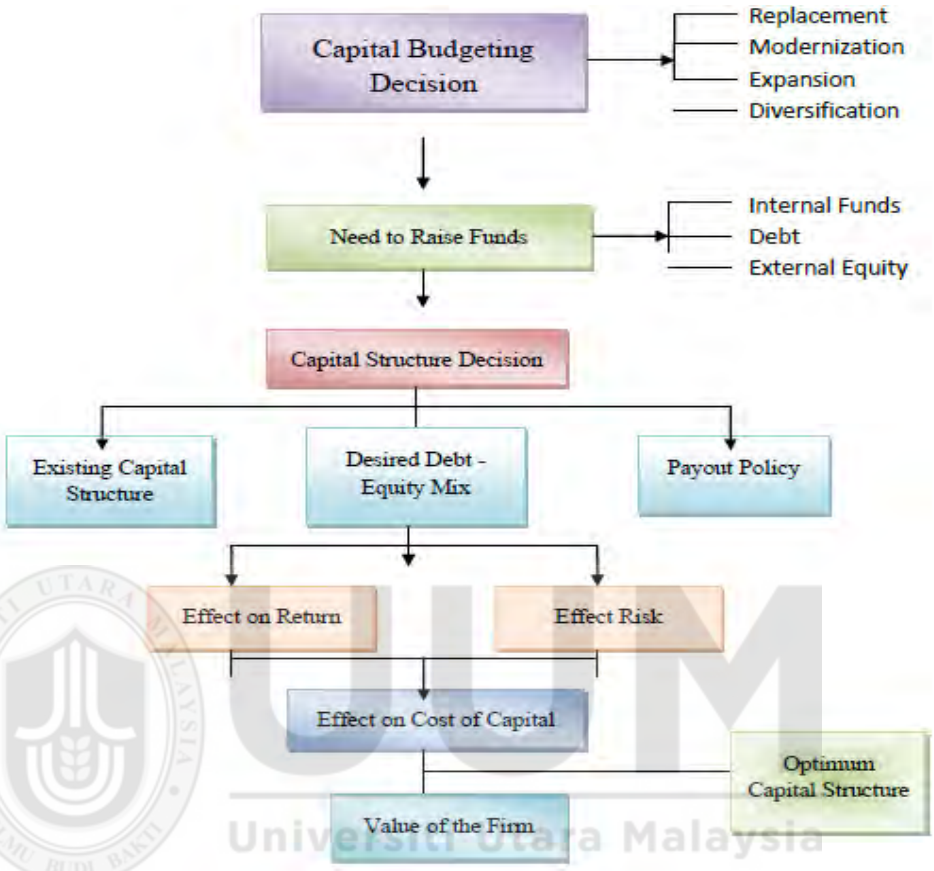
A study on the impact of financial crisis in 2008 was conducted by Stephen (2008). According to him, prior to financial crisis in 2008, top five US financial institutions had increased their leverage significantly, with a total debt of $4.1 trillion for year 2007, which represents approximately 30% of US nominal GDP for 2007. As the consequences of the financial crisis, the bankrupt Lehman Brother

then being liquidated, Merril Lynch and Bear Sterns were sold at discounted prices, and Morgan Stanley and Goldman Sachs were governed by a more stringent banking regulations upon transforming them to commercial banks (Stephen, 2008).

Ayanda et. al. (2013) also pointed out that, banks need to have a strategic composition of both debt and equity in order to raise adequate capital and to achieve the optimal level of capital structure. The common empirical studies on standard capital structure is not applicable to banks due to the level of leverage and the statutory requirement regulating the banking institutions. Nevertheless, understanding the determinants of capital structure is an important factor to the banks. Diamond and Rajan (2000) found that the bank's capital structure may affect its ability and stability to maintain the required liquidity and to serve its obligation as fund provider to the society.

Flannery (1994), Allen et. al. (2011), Myers and Rajan (1998) and Diamond and Rajan (1999) proposed different perceptions on the optimum level of bank's capital structure. These viewpoint prompted that the statutory capital adequacy standards enforced by regulators are not the only elements affecting the banks' financing structure. Amjad et. al. (2013) opined that the financial institutions may use the same way to measure the optimal capital structure as those of non-financial firms (Amjad et. al., 2013). The general capital structure decision process is depicted below.

Figure 1.1
Capital Structure Decision Process



1.3 Difference of Debt and Equity Financing

Azhagaiah and Gavoury (2011) portray that the best alternative for capital structure for firms is a combination of debt and equity. Combinations of equity and debt in capital structure of the firm have been identified by scholars to effect current and future financial operations of the firm (Chakraborty, 2010; Tian and Zeitun, 2007; San and Heng, 2011; Champion, 1999; Hadlock and James, 2002; Ghosh et. al., 2000; and Abor, 2005).

The issue of tax deductible in interest also play significant role in capital structure as there are uncertainty for owners in utilizing the financing sources, without the existence of tax incentive. The internal manager however, would prefer to maximize the value of the firm by using debt financing only, in the event that interest was tax deductible. Nonetheless, this would not be possible due to the fact that debt financing increases the agency cost and potential bankruptcy costs. The agency cost is the costs which arise due to the relationships of two parties who have totally different concerns i.e. shareholders and managers, and debt-holders and shareholders (Azhagaiah and Gavoury, 2011). Adesina and Nwidobie (2015) had performed a study on the capital structure impact on financial performance of Nigeria banks and they found out that, when debt is minimal, the cost incurred is less expensive compared to equity due to the lower after tax cost which further improve earnings per share and dividend per share. Notwithstanding that, the researchers opined that when the level of debt increase, the after-tax cost would further increase, thus, negatively affecting corporate financial performance. The study however concluded that the management of Nigeria's bank should consistently use debt in the capital structure as this will reduce the overall cost of capital as a result of its tax advantage, and hence, enhance the bank's financial performance.

Though the favorable tax treatment for debt seems attractive, the tight capital requirements in banking sector does not allow banks to explore more into debt (Miles et. al., 2012). Setting the bank's minimum capital requirement is a major policy and regulation issue for government and regulators, globally.

The recent requirement of Basel III framework has set the rules that the banks have to maintain higher level of equity capital to finance their assets, which is more than what has been required under previous regulations. The study carried out by Miles et. al. (2012) observed that the level of equity capital for banks is very much higher than the minimum capital required under Basel III regulations and much larger than previous years.

Barclays and Smith (2005) opined that the capital structure and financing decision is a reflection of the corporate manager's effort in order to balanced out the impact of tax incentive for higher debt amount and the potential high cost of financial distress. In addition, higher debt level will give a negative impact towards the firm's value since it may cause financial distress, but, on the other hand, use of less debt may also impose unfavourable condition to the firm's value due to over-investment using equity capital which may further affect the firm's profits (Barclays and Smith, 2005).

Abor (2005) further asserts that, if a firm cannot avoid to use debt, then it will prefer secured debt, for instance, common stock and debt will be used as alternative. The decision which regards to the optimum capital structure is very difficult for managers as they are no guidelines to be referred to (Abor, 2005).

Though banks are diverse from other organisations, the banks still encountered same difficulties and challenges as non-financial institutions, particularly, in determining the optimum level of capital structure which would increase their profitability and at the same time, minimize the cost of capital (Abor, 2005).

According to MM theorem, any changes in company's capital structure would not give impact to the cost of funds (Miles et al, 2012). Decreasing leverage will probably cause the required rate of return on equity financing to decrease (Miles et al, 2012). This theorem however, does not hold for banking sector due to several reasons. One of the reason is the different tax treatment for equity and debt. The debt interest payment is tax-deductible, which is allowed to be set-off against their corporate tax payment, but tax paid for dividend is not tax-deductible.

Another observation that may have the same implication was found by Miles et. al. (2012). Deposit insurance may encourage the banks to substitute equity financing with deposit financing (debt). MM theorem also agrees that debt financing is fully secured due to the presence of deposit insurance (Miles et. al., 2012).

Berger et. al. (1995) concluded that financing through equity capital is more favourable by investor as it increases their expected rate of return, whereas the firm's owner favour debt financing due to its tax advantage.

Though the role of deposits has varied over the years, several researches have shown that deposits often regarded as the optimal form of funding for banks and remain as important source of financing for banking institutions in all countries (Diamond, 1984 and Diamond and Dybvig, 1983).

The equity financing in banks's capital structure is considered as an element which can affect the bank's liquidity, buffer and agency costs. The cost to obtain equity capital for banks is assumed to be much higher than the cost of obtaining deposits (Myers & Majluf, 1984 and Bolton & Freixas, 2006).

Banks should be able to sustain in the financial market, even with variations in the assets value without triggering fears of insolvency with its higher capital (Miles et. al., 2012). Hence, this would resulted to a lower likelihood of banking crises and preserves a more robust banking sector (Miles et. al., 2012). The financial crisis should be able to be avoided by maintaining a higher level of bank's capital and having banks using equity capital to finance most of their assets (Miles et. al., 2012).

Solomon (1963) states that the main difference between debt and equity financing is that the debt holder will receive a fixed interest payment on regular basis, whereas the equity holder is a part of the firm, who will have the voting right which will determine on how a firm manage it assets and who also will enjoy the dividend payments.

1.4 Overview of Banking Sector in Malaysia

Malaysian banking sector plays the primary role in obtaining fund from those parties who have excess funds available for investment and further provide the funds as credit to those who wish to borrow (Ingves, 2014). Being providing this kind of service, bank is the major financing source for economic activities in Malaysia. The banking system is the largest component of the financial system, which consists of the Central Bank i.e. Bank Negara Malaysia (BNM), banking institutions and other group, which also includes representative offices of foreign banks and discount houses. The commercial banking institutions are the biggest and most substantial provider of fund in Malaysian banking system. Faezah (2007) highlighted that BNM has started to regulate and supervise the commercial banks

after two years of the independence of Malaysia i.e. 1959, despite Malaysian financial system has been in operation before that in 1957 (Guisse, 2012). Nonetheless, only foreign banks were operating in Malaysia during these early periods. The local banks commenced their operations in 1959 with the establishment of Bank Negara Malaysia (Matthews and Ismail, 2006).

Due to the occurrence of financial crisis in 1980's and 1990's, the number of local banks in Malaysia decreased from eighty in the early 1980's to fifty four in the end of year 1990's (Ong and Ng, 2013). According to Bala and Mohendran (2003), the initial merger in Malaysia financial industry occurred when the Bank of Commerce took over the United Asian Bank in 1990. This entity has consequently merged with Bank Bumiputra on 1 October 1999, to form Bank Bumiputra Commerce. Later in 1996, the Rashid Hussain Group took over Kwong Yik Bank to form RHB Bank to mark the second merger exercise in Malaysian banking system. RHB Group expanded when Sime Bank joined the group in June1999. During the Asian financial crisis in 1998, a robust bank merger programme was initiated by Malaysian government to restructure all the fifty four financial institutions into ten anchor banks in 1999. In 2006, the ten anchor banks became nine after the acquisition of Southern Bank Berhad by CIMB. Later in October 2011, Hong Leong Bank Berhad acquired EON Bank Berhad and upon completion of this acquisition exercise, there were only eight commercial banking institutions in Malaysia.

All of these merger and acquisition (M&A) in the Malaysian banking sector has not significantly improve the capital structure of banks (Ong Tza San, 2015).

However, the result of return on equity (ROE) and return on assets (ROA) indicate that the bank's performance will improve after merger and acquisition, but the changes in capital structure indicates that not all merged banks will had better performance after the consolidation exercise (Ong and Ng, 2013).

1.5 Problem Statement

Capital is necessary to be used as buffer when banking institutions are impacted by huge losses (Ayanda et. al., 2013). The bank becomes insolvent when its total liabilities is more than the value of asset and when the equity holders are failed to service the bank's obligations. The bank is therefore required to determine the type and amount of capital it needs to maintain to ensure adequate protection against default risk. When the cost of capital is minimal, this is the point where the optimal level of capital structure is reached (Ayanda et. al., 2013).

Capital would also enable the bank to continue in operation, in a sound and viable manner while the problems are being addressed and resolved (Ayanda et. al., 2013). Adequate capital reserves can create confidence and trust in the stability and financial soundness of the banking system as a whole. This would further provides perpetual assurance that it will never default in honoring its obligations to creditors and depositors (Ayanda et. al., 2013)

Angelides (2011) agreed that the financial crisis was triggered by six root causes, i.e. governance, liquidity, leverage, conflicts of interest, too big to fail and, taxes and subsidies. Out of these causes, he suggested that the main cause of financial crisis is the excess leverage. The author highlighted that limiting the leverage is indeed complex, and beyond the competency of legislators to create a law to

govern it and beyond the ability of regulators to manage it. The only solution available is to impose a higher capital requirements which way better than the crisis that the financial sector has just experienced (Angelides, 2011).

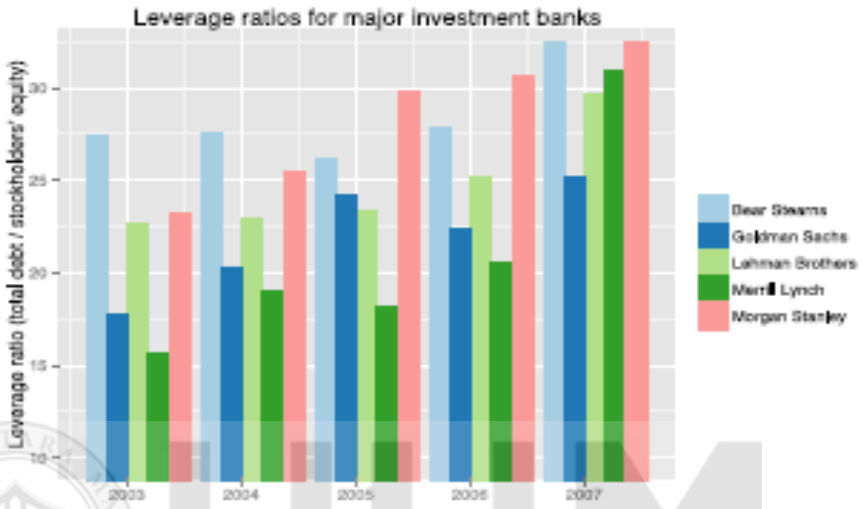
Maxfield further in year 2011 indicated 25 major causes of financial crisis and believed that lapses in Basel II capital rule is one of the major cause, whereby the undercapitalized banks would render insolvent during financial shock, due to their high leverage as they hold more capital relative to their assets. The Basel II capital rule, which took effect in 2004, allowed banks to substitute the tangible common equity with subordinated debt and convertible preferred stock. This resulted to certain major US banks only maintained less than 4% of tangible common equity during the crisis (Maxfield, 2011).

Simon (2009) also pointed out that the financial crisis has signaled that banks need to raise more capital. Pursuant to the massive write-down of bad assets which resulted to severe stress for US banks, the bank capital issue has been the main concern for US of which since then, many banks have started to raise additional money in the private markets in order to build up their capital base. Concurrently, the federal government has also provided funds into the banks in terms of preferred equity.

According to Simkovic (2009), financial institutions in US became highly leveraged prior to the financial crisis in 2008, as they increased their risky investment and using complex financial instrument such as derivatives, which was difficult for regulators and creditors to monitor and looking for the solution to reduce the level of risk associated with such investment and instruments.

Economist (2008) also highlighted that during the years preceding the crisis, US financial institutions and households became excessively leveraged.

Figure 1.2
Leverage ratio of top five US investment banks for 2003 to 2007 (prior to 2008 financial crisis)



As per Figure 1.2 above, the top five US investment banking institutions had significantly increased their financial leverage from 2004 to 2007, which further increase their vulnerability against financial shock (Conard, 2012). In year 2007, these top five institutions recorded more than $4.1 trillion in debt, which represented 30% of US nominal GDP for the year (Stephen, 2008).

The financial crisis in 2008 has a great impact on US, when Lehman Brothers went bankrupt and liquidated, while Merrill Lynch and Bear Stearns were sold off, and Morgan Stanley and Goldman Sachs were transformed to commercial banks so as to govern them with a more stringent banking regulation (Stephen, 2008). Apart from these five institutions, US government took over another two US government controlled organisations, Freddie Mac and Fannie Mae in September 2008, upon which they had guaranteed approximately $5 trillion in mortgage obligations

(Calomiris, 2008). These seven entities had a total of $9 trillion in debt or guarantee obligations and were highly leveraged (Paul, 2009). The International Monetary Fund (IMF) anticipated that for the period from January 2007 to September 2009, large European and US banks had lost over $1 trillion in bad loans and assets and the amount is expected to increase to $2.8 trillion in 2010 (Reuters, 2009).

Based on the effect of excessively high bank's leverage to the economy as a whole, close monitoring and effective capital structure decision is therefore crucial in ensuring the stability of the banking sector. This research is thus, intended to defining the relationship of capital structure determinants that contributes to the decision of choosing either debt or equity to finance the bank's operation. Further, this study would also provide the information on capital structure strategy deployed by domestic commercial banks in Malaysia.

1.6 Research Questions

The research paper is aimed to answer the following research questions:

1) How the selected six (6) capital structure determinants influence the capital structure decision of domestic commercial banking institutions in Malaysia, i.e. whether to issue equity or debt capital?
2) What is the approach of capital structure deployed by the banks under review, i.e. whether the banks prefer debts over equity capital?

1.7 Research Objectives

The objectives of this study are to assess the following:

1) The relationship between the capital structure determinants of domestic commercial banking institutions in Malaysia and the leverage ratio. The determinants to be analysed are profitability, tangibility, size, dividend, liquidity and growth.
2) Further, the analysis result would also be used to determine the capital structure strategies deployed by the domestic commercial banking institutions in Malaysia.

The analysis to be carried out in order to meet the above objectives will utilize the evidence based on historical data for all eight (8) Malaysian commercial banks as at January 2016.

1.8 Significance of the Study

Evaluating the factors that determines the capital structure decision will benefit the relevant parties in initiating measurement which can intensify their competitive position in the banking industry. This research is significant in three ways. First, there are loads of research papers related to the area of capital structure, despite that, those that are concerned in the financial industry are limited. This study therefore, attempts all its best to at least, contribute to the existing research and literature related to the capital structure decision of domestic commercial banks in Malaysia.

Second, the study will provide great significance to the bank's stakeholder including the external investors and shareholders, bank managers, lenders and policy makers in making well-informed decisions and regulations considering the

financing practice of the banking sector in Malaysia. It will provide some guideline for financial managers and senior management of the banks on how to design the capital structure proportion in order to capitalize the value of the firm and reduce the agency cost and moral hazard which may arise.

Lastly, the study may serve as a reference point and contribution to other researches in different industries by providing the overview of the bank-specific factors which determine the capital structure of Malaysia commercial banks.

1.9 Scope of the Study

This study is delimited to the study of determinants of capital structure for Malaysian domestic commercial banking institutions. The details are as follows:

1) All eight (8) domestic commercial banking institutions in Malaysia as of January 2016, as listed in the website of the Bank Negara Malaysia ("BNM") or Central Bank of Malaysia, since locally originated banks share the common attributes in accounting practices, corporate governance and control. The eight banks are Malayan Banking Berhad, CIMB Bank Berhad, Public Bank Berhad, RHB Bank Berhad, Hong Leong Bank Berhad, AmBank (M) Berhad, Affin Bank Berhad and Alliance Bank Malaysia Berhad.
2) The study only focused on firm-specific determinants of capital structure and therefore it excludes external factors such as inflation, GDP growth, interest rate etc.
3) The coverage period is confined to 5-year period starting from year 2010 to 2014.

1.10 Limitations of the Study

There are three main limitations in this study:

1) Due to time constraint and limited data, the researcher excludes the external factors in Malaysian economy that may have a certain contribution to the determination of the capital structure of the domestic commercial banks.
2) The writer used correlation analysis to determine the relationship between the selected variables. It would be better to use regression analysis to determine the relationship between those variables, provided that dependent and independent variables are well defined with adequate observations to run the regression analysis.
3) The analysis is based on the data available in the bank's financial statement, and therefore the assessment on the factors contributing to capital structure deployed by the respective banks is limited, as it is only confined to secondary data.
4) The researcher did not include the primary data such as interview of the banks' Chief Executive Officers, Chief Financial Officers, other relevant Senior Management team and financial managers, to analyze their knowledge and level of competency on capital structure, corporate policy and financing decision practices. The study would have been much better if the researcher could carry out such interviews to gauge the existing practices on financing decision making.

1.11 Organization of the Study

The subsequent part of this research paper is structured as follows: Chapter 2 provides an overview of the previous literature reviews of the determinants of capital structure followed by Chapter 3 which explains the research framework and methodology which covers the sampling details, data collection method, measurement of variables, the technique of analysis and so on. Chapter 4 will discuss the findings of the analysis done and lastly Chapter 5 will provide the conclusion and recommendation based on the analysis and findings noted.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter discusses the results and findings of past studies on capital structure determinants and the corresponding assertions on the four (4) capital structure theories. Many studies have conducted empirical tests to describe the correlation between the six (6) variables with leverage or debt level and how it affects the decision between debt and equity financing. The first section covers the overview of capital structure theories followed by the discussion on the previous research work on the selected variables.

2.2 An overview of capital structure theories

It is not easy to define the most appropriate capital structure composition in order to maximize the firm's value, but he following capital structure theories may provide some guidance and reference in understanding how capital structure will give impact to the organization's value:

2.2.1 Modigliani and Miller (MM) Theory

Modigliani and Miller (1958) proposed the theory which analyses the impact of capital structure on firm's value. The authors suggested that under perfect economic condition, financing has no impact since the firm's value is not dependent on how debt and equity are structured. In other words, firm's capital structure is not affected by equity issuance or selling of debt, and the cost of capital will remain constant.

In reality however, the market is never perfect and financing structure does matter whereby the firm's value of the firm would fluctuate, either increase or decrease, depending on its financing structure proportion (Banal-Estanol, 2010). Debt financing has the advantage of tax shield, whilst having the disadvantage of bankruptcy cost (Banal-Estanol, 2010). Notwithstanding this, debts are still not attractive from the investor's point of view due to the personal tax imposed on their interest income (Banal-Estanol, 2010).

In 1963, Modigliani and Miller revised the earlier irrelevant theory by providing a revised assertion that cost of capital does affect the capital structure and further give impact to the value of the firm. This was only applicable without the existence of tax and transaction cost. They further opined that debt borrowing provide tax incentive which will reduce the cost of borrowing and maximizes the firm performance (Miller, 1977).

Following Modigliani and Miller (1958, 1963), there are three other major capital structure theories, i.e. agency cost theory (Jensen and Meckling, 1976), pecking order theory (Myers and Majluf, 1984) and trade-off theory (Bradley et. al., 1984).

2.2.2 Trade-off Theory

According to trade-off theory (Myers, 1977), debt-equity ratio must be appropriately defined after taking into consideration the explicit nature and requirement of business. This theory agrees that tax incentive for interest paid on debt would provide advantage to a corporation, in comparison to equity financing which income is charged with tax. The interest tax shield

will further increases the return to investors and enhance the corporate value. Larger firms also can easily approach the capital market, leading to lower monitoring and agency cost. As larger firms having low probability of bankruptcy and more diversified, it has no difficulties in increasing their level of leverage. The theory also suggests that larger firms should favor more debt financing to finance their operations, since they have low financial distress cost as compared to smaller firms. (Amjad et. al., 2013). This would makes the firm maximizes debt financing over equity.

Notwithstanding that, too much debt may increase the likelihood of financial distress. Ata and Ag (2010) agrees that debt financing is more favourable due to its lower cost and tax benefit, but the level of debt must be properly determined as excessive leverage will further lead to high cost of bankruptcy.

In the absence of transaction costs, the trade-off theory predicts a direct relationship between profitability and the leverage ratio, but, this is relevant only when the company makes more profit, as the benefits from debt outweigh the cost of debt. A negative relation between profitability and leverage ratio may still exist in the presence of transaction costs because the firms may not adjust their leverage ratios on frequent basis. As firms become more profitable, the share market value may increase faster than that of debt, leading to a negative relationship between profitability and leverage ratios. Higher profitable firms will start issuing more debt relative to equity to adjust their target leverage ratios (Chen and Zhao, 2005).

2.2.3 Pecking Order Theory

Pecking order theory predicts that firms will favour retained earnings to fulfill its financial requirement, and followed by debt and equity financing is the last resort. Though the equity financing is required, they will choose those securities with the least risky one, due to information asymmetry. The least risky securities includes convertible securities and preferred stock, which is very unlikely to be marked down by investors (Lee, 2015). The Pecking Order theory suggests that a firm might not have an optimal capital structure, with the existence of information asymmetry between insiders and outside investors (Gocmen and Sahin, 2014). Information asymmetry is a condition whereby in any transaction, one party has more information and knowledge than the other party. Theoretically, the internal managers would have superior and material information on the investment decisions of the company and the expected rate of returns, as compared to outsiders. With the existence of information asymmetry between managers and investors, the prospective investors are willing to buy shares with discounted price. A firm may need to appropriately define its priority in order to mitigate the impact of such issue, which may lead to the preference of internal fund over debt and equity financing (Myers et. al., 1984). In relation to this as well, a more profitable firm tend to finance the investment internally and use less debt, which will result to lower leverage ratio (Ata and Ag, 2010). Information asymmetry issue might not exist in large firms and they could have easy access to capital market. This inverse relationship between leverage and size is therefore, supports the pecking order theory.

2.2.4 Agency Cost Theory

M.C. Jensen and Meckling (1976) were the first who proposed the Agency Cost Theory. This theory assumes that there are two types of conflicts of interest that may exist in any organization or corporation (Amjad et. al., 2013). The first conflict is those arise between the shareholders and managers due to the decisions made by managers, which may be in their personal interest and not in line with the effort to maximize the shareholders' wealth (Amjad et. al., 2013). The second type of conflict of interest is the conflict which exists as a result of different views on the risk and return, between the debt-holder and shareholders (Amjad et. al., 2013). The debt-holders are more interested on current profit since it guarantees their return, whilst the shareholders are more interested in long term capital appreciation and therefore, they are willing to relinquish the current profit (Amjad et. al., 2013). This conflict creates an agency problem. According to Lee (2015) and Jensen and Meckling (1976), the agency cost theory agrees that optimal capital structure is materialised whenever the debt value alleviates the conflicts of interest between shareholders and managers, and shareholder and debt-holders.

2.3 Capital Structure Determinants

This section highlights the six (6) variables that determines the decision on the capital structure, debt or equity financing. The variables namely liquidity, profitability, size, tangibility, dividend and growth.

2.3.1 Profitability

In this study, profitability is measured by Return on Asset (ROA). There were different predictions observed on the correlation of this variable with leverage ratio.

Negative correlation was predicted by pecking order theory based on the argument that firms with higher profitability generally have sufficient internal funds to finance their future investment and therefore, they will borrow less. In contrast, firms lacking internal funds due to lower profit tend to resort for more debt financing. Firms usually prefer internal sources of financing, but would rather prefer debt financing to equity financing if the internal financing source are inadequate to fund the business operation (Amjad et. al., 2013). Thus, this argument concurs the pecking order theory principle, whereby the firms with higher profitability tend to rely more on internal financing rather than external financing.

Trade-off theory on the other hand, stands on the principle that profitability is in positive relationship with leverage (Myers, 1984). Firms with higher profitability would normally have higher debt capacity and hence, the risk imposed to the debt holders would be lower.

The predictions of pecking order theory was supported by most of previous researches. The studies of Kester (1986), Friend and Lang (1988), Friend and Hasbrouck (1989), Gonedes et. al. (1988), Sheel (1994), Hovakimian et. al. (2001), Cassar and Holmes (2003), Esperanca et. al., (2003), Bauer (2004), Hall et. al. (2004), Gropp and Heider (2010) and Juca et. al. (2012) evidenced an indirect correlation between profitability and the debt level in

capital structure. Firms that have higher profit are able to generate fund internally and therefore would maintain a low debt level (Titman and Wessels, 1988 and Barton et. al., 1989). Murinde et. al. (2004) observed that retained earnings are the main source of funding. Nepalese and Indian researches were also share similar evidence as foreign studies do (Baral, 1996). Myers (1984) narrates that firms tend to favour internal funds, but, if the internal funds is inadequate to support the business, the firm may prefer debt financing rather than equity financing. Firms with higher earnings and profit are expected to have lower debt level in the capital structure, as compared to firms with lower earnings (Sarkar and Zapatero, 2003). Higher level of earnings would increase the equity base of the company and therefore, over the years, the proportion of equity will keep growing and become larger than debt proportion.

Research findings of Rajan and Zingales (1995) on G7 countries found that in case of additional debt financing, firms with higher profitability incur higher agency cost. Amidu (2007) also found indirect relationship between leverage and profitability. In the study, the author observed that debts represented approximately 87% of total assets of banking institutions in Ghana and more than three quarters of the capital represented by short-term debts. Velnampy and Niresh (2012) conducted a study assessing ten listed Sri Lankan banks for the period from year 2002 to 2009, and observed that there was a n inverse relationship between profitability and capital structure. They also found out that debt represented 89% of total assets in

the Sri Lanka banking sector, which concurred the fact that banks are highly leveraged institutions.

The analysis carried out by Berger et. al. (2008) on the profitability and capital structure in listed commercial banks in USA from year 1992 to 2006 found that the banks were seeking for capital by raising more new stock issuance. This implies that more profit the bank is making, the greater will be their ability and capacity to build up their own capital. Thus, the study provide the evidence that there is an inverse relationship between the bank profitability and their debt level. The findings were also confirmed by the study carried out by Kleff and Weber (2008). Drobetz and Fix (2003) found that higher profitable Switzerland firms use less debt, which supports the assertion of pecking order theory. The study examined the leverage predictions of both trade-off and pecking order theory using data obtained from Switzerland firms.

The research of Osborne et. al. (2011) on banks in United States showed that there is a significant indirect relationship between profitability and equity-asset ratio, regardless of the size of the bank. The high leverage of the US banks was due to minimum capital requirement the banks must hold for protection in the event of unexpected economic conditions and this resulted to the capital optimization and therefore, the value of the bank is maximized. Aside from that, bank favours debt because of the tax advantage and backed by government in respect of bankruptcy costs.

Gropp and Heider (2009) analyzed the capital structure determinants of large banks in Europe and United States for the period from year 1991 to

2004 and concluded that the profitability and leverage are negatively correlated. The assertion was contributed by the fact that most of the banks were highly levered as they financed the assets with deposits, which is one of the leverage component. The authors further analyzed the reason as to why the banks are so levered and further found out that issuance of equity capital was more expensive than obtaining debt, and therefore the banks prefer debt rather than equity. The agency problems between managers and shareholder, and the psychology of "too big to fail" also explained the reason which pushed the bank to be more levered. Gropp and Heider (2009) also found that the capital structure of other financial firms are differ from banks whereby the customer deposits are only available to banks, but not available to other financial firms. In other firms, deposits can be considered as short term debts while long term debts are considered as non-deposit items.

Some other research works came to a different conclusion. Taub (1975), Abor (2005), Titman and Wessels (1988), Myers and Majluf (1984), Burgman (1996), Jensen et. al. (1992) and Aggarwal (1994) found a direct correlation between profitability and debt. These studies concluded that leverage and profitability are negatively correlated and the relationship is inconclusive. De Angelo and Masulis (1980) argued that highly profitable firms could get extra benefit of tax shield by raising financing through debt. A highly profitable firm has higher probability to pay the loan granted to them and therefore, less default risk to the lender and they can borrow more. The finding was agreed by Um (2001) who also suggested that highly

profitable firms will also have greater ability to pay debt, and the firm may also gain tax shields, hence, a direct correlation should be expected between profitability and leverage.

Williamson (1988) was having an exceptional stance on debt whereby he believes that debt serves as a tool for managers to ensure that preference was given to create wealth and increase the value for shareholders. This may be relevant for companies with high profit and cash flow, whereby raising additional debts can be utilised as a mechanism to ensure efficient and effective allocation of available resources.

According to Raheman et. al. (2007), profitable firms prefer debt financing as compared to equity due to three reasons. The first reason is that higher proportion of debt in a firm's capital structure would subsequently reduce its tax liabilities and increases tax savings. Hence, a more profitable firms opted for more debts rather than equity. The second reason is that a low profitable firm has higher likelihood for bankruptcy, thus, raising more debt may make it more susceptible to bankruptcy. However, the probability of bankruptcy would be reduced and minimised if the firm constantly making more profit. The last reason is related to agency cost, whereby it is a cost in the form of interest rate or also known as cost of fund. The creditors will continuously observe the company's financial position and closely monitor its performance. So, if a firm portrays a good performance and reputation, creditors are optimist about the firm and have no worry on possibility of bankruptcy, and therefore, it can acquire more debt.

Another study conducted by Ross (1977) elaborated on different concern for managers and shareholders. Managers do have knowledge on the distribution of the firm's return, but investors don't. If managers decide to raise additional debt into the firm's capital structure, the cash outflow and firm's commitment will be increased and the investors will foresee this as additional obligation to be fulfilled by the firm. The managers however have different perception on this. Additional debt means the management perceive higher level of confidence towards the future prospect and performance of the firm. Conversely, if managers decide to raise capital by issuing new equity, this would signaled that management has no confidence towards the firm's future prospect and profitability. Thus, it shows a positive correlation between the profitability and debt level.

2.3.2 Tangibility

Most of past studies measured assets tangibility in terms of ratio of fixed assets over total assets, and therefore in this study, it is measured the same way. Tangibility of assets, is the collateral value of those assets that creditors or lenders can accept as security for debt issuance. The firm's tangible assets are the most widely accepted collateral to secure for bank borrowing and secured debts and therefore, the asset structure of a firm has a direct impact on its capital structure. Firms with only few tangible assets that can be provided as collateral to the lender, it may be difficult for the firm to raise funds via debt financing. This will become worse if the lenders have limited and unfavourable information on the position and performance of the firm. The type of assets owned by the firm would give

a huge impact in determining the firm's capital structure since a large proportion of tangible assets means more assets can be collateralized as security to the lenders for debt issuance. This will minimize the risk of the lender suffering agency costs of debt and also reduce the default risk (Ramirez and Cabestre, 2010).

Kremp et. al., 1999; Rajan and Zingales, 1995; and Friend and Lang, 1988 concluded that tangibility is positively related to a firm's leverage. High tangibility ratio assures the lender or creditor that the loan granted is backed by collateral assets. If the firm has more tangible assets, it means more debt can be granted by the lender. This is due to the fact that if firm has more tangible assets which can be easily converted into cash, the lender is willing to grant more debt since the lender has confidence that the firm can service the debt payment through its tangible assets in the event of liquidation. This observation is supported by most of the previous studies in developed countries which concluded a direct relationship of debt level with tangibility ratio.

According to trade-off theory, a higher proportion of tangible assets in comparison to total assets, ensure higher security level and thus, offering more value to liquidate assets in the event of bankruptcy. Findings by Rajan and Zingales (1995) are consistent with the trade-off theory. The researchers assert that tangible assets are appropriate and provide more value for the purpose of raising debt since it serve as good quality of security and has the ability to reduce the cost of financial distress. The researchers further suggested that lenders are more willing to provide loan

if the balance sheet of the firm shows a greater proportion of tangible assets, thus leading to higher leverage. The liquidation value of the assets is based on the degree of asset's tangibility, where the more generic and tangible the asset is, the greater liquidation value it will have. As conclusion, firms with large proportion of tangible assets would be expected to raise more debt.

Agency cost theory also suggested that lenders can recover or liquidate more assets if the firm has high collateralized assets in the event of default. The trade-off theory is in agreement with agency theory, of which both theories concur that tangible assets as collateral would be able to reduce the cost of financial distress and agency costs of debt, hence increase the capacity to obtain more debt for firms. The positive relationship between collateral and leverage ratio was also agreed by Rajan and Zingales (1995), Titman and Wessels (1988), Aggarwal and Jamdee (2003), Frank and Goyal (2005) and Harris and Raviv (1991).

Pecking order theory implies that it may be favorable and the organization may take advantage by selling secure debt as it reduces the cost which may arise due to information asymmetry that exist between the managers and investors. The theory also contends that firms with low tangibility ratio faces larger asymmetric information problems and therefore, the firm tend to raise more debt over time and become more levered (Frank and Goyal, 2003).

Studies by Scott (1977), Stiglitz and Weiss (1981), Williamson (1988) and Harris and Raviv (1990) emphasized that the debt holders may demand for

security and the tangibility value may be the key factor to determine the level of debt available to companies. It is certain that more debt will be granted by the lenders if firms have more tangible assets to serve as collateral, as the cost associated with moral hazards are reduced. This resulted to the assumption that firms with higher asset liquidation value having more access to debt at low cost than firms that have intangible assets (Storey, 1994; and Berger and Udell, 1998).

According to Myers (1977), capital intensive companies will likely having more debt capital as they are having higher capacity in pledging the tangible assets as collateral.

Gropp and Heider (2010) study the capital structure determinants of large banks in United States and Europe for the period 1991 to 2004 and found out that the bank's leverage was positively correlated with collateral. MacKie-Mason (1990) concluded that firm that use its internal fund to obtain tangible assets will have lower cost of bankruptcy and financial distress in comparison to firm with intangible assets. The researcher also believed that firm with more tangible assets in its asset base prefer to opt for debt financing and this will affect the firm's performance. Marsh (1982) also maintain that firms that have few tangible asset are more likely to issue equity since few tangible assets implies that they cannot provide collateral. In contrast however, Bauer (2004) concluded that there was also a negative relation between tangibility and leverage.

According to Titman and Wessels (1988), firms in a mature industry are more likely to have higher proportion of tangible assets and hence, they can

afford higher debt level since the risk of business is lower than those in immature industry.

2.3.3 Size

Size is one of the most widely accepted determinants of capital structure in the literature. Relationship between size and leverage is however mixed. Firm size which is measured by total asset, is expected to have a positive influence on leverage. Most of previous researchers observed a direct correlation between banks' size and their leverage. This finding supports the conviction that larger banks are better diversified and due to this, the probability to breach their target leverage is very low. This is because a company with larger asset base is assumed to be more capable in obtaining bank loan or issue debt securities. Evidence on the impact of organisation's size on capital structure varied but showed sturdy bias towards a direct relationship. The positive relationship between size and leverage agreed by Homaifer and Benkato (1994), Ferry and Jones (1979), Harris and Raviv (1991), Chang and Rhee (1990) and Scott (1977). In respect of short-term debt, Titman and Wessel (1988) and Fischer, et. al. (1989) found negative correlation with leverage.

Assertion based on asymmetric information contends that large firms may have to be more transparent to their investors and due to the availability of information, they prefer equity capital over debt. Based on this, leverage and size are negatively correlated. The negative relationship between these two variables are also agreed by pecking order theory. Larger firms should have greater capability in issuing more equity since they are closely

monitored and observed by analysts, and therefore, should have lower debt capital. On contrary, it would be cheaper and cost effective for small firms to borrow short term debt through bank borrowing rather than issuing equity, since equity or bond offering would incur high cost and this would not be feasible for them.

Researchers who supported the trade-off theory justifies the positive relationship between leverage and size with the contention that large firms are more diversified, maintain more stable cash flow, incur low cost of transaction for new equity issuance, and lower probability of bankruptcy as compared to smaller firms and therefore, lower bankruptcy cost. The positive correlation between the level of leverage and size is also agreed by Frank and Goyal (2005), Titman and Wessels (1988), Booth et. al. (2001) and Aggarwal and Jamdee (2003). There is also a perception that leverage increases with the size of the company and larger firms are expected to be more diversified. The larger the firm is diversified, the more stable is the firm's cash flow and consequently it allows a heavier recourse to debt issues. This concludes that larger firms are able to borrow at a more favourable rates and would have an easier access to the capital markets.

The positive relationship between size and leverage is as well agreed by Remmer et. al. (1974) based on the fact that large firms are more diversified. Penrose (1959) believed that larger firms enjoy economies of scope and economies of scale while Pinches and Mingo (1973) concurred that larger firms receive favorable credit ratings, have easy access to the capital market and would be granted debt financing with lower interest rate.

The above arguments also consented by Titman and Wessels (1988) particularly on the low probability of bankruptcy and lower bankruptcy cost, stable cash flow and has the capacity to have more debt in capital structure with lower interest rate. Castanics (1983), Fitman and Wessels (1988) Shepherd (1989) and Wald (1999) argued that as a result of large firm diversification, volatility of their earnings is low and therefore, they would be able to obtain more debt capital or be more levered since they have adequate capacity to service their debt upon making more profit and higher earnings. Lenders who provide borrowings to large and diversified firms are more likely to be paid back their principal including the interest payment, thereby reducing the agency cost associated with debt. In contrast, young and smaller firms may not have stable earnings and thus, cannot tolerate high debt ratios. Empirical evidence by Barclay and Smith (1996), Martin et. al.(1988), Friend and Lang (1988) and Hovakimian et. al.(2004) supports positive relationship between size of a firm and debt level in the capital structure. They believed that smaller firms are likely to finance their operations by equity and they would have lower debt in their capital structure.

Yu (2000) concluded that large banks in Taiwan relied more on internal funds to finance their operation. Studies by Guney et. al. (2011), Cespedes et. al. (2010) and Cheng and Shiu (2007) in respect of non-financial firms found positive relationship of size with leverage.

Research findings of Rajan and Zingales (1995) suggest that larger firms are expected and more likely to be transparent by releasing their

information to the public, and this give advantage for them in obtaining equity financing. Based on this argument, size may have indirect relationship with leverage. Observation carried out by Chen (2004) concurred this by referring to reputation of large companies and its easy access to equity market.

Asarkaya and Ozkan (2007) observed that Turkish bank's capital adequacy ratio are negatively related to asset size since he noted that larger banks hold less capital. Juca et. al. (2012) found that leverage is negatively related to size for smaller banks, but positively related for bigger banks. Doukas and Pantzalis (2003) highlighted that large firms have the ability to obtain financing using their internal fund of which cash flow generated by other business unit may be used to finance other units within the organization. The large firm can reduce its external financing if they deploy the strategy. Gropp and Heider (2010) studied the capital structure of large banks in Europe and US, and concluded that the bank's leverage is positively correlated with size. Bauer (2004) also concluded that leverage is positively correlated with size. Firm size has the same direction of relationship in respect of short-term debt ratio (Abor J., 2008) and capital ratio (Martin et. al., 1988).

Fama and French (2002) argued that large firm are expected to have less volatile earnings due to diversification and this will cause a higher leverage ratio. According to Capozza and Seguin (2000) contended that it is quite costly to manage liabilities and therefore, this justifies a different level of debt deployed by organization. Issuance of public debt demands the service

of bond rating agencies and trustee. Additional debt to the company's capital structure will result to additional time needed to manage the debt i.e. to finance, refinance, financial account, reporting and disclosure. In relation to this, the cost of obtaining additional financing via debt will be lower for larger firm since they have greater economies of scale. Hence, larger firms are presumed to maintain high leverage ratio and this evidenced positive relationship between leverage and size.

Panno (2003) agreed with trade-off theory whereby larger companies are more levered as a result of its diversification, but this does not seem to affect the level of debt in its capital structure. He however contends that the direct relationship between company's size and leverage is a reflection of the its better access to financial market, the relatively low proportion of bankruptcy costs to the firm's value and the flexibility available for larger firms in obtaining loan financing from its bank.

2.3.4 Growth

Growth opportunity is considered as part of the firm's capital asset which contributes to add value to a firm. It is however an intangible asset which cannot be collateralized as security for borrowing and it is not charged under taxable income (Titman and Wessels, 1988).

Past researches show conflicting observations on the relationship between the level of debt and growth opportunities. Different predictions were suggested by different theories to show the relationship of leverage with growth opportunities. In case of banking sector, growth opportunity can be

measured as growth rate of deposits and growth rate of advances. In this study, growth rate in total assets is used to determine the growth potential. The agency cost theory asserts that growth rate is negatively related with the level of long-term debt. The theory contends that firms in growing industries will have higher agency cost as they have more flexibility in making decisions and options for their future investment (Jensen and Meckling, 1976). This empirical result is consistent with studies carried out by Titman and Wessels, (1988) and Kim and Sorensen (1986).

The pecking order theory, on the other hand, suggests positive relationship between the level of debt and growth rate, which is in contrary with agency cost theory. The pecking order theory predicts that firms with high growth rate will opt for debt issuance rather than seeking for equity. This is based on the rational that a higher growth rate demands for higher funds and the firms prefers to rely more on external funds through the preferred source of debt (Sinha, 1992). The management prefers internal over external financing, and debt over equity if they need to issue securities (Myers, 1984).

According to the trade-off theory, firms with larger growth opportunities would raise less debt because the value of their growth opportunities in case of bankruptcy is exceptionally minimal (Titman and Wessels, 1988). This behavior can also be presumed as a disciplinary role of debt, whereby firms with greater opportunities for future investment will need less disciplining effect of debt payments in order to control their cash flows,

and they tend to retain the capacity to obtain debt as they might need to borrow in the future (Titman and Wessels, 1988).

Benito (2003) proposed that firms with greater growth opportunities require more funds to finance the potential growth. If the available internal funds is not sufficient to finance the growth, the firm would need to obtain external sources which will in turn increase the debt level in its capital structure. Hall et. al. (2004) also agrees that most of the time, when firms have high growth opportunities, their retained earnings is inadequate to finance their investment projects and they usually turn to get additional borrowing. Heshmati (2001) as well found that firms with high growth potential will maintain high debt ratios. Empirical research done by Kester (1986) and Barton et. al. (1989) further suggest positive relationship between firm's growth and capital structures. According to Michqelas et. al. (1999), Sharif et. al. (2012), Cespedes et. al. (2010), Tang and Jang (2007) and Gill et. al. (2009), growth rate is positively related to leverage ratio.

A number of researchers suggest an indirect relationship between the growth in assets and its capital structure because they asserts that higher growth firms use less debt (Kim and Sorensen, 1986; Rajan and Zingales, 1995; Roden and Lewellen, 1995; and Juca et. al., 2012).

M.C. Jensen and Meckling (1986) and Myers (1977) agree that growth opportunities is not tangible assets and therefore it cannot be pledged as collateral for debt financing. Despite that, firms which have less growth opportunities still tend to prefer debt financing. Fama and French (2002)

observed that firms having greater growth opportunities prefer less debt utilization.

Indirect relationship of growth opportunities with long-term debt and direct relationship with short-term debt was observed by other researchers including Chen et. al. (1997), Bevan and Danbolt (2002) and Rajan and Zingales (1995).

2.3.5 Dividend

There were limited empirical findings that showed dividend as one of the key determinants of capital structures. Despite that, the capital structure theories have their assertions and predictions on dividend as the capital structure determinants.

The trade-off theory pleads for negative relationship between dividend payout ratio and leverage ratio (Ayanda et. al., 2013). The low dividend payout ratio means increase in the equity base for debt capital and low probability of going into liquidation (Ayanda et. al., 2013). When there is low probability of bankruptcy, the bankruptcy cost will be low. Low bankruptcy cost implies high level of debt in capital structure (Ayanda et. al., 2013).

In contrast, the pecking order theory recommends that management tend to prefer internal financing rather than external fund (Titman and Wessels, 1988) and therefore, it shows positive relationship between dividend payout ratio and debt level. Management also tend to retain the earnings instead of declaring high dividend payout and meeting the financial obligation from debt capital (Titman and Wessels, 1988). This argument

shows that the lower the dividend payout ratio, the lower the debt level in capital structure.

Berger et. al. (1995) studied the role of capital in commercial banking institutions in United States and found that dividends do not decrease tax payment and hence, bank will prefer debt capital. According to Gropp and Heider (2007), negative relationship was noted between leverage ratio and dividend. Due to asymmetric information, banks will incur higher cost for equity issuance. In spite of that, banks that paying higher dividends to the shareholders are expected to incur lower cost of issuing equity as the banks are well known to the outsiders who prefers equity financing. Study carried out by Gropp and Heider (2010) on the capital structure determinants of large banks in Europe and United States found that dividends was negatively related to bank's leverage.

A large and established company which constantly paid dividend to the shareholders can rely on its good reputation and performance to raise external fund, hence would reduce its reliance on debt financing or bank borrowing.

2.3.6 Liquidity

Many previous researchers used liquidity as a variable that determine the choice of capital structure and to measure its impact on leverage of the firm. Basically, liquidity is the ability of the firm in meeting its short term obligation when they become due. In this study, liquidity variable is measured as cash and cash equivalent to total assets.

Yu (2000) observed the relationship of leverage ratio with liquidity ratio for the banks in Taiwan. The relationship of leverage and liquidity ratio is different according to the size of the banks, whereby it shows negative correlation for medium size banks but positive correlation for small banks. Medium-sized banks in Taiwan considered liquidity as a substitute for bank capital, while small banks with low liquidity usually have lower capital ratios.

Ozkan (2001) reported that higher liquidity ratio implies that a firm has higher capacity to pay its debt when they become due and hence, the firm has the ability to structure its financing pattern by taking more debt rather than issuing new equity capital. This study shows that liquidity has direct relationship with leverage ratio.

On the other hand, Tong and Green (2005), Guney et. al. (2011), Mishra and Tannous (2010) and Sharif et. al. (2012) observed an indirect relationship between liquidity and leverage ratio.

2.4 Chapter Summary

This chapter explains the capital structure theories and empirical findings of previous studies on determinants of capital structure. There are four (4) theories of capital structure elaborated in this chapter i.e. Modigliani and Miller theory, trade-off theory, pecking order theory and agency cost theory. The empirical findings of previous studies on the relationship of capital structure determinants with the leverage ratio of both banking and non-financial institutions were then elaborated,

based on six (6) determinants of capital structure. The empirical findings and related capital structure theories are summarized below:

Figure 2.1
Empirical findings and the related capital structure theories

Determinants of Capital Structure		**Positive Relationship with Leverage**	**Negative Relationship with Leverage**
Profitability	Theory	TOT	POT
	Previous Studies	Taub (1975), Abor (2005), Myers and Majluf (1984), Jensen et. al. (1992), Burgman (1996), Aggarwal (1994), and Titman and Wessels (1988)	Kester (1986), Friend and Hasbrouck (1989), Friend and Lang (1988), Gonedes et. al. (1988), Cassar and Holmes (2003), Esperanca et. al., (2003), Hovakimian et. al. (2001), Sheel (1994), Gropp and Heider (2010), Juca et. al. (2012), Bauer (2004) and Hall et al. (2004)
Tangibility	Theory	TOT, ACT	POT
	Previous Studies	Kremp et. al. (1999), Rajan and Zingales (1995), Friend and Lang, (1988), Titman and Wessels (1988), Aggarwal and Jamdee (2003), Frank and Goyal (2005), Harris and Raviv (1991), Gropp and Heider (2010)	Frank and Goyal (2003), Bauer (2004)
Size	Theory	TOT	POT
	Previous Studies	Ferry and Jones (1979), Scott (1977), Chang and Rhee (1990), Harris and Raviv (1991), Homaifer and Benkato (1994), Titman and Wessels (1988), Booth et al. (2001), Aggarwal and Jamdee (2003), Frank and Goyal (2005)	Doukas and Pantzalis (2003), Juca et. al. (2012), Rajan and Zingales (1995), Chen (2004)
Growth	Theory	POT	ACT, TOT
	Previous Studies	Sinha (1992), Myers (1984), Benito (2003), Hall et. al. (2004), Heshmati (2001), Kester (1986), Titman and Wessels, (1988), Barton et. al. (1989), Michqelas et. al. (1999)	Jensen and Meckling (1976), Kim and Sorensen (1986), Titman and Wessels (1988), Rajan and Zingales (1995), Roden and Lewellen (1995), Juca et. al. (2012), M.C. Jensen and Meckling (1986), Myers (1977), Fama and French (2002)

Determinants of Capital Structure		Positive Relationship with Leverage	Negative Relationship with Leverage
Dividend	Theory	POT	TOT
	Previous Studies	-	Gropp and Heider (2007 and 2010) Frank and Goyal (2005)
Liquidity	Theory	-	-
	Previous Studies	Yu (2000) Ozkan (2001)	Tong and Green (2005), Childs et. al. (2005), Guney et. al. (2011), Mishra and Tannous (2010), Sharif et. al. (2012)

CHAPTER 3

METHODOLOGY

3.1 Research Framework

The framework is aimed to demonstrate the relationship between the determinants of capital structure and the level of leverage. There are six (6) variables which attributed to the choice of capital structure proportion i.e. debt or equity.

3.2 Hypothesis Development

A major purpose of this study is to gauge the factors that influence the choice of capital structure in Malaysian commercial banks. The capital structure theories and previous empirical findings identified a number of variables that determine the firm's debt proportion in the capital structure. To achieve the intended objective, six hypotheses have been developed as discussed below:

3.2.1 Profitability

There is a resilient point of conflict on profitability variables between two capital structure theories i.e. trade-off theory and pecking order theory. Trade-off theory asserts that the higher profitability of the firm, the higher debt capacity it will have and this in turn, will impose less risk to the debt holders. On the contrary, pecking order theory contends that higher profitable firms will have higher retained earnings and they may prefer to use the available internal funds to finance the capital investment and therefore, less borrowings. Therefore, the trade-off theory expects a positive relationship between leverage and profitability, whereas the pecking order theory expects the opposite correlation.

Hypothesis 1:
Ho= *There is a negative relationship between profitability and leverage*
H1 = *There is a positive relationship between profitability and leverage*

3.2.2 Tangibility

Based on trade-off theory and agency cost theory, tangibility is positively correlated with leverage. A higher collateral value will ensure higher level of security and thus, offering more value to liquidate assets in the event of bankruptcy. This assertion is consistent with findings by most researchers including Rajan and Zingales (1995) since that tangible assets can serves as good security and be able to reduce the cost of financial distress.

Pecking order theory in contrast, believes that firms with few tangible assets tend to raise more debt and become more levered over time, and this contention is agreed by Frank and Goyal (2003).

Hypothesis 2:
Ho = *There is a positive relationship between tangibility and leverage*
H1 = *There is a negative relationship between tangibility and leverage*

3.2.3 Size

Pecking order theory agrees on negative relationship between firm size and leverage. Larger firms should be more capable of issuing more equity and therefore, should have lower debt. For smaller firm instead, it will be cheaper for them to borrow short-term debt through credit lines and bank loans rather than to activate a market issue as this will incur higher cost.

Frank and Goyal (2005), Titman and Wessels (1988), Aggarwal and Jamdee (2003) and Booth et al. (2001) support the assertion of trade-off theory which justifies positive relationship between leverage ratio and size. Larger firms are expected to have more stable cash flow as they are generally more diversified

and will incur lower transaction costs for new equity issuance. The likelihood of bankruptcy for larger firms will be lower than those of smaller firms and therefore, lower bankruptcy cost.

Hypothesis 3:
Ho = *There is a positive relationship between size and leverage*
H1 = *There is a negative relationship between size and leverage*

3.2.4 Growth

The agency cost theory contends that firms in growing industries have more flexibility in making financial decision for future investment and therefore, growth rate is negatively related to long-term debt level. Trade-off theory concurs the prediction of agency cost theory based on the argument that firms experiencing greater growth opportunities would raise less debt and they would preferably retain the debt capacity as they might require external borrowing in the future. The pecking order theory in contrary predicts positive relations as highly growing firms demand for more funds to finance its growth and it will rely more on external financing based on their managements' preference.

Hypothesis 4:
Ho = *There is a positive relationship between growth and leverage*
H1 = *There is a negative relationship between growth and leverage*

3.2.5 Dividend

Dividend payout ratio is observed to be negatively correlated with debt level in capital structure as agreed by the bankruptcy costs theory. Firm with low dividend payout ratio implies high level of debt as there is low probability of liquidation and therefore low bankruptcy cost. Researches carried out by

Gropp and Heider (2007) and Frank and Goyal (2005) also found negative relation between dividend payout and leverage.

On the contrary, the pecking order theory shows positive relationship between dividend payout ratio and debt level as management prefers internal financing over obtaining external funds. Management prefers to retain the earnings instead of declaring high dividend.

Hypothesis 5:
Ho = *There is a positive relationship between dividend payout and leverage*
H1 = *There is a negative relationship between dividend payout and leverage*

3.2.6 Liquidity

Yu (2000) and Ozkan (2001) observed that liquidity ratio has direct relationship with leverage level. Higher liquidity ratio shows that a firm has higher capacity to service its debt obligation as they become due and thus, it can structure its financing by raising additional debt into its capital structure. Tong and Green (2005), Mishra and Tannous (2010), Guney et al. (2011), Childs, Mauer, and Ott (2005) andd Sharif et al. (2012) observed an inverse relationship of liquidity with leverage based on the argument that firms tend to avoid interest rate and minimise liquidity risk.

Hypothesis 6:
Ho = *There is a positive relationship between liquidity and leverage*
H1 = *There is a negative relationship between liquidity and leverage*

3.3 Research Design

This research presents an empirical analysis on the relationship between the factors that determines the capital structure of domestic commercial banking institution in Malaysia with the most recent available data. A correlation analysis was deployed to

analyse the data collected from the financial statements of all eight (8) domestic commercial banks in Malaysia as of January 2016. The result of the study will be based on the hypothesis that has been developed and the analysis output using the correlation method.

3.4 Definition and Measurement of Variables

3.4.1 Leverage variable

According to Ronald, Merle and Edgar (1996), capital structure which is also known as leverage is the ratio of long-term debts over equity. This definition has been consistently used in past studies on capital structure.

Since there is no explicit definition of leverage in academic literature, Rajan and Zingales (1995) has therefore specify an alternative definition of leverage. The specific definition may be depending on the objective of the analysis.

For firms, debts refer to the borrowings or loans obtained from banks, most of which are long-term loans. As the banking industry is peculiar in nature, the debts in banks are very distinctive from other non-financial firms. The main source of banks' debts is from customer deposits, which are more of short-term nature as it is normally transaction accounts. Hence, the above measure of leverage is not appropriate to compute the leverage ratio for banks.

Rajan and Zingales (1995) has suggested four alternative definitions of leverage. The first and widest definition of leverage ratio by Rajan and Zingales (1995) is the ratio of total liabilities to total assets. In simple words, this ratio implies the portion of what is left for shareholders in case of liquidation. The drawbacks of this measurement is that it ignores the

appropriate indication, of whether the firm is at risk of default in the near future. There is also a possibility of overstating the amount of leverage since the numerator, i.e. total liabilities, may also include accounts payable which is transaction-related, instead of financing-related. Apart from that, provisions and reserves may as well affect this measurement of leverage.

A second definition of leverage by Rajan and Zingales (1995) is the ratio of debt which includes both long-term and short-term debt, to total assets. This measure of leverage excludes provision and include only interest bearing debt. It also fails to recognise that there are some assets which are offset by specific non-debt liabilities. For instance, increase in trade credit resulted to lower leverage since the amount of accounts payable may varies across industries. Rajan and Zingales (1995) favoured using a leverage computation which is not affected by the trade credit amount.

A third definition of leverage by Rajan and Zingales (1995) is the total assets minus accounts payable and other current liabilities, in short, ratio of debt to net assets. This leverage measurement is not affected by working capital and non-interest bearing debt, but, it may be affected by non-financing related factors.

The fourth and final definition of leverage by Rajan and Zingales (1995) is one minus the ratio of total equity to total assets. This measure of leverage looks at the capital employed and thus best represents the effect of historical financing decisions as it most directly relates to the agency problems associated with debt, as suggested by Jensen and Meckling (1976), Myers

(2001), Ayanda et al (2013) and Frank and Goyal (2004). Therefore for the purpose of this study, this measure is used to compute the leverage ratio.

3.4.2 Other variables

The following six (6) factors are selected based on past empirical studies on determinants of capital structure of firms in general and of banks specifically, i.e. profitability, tangibility, size, growth, dividend and liquidity.

Figure 3.1
Descriptions and measurement of capital structure determinants

Determinants	Descriptions	Measurement
Profitability in terms of Returns on Assets (ROA)	ROA is used in order to measure bank's profitability. It is frequently used by banks as a means to estimate their performance (Papagianni, 2013).	Net Profit / Total Assets (Kibrom Mehari Fisseha, 2010; and Brigham & Houston, 2007)
Tangibility	This ratio is most often used in studies. Tangibility of assets is used to estimate the level of collateral the debt issuer can accept as security for issuing the debt (Papagianni, 2013).	Fixed Assets / Total Assets (Kibrom Mehari Fisseha, 2010; and Ayanda et al, 2013)
Size	This is the measure of how large the bank's operational capacity is.	Book Value of Total Assets (Frank and Goyal, 2004)
Growth	Annual percentage increase in total assets as a measure of growth.	Percentage change in Total Assets (Titman and Wessels, 1988)
Dividend	Dividend paid-out by the bank for the year	Dividend Pay-out in a Given Year (Frank and Goyal, 2004)

Determinants	Descriptions	Measurement
Liquidity	The bank's ability to meet unexpected and expected expenses, using only liquid assets, without having to liquidate other assets (White, 2016).	Current Assets / Current Liabilities

3.5 Data Collection and Sampling

The banking sector was selected for this study based on the fact that the empirical analysis carried out to gauge the determinants of capital structure for Malaysian domestic commercial banking institutions are limited. Though there might be researches conducted on determinants of capital structure for banking institutions, it was done on general basis and not confined to domestic commercial banks.

Looking into the recent crisis of weaken ringgit and its impact against the banking sector, Moody's Investors Service (2015) had commented that minimal exposure to foreign currency loans resulted to the stability of Malaysian banking sector nowadays. Further, the current banking sector position are quite resilient and more sound, as compared to what they were during the Asian financial crisis. Despite that, profitability and slower growth dynamics would be the major concerns for the domestic banking institutions. This however would only materialised later and not within the period under review. Nonetheless, Kent and Mahadzir (2006) observed that Malaysian domestic banks were more exposed to the Asian financial crisis than foreign banks operating in Malaysia.

In this study, the secondary sources of data has been used i.e. audited financial statements of all eight (8) domestic commercial banks listed in the Central Bank of Malaysia website as of January 2016, which is available in the respective banks'

website. The data exclusively extracted from the Statements of Financial Positions and Income Statements for five years i.e. Financial Year 2010 to 2014. Therefore, the analysis was based on 40 observations, represented by 5-year period of data for eight (8) banks. Reference has also been made to the notes to the financial statements to gauge additional information and details to further elaborate on the numerical data stated in Statements of Financial Positions and Income Statements. Despite that all audited financial statements under review were consolidated with the Group, for the purpose of this study, only data corresponds to the commercial banking that offer services as stipulated in Chapter 1 are taken into consideration.

The eight (8) domestic commercial banks reviewed and the assets size as of 31 December 2014 are as follows:

Table 3.1
Domestic commercial banks in Malaysia and their assets size as of 31 December 2014

No.	Commercial Bank	Asset Size (RM billion)
1.	Malayan Banking Berhad	640.30
2.	CIMB Bank Berhad	414.16
3.	Public Bank Berhad	345.72
4.	RHB Bank Berhad	219.35
5.	Hong Leong Bank Berhad	194.87
6.	AmBank (M) Berhad	130.20
7.	Affin Bank Berhad	66.67
8.	Alliance Bank Malaysia Berhad	51.24

Source : Forbes and Relbank

As of January 2016, there are 27 commercial banking institutions in Malaysia including foreign banks as listed in the Central Bank of Malaysia website. For the purpose of this study and in order to have fair and uniform judgement to obtain valid results, only domestic commercial banks are selected as the banks share common attributes in business objective, corporate governance, corporate control and

accounting practices. Other banks such as Development Financial Institutions for example, carrying out their business to be in line with the mandated role by the Government and therefore, their business objectives are different from commercial banks and controlled by the Government.

Ong et. al. (2011) highlighted that foreign banks are distinctive in respect of regulatory requirement, language, culture, currency and further, long distance from home regulator would give impact on the governance of the foreign banks.

Based on Monthly Statistical Bulletin issued by Central Bank of Malaysia as of January 2016, commercial banks hold 76% of assets against the entire banking industry. Despite that the statistic is inclusive of foreign commercial banks as well, this however able to proof that commercial banks are the main player in the banking industry. Other available statistics are as follows:

Table 3.2
Significant statistics of commercial banks in Malaysia

Descriptions	**Banking Industry (RM million)**	**Commercial Bank**	
		Amount (RM million)	**Percentage (%)**
Total Assets	2,366,811	1,787,440	75
Stock of High Quality Liquid Assets	479,061	353,548	74
Statutory Reserve	49,856	35,076	70
RM Eligible Liabilities	1,226,108	863,760	70

Source : Monthly Statistical Bulletin issued by Central Bank of Malaysia as of January 2016

3.6 Techniques of Data Analysis

After a review of past literature on the determinants of capital structure, this study is now carried out on all eight (8) Malaysia domestic commercial banking institutions in order to answer the following research questions:

1) How the selected six (6) capital structure determinants influence the capital structure decision of domestic commercial banking institutions in Malaysia, i.e. whether to issue equity or debt capital?
2) What is the approach of capital structure deployed by the banks under review, i.e. whether the banks prefer debts over equity capital?

This study makes use of the correlation analysis in estimating the relationship between leverage and multiple variables that determines the capital structure i.e. profitability, tangibility, growth, size, dividend and liquidity.

The correlation coefficient is a measure of linear association between two variables and this is the most simplified method in determining the relationship among variables. The correlation is measured by values which are always ranged between -1 and +1. The value of +1 indicates that two variables are perfectly related in a positive direction, whilst the value of -1 indicates that two variables are perfectly related in a negative direction. A correlation with value of 0, on the other hand, indicates that there is no linear relationship between the two variables.

CHAPTER 4

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the result of data analysis carried out by deploying the correlation analysis method. The data were gathered and consequently input into the analysis template in order to provide the result.

4.2 Result of Correlation Analysis

The correlation analysis was deployed in order to assess the relationship between leverage and the selected six (6) determinants of capital structure, of which the results are depicted below in Table 4.1. The test result shows that the correlation between leverage ratio and other variables ranged between – 0.0427 and 0.6677. The correlation between leverage ratio and other variables is further discussed below:

Table 4.1
Collective Result of Correlation Analysis for All Domestic Commercial Banks in Malaysia

	LEV	***EPS***	***ROE***	***ROA***	***LIQ***	***DIV***	***GRW***	***SIZE***	***TANG***
LEV	1.0000								
EPS	0.3956	1.0000							
ROE	0.6677	0.7333	1.0000						
ROA	0.2944	0.6832	0.8854	1.0000					
LIQ	0.1178	0.0519	0.0703	-0.0631	1.0000				
DIV	-0.4105	0.0519	0.0218	0.2393	-0.0513	1.0000			
GRW	0.0663	-0.1988	-0.1575	-0.2563	-0.0487	0.0870	1.0000		
SIZE	-0.3231	-0.0753	-0.0450	0.1151	-0.1564	0.9062	0.2067	1.0000	
TANG	-0.0427	-0.5652	-0.3460	-0.4321	0.2515	-0.1836	0.2234	-0.1126	1.0000

Note: LEV: Leverage; EPS: Earnings per Share; ROE: Return on Equity; ROA: Return on Assets; LIQ: Liquidity; DIV: Dividend; GRW: Growth; TANG: Tangibility

4.2.1 Leverage with Profitability

In this study, Return on Assets (ROA) is used to measure the profitability of the Malaysian commercial banks under review. Based on the above positive correlation coefficient of 0.2944 between profitability and leverage, it implies that higher profitable commercial banks in Malaysia maintain higher debt rather than equity. The result is consistent with the predictions of Trade-Off Theory which states that a more profitable firms has higher capacity to pay the loans granted and thus, imposed less risk to the debt issuers.

The outcome also supports the findings of previous researches, for instance, Taub (1975), Abor (2005), Myers and Majluf (1984), Jensen, Solberg and Zorn (1992), Burgman (1996), Aggarwal (1994), and Titman and Wessels (1988). Hence, it can be concluded that highly profitable commercial banks in Malaysia maintain higher debt in proportion of their capital structure.

4.2.2 Leverage with Liquidity

Liquidity with a coefficient recorded at 0.1178 shows a positive correlation with leverage. As liquidity implies the capability of the bank in meeting its short-term obligations solely from its current assets, therefore it seems that the banks with higher liquidity tend to obtain more borrowing since they have higher capacity to pay the debts when they become due.

The result supports the findings of previous researches i.e. Yu (2000) and Ozkan (2001), of which they observed direct relation of leverage against liquidity. Since the banks are more liquid and able to service the obligation on

time, therefore, the management may prefer to take more debt rather than issuing equity.

4.2.3 Leverage with Dividend

Dividend pay-out with a coefficient given at -0.4105 is negatively related to leverage, which supports the finding of Gropp & Heider (2010) and Frank & Goyal (2005) and Trade-Off Theory.

Banks with low dividend pay-out would retain most of its earnings that is not distributable to the shareholders, which would lead to a higher equity base. Based on Trade-Off Theory, the bankruptcy cost would be lower since the bank has adequate capital in terms of equity and this would be a comfort to the debt issuer to lend more money to the banks.

On the other hand, banks with high dividend pay-out would prefer equity financing as the bank is already known to the prospective shareholders and the cost of issuing equity therefore, will be lower. Due to established and good reputation of paying high dividend, the bank would not face any problem in raising external capital through equity and it could reduce the reliance on debt financing or borrowing.

4.2.4 Leverage with Growth

The correlation coefficient of leverage against growth recorded at 0.0663 which signifies a positive relation between these two variables. This finding is consistent with Pecking Order Theory which contend that banks with high growth will seek for borrowing rather than issuing equity. Previous researchers that support this theory including Benito (2003), Sinha (1992),

Hall et al (2004) and Heshmati (2001). Higher growth opportunity means more fund is required to finance the potential growth and based on the finding, the management of domestic commercial banks in Malaysia rely more on debt. Since the internal financing by way of retained earnings may not be adequate to support the growth, the management may resort to external borrowing. The lender may also grant the required borrowing based on the potential of the banks in paying back the loan.

4.2.5 Leverage with Size

This study found that the size of bank in terms of its total assets, to be negatively related to leverage. Based on the findings, larger domestic commercial banks in Malaysia tend to finance their operations using its internal fund and less borrowing in comparison to smaller commercial banks. The empirical finding is consistent with the predictions of Pecking Order Theory which in principle, asserts that larger banks should be more capable in issuing equity as it is well-known and closely observed by existing and prospective shareholders. Due to this, larger banks would have higher equity and lower debt. On the other hand, smaller bank would prefer borrowing as the cost of borrowing is much cheaper than the cost incurred to issue equity.

4.2.6 Leverage with Tangibility

In this study, the result of tangibility variable coefficient is found to be negatively correlated to leverage, which inconsistent with Trade-Off Theory, Agency Cost Theory and most of the past studies (Rajan and Zingales, 1995;

Titman and Wessels, 1988; Aggarwal and Jamdee, 2003; Frank and Goyal, 2003; and Harris and Raviv, 1991).

However, the empirical finding coincides with Pecking Order Theory that contends negative relationship between leverage and tangibility. The theory predicts that firms holding few tangible assets will be more susceptible to asymmetric information problem and therefore, will increase the agency cost. Due to this assumption, firms with few tangible assets prefer to raise more debt over equity and become more levered over time (Frank and Goyal, 2003).

4.3 Trend Analysis on Domestic Commercial Banks in Malaysia

The analysis in this section is based on the ratio for the individual domestic commercial banks under review. The eight (8) domestic commercial banks reviewed and the assets size as of 31 December 2014 are as follows:

Table 4.2
Domestic Commercial Bank and Assets Size as of 31 December 2014

No.	Commercial Bank	Asset Size (RM billion)
1.	Malayan Banking Berhad	640.30
2.	CIMB Bank Berhad	414.16
3.	Public Bank Berhad	345.72
4.	RHB Bank Berhad	219.35
5.	Hong Leong Bank Berhad	194.87
6.	AmBank (M) Berhad	130.20
7.	Affin Bank Berhad	66.67
8.	Alliance Bank Malaysia Berhad	51.24

Source : Forbes and Relbank

4.3.1 Malayan Banking Berhad

Based on the assets size of all eight (8) domestic commercial banks in Malaysia as of 31 December 2014, Malayan Banking Berhad (MBB) is the

leading bank having RM640.30 billion worth of assets. The data for MBB are as follows:

Table 4.3
Data on Malayan Banking Berhad from year 2010 to 2014

Year	Leverage Ratio	Return on Assets (%)	Liquidity Ratio	Dividend (RM)	Growth (%)	Size (RM)	Tangibility Ratio
2010	0.8983	143.03	0.45	1,008,613	4.25	248,392,266	0.0043
2011	0.8889	63.74	0.51	1,794,772	30.44	323,999,608	0.0033
2012	0.8717	125.70	0.47	3,944,958	5.73	342,556,673	0.0035
2013	0.8981	122.88	0.48	4,365,481	16.07	397,605,477	0.0034
2014	0.8980	130.44	0.47	4,939,066	13.82	452,559,458	0.0029

MBB, the largest domestic commercial banks in Malaysia, has the lowest leverage ratio for the 5-year period under review i.e. 2010 to 2014, in comparison to other 7 banks. The leverage ratio for MBB ranged between 0.8717 and 0.8983, with the highest ratio in year 2010. Other banks are relatively more levered than MBB, as they are having leverage ratio more than 0.9000 for the 5-year period under review.

In year 2010, MBB recorded the highest leverage ratio with the lowest liquidity ratio, dividend pay-out, growth and size in terms of assets. Further in the same year, the profitability in terms of ROA and tangibility recorded the highest ratio among all 5-year period under review. This can be concluded that individually, MBB's management prefers more debt over equity whenever it is less liquid, pays lower dividend to shareholders, and having lower rate in terms of assets growth. Since MBB had more tangible assets and higher profit in year 2010, therefore more debt were issued during the year as it has more collateral to serve as security and the lender more confident that MBB has the capacity to service the loan payment.

4.3.2 CIMB Bank Berhad

CIMB Bank Berhad (CIMB) is the second largest domestic commercial banks in Malaysia as of 31 December 2014, with RM414. 16 billion worth of assets. The data for CIMB are as follows:

Table 4.4
Data on CIMB Bank Berhad from year 2010 to 2014

Year	Leverage Ratio	Return on Assets (%)	Liquidity Ratio	Dividend (RM)	Growth (%)	Size (RM)	Tangibility Ratio
2010	0.9079	111.19	0.57	1,339,083	6.62	170,823,022	0.0032
2011	0.9082	143.24	0.43	1,500,903	9.31	186,722,227	0.0026
2012	0.9118	120.38	0.41	1,487,000	10.75	206,795,324	0.0025
2013	0.9147	91.30	0.42	1,598,993	13.45	234,603,951	0.0022
2014	0.9091	93.51	0.42	1,609,007	12.93	264,948,946	0.0019

For the 5-year period under review, CIMB recorded the lowest leverage ratio in year 2010. Despite CIMB having lesser debt during the year, the level of tangibility was the highest which evidenced that it was having more assets that can be collateralised for external borrowing. The negative relationship between tangibility and leverage is in line with the industry practise as discussed in Section 4.2.6 above. This may be due to CIMB's low level of tangible assets caused less vulnerability to asymmetric information problem which will further reduce the agency cost. Due to this, the existing and prospective shareholders having more confident on CIMB and it was easier for CIMB to issue equity rather than debt capital.

During the year as well, CIMB paid the least dividend and the lowest growth rate in terms of assets. Despite low dividend paid in 2010, it had improved in 2011 whereby the Earnings per Share (EPS) was increased from RM0.50 to RM0.71, Return on Equity (ROE) was increased from

12.07% to 15.61%, and Return on Assets (ROA) was increased from 111.19% to 143.24%, which were the highest for the 5-year period under review.

4.3.3 Public Bank Berhad

Public Bank Berhad (PBB) is the third largest domestic commercial banks in Malaysia as of 31 December 2014, with RM345.72 billion worth of assets. The data for PBB are as follows:

Table 4.5
Data on Public Bank Berhad from year 2010 to 2014

Year	Leverage Ratio	Return on Assets (%)	Liquidity Ratio	Dividend (RM)	Growth (%)	Size (RM)	Tangibility Ratio
2010	0.9340	157.26	0.97	1,303,796	5.57	186,409,862	0.0033
2011	0.9286	167.05	0.48	1,637,246	10.81	206,562,857	0.0032
2012	0.9263	164.13	0.41	1,681,020	10.56	228,383,717	0.0027
2013	0.9256	146.54	0.41	1,821,105	10.71	252,839,439	0.0022
2014	0.9095	140.57	0.37	1,936,675	13.38	286,667,566	0.0023

For the 5-year period under review from year 2010 to 2014, there were a remarkable deterioration of leverage ratio with the highest ratio recorded in 2010 whilst the lowest one in 2014. When the leverage ratio stood at its highest in 2010, the liquidity as well as tangibility ratio recorded the highest and positive correlation with leverage. The same relationship was noted in year 2014 as well, where both the liquidity and leverage ratio were at the lowest. Despite PBB recorded the highest debt level in 2010, PBB had the required capacity to serve the debt when they become due. This finding is consistent with previous study by Ozkan (2001) whereby he reported that

firm that has the power to pay its obligation when it becomes due, has the capacity to restructure its financing by taking more debt over equity capital. The dividend pay-out, asset size as well as the growth rate of assets was negatively correlated with leverage as recorded in year 2010 and 2014. The correlation of dividend pay-out and size of PBB with its leverage level is in line with the industry as discussed in Sections 4.2.3 and 4.2.5 above. The negative relationship of asset growth with leverage of PBB is however inconsistent with the industry. PBB would rather go for equity capital whenever it has a higher growth rate. This may be due to the good reputation of PBB in the banking industry and it has no difficulties in raising additional equity with a relatively low cost.

4.3.4 RHB Bank Berhad

RHB Bank Berhad (RHB) is the fourth largest domestic commercial banks in Malaysia as of 31 December 2014, with RM219.35 billion worth of assets. The data for RHB are as follows:

Table 4.6
Data on RHB Bank Berhad from year 2010 to 2014

Year	Leverage Ratio	Return on Assets (%)	Liquidity Ratio	Dividend (RM)	Growth (%)	Size (RM)	Tangibility Ratio
2010	0.9202	123.07	0.35	244,068	11.84	105,179,231	0.0051
2011	0.9187	128.99	0.34	237,907	14.79	120,731,463	0.0043
2012	0.9243	112.81	0.34	520,000	19.82	144,661,155	0.0035
2013	0.9170	104.60	0.27	593,534	3.72	145,573,549	0.0034
2014	0.9205	88.10	0.31	175,000	18.25	172,134,201	0.0028

As tabulated in Table 4.6 above, RHB was having the highest and the lowest leverage ratio in year 2012 and 2013 respectively. For both years,

growth rate was directly correlated with leverage ratio, which is consistent with the industry. Hence it can be concluded that RHB is seeking more debt rather than equity to finance its growth.

Apart from growth, the financial decision of RHB's management is relatively consistent with the industry in respect of their concern on tangibility and liquidity. Since the tangibility of RHB is negatively correlated with leverage ratio, it can be concluded that when RHB having few tangible assets, the management prefers debt capital rather than equity. In respect of liquidity, RHB recorded positive correlation with leverage ratio whereby RHB has the capacity to pay the debt when it becomes due and thus, the management may choose to have more debt.

4.3.5 Hong Leong Bank Berhad

Hong Leong Bank Berhad (HLB) is the fifth largest domestic commercial banks in Malaysia as of 31 December 2014, with RM194.87 billion worth of assets. The data for HLB are as follows:

Table 4.7
Data on Hong Leong Bank Berhad from year 2010 to 2014

Year	Leverage Ratio	Return on Assets (%)	Liquidity Ratio	Dividend (RM)	Growth (%)	Size (RM)	Tangibility Ratio
2010	0.9252	98.78	0.59	261,305	10.01	77,730,208	0.0040
2011	0.9251	92.13	0.66	294,702	12.76	87,650,089	0.0040
2012	0.9280	88.91	0.58	499,449	60.05	140,284,562	0.0050
2013	0.9221	99.69	0.54	593,534	3.72	145,500,383	0.0049
2014	0.9171	106.90	0.49	723,763	2.28	148,821,876	0.0047

As can be seen from Table 4.7 above, there was a significant movement for year 2012 as a result of merger exercise with EON Bank Group (EON) on 6 May 2011. HLB completed the merger with EON which effectively

transforms HLB into a banking group of more than RM145 billion in assets, with RM115 billion in deposits and RM84 billion in loans. Despite the merger was successfully executed in Financial Year Ended (FYE) 2011, the consequence of the merger on the financial position can only be seen in FYE 2012 since HLB's financial year was ended on 30 June 2011 i.e. only 54 days after the merger effective date.

In year 2012, the leverage ratio of HLB stood at 0.9280 which was the highest for the 5-year period under review. Most variables in Table 4.7 above which related to assets and liabilities has shown significant changes during the year. This movement was due to the acquisition of the entire assets and liabilities of EON Banking Group in 2011. Based on the Audited Financial Statement for FYE 2011, the gross loans and deposit has increased by 87% and 55% respectively. The total assets also increased 1.7 times from preceding year's figure. Due to this major exercise undertaken by HLB, the financial position and performance for year 2011 up to 2013 may be largely affected by the integration of EON's operations into HLB and not solely on the management's financial decision and concern.

In year 2014, HLB's financial position seems to be more stable after 3 years of merger. During the year, HLB recorded the lowest leverage ratio for the period under review, with the highest profitability ratio in terms of ROA, dividend pay-out and size in terms of assets. HLB's management seems to favour equity capital rather than debt, despite HLB has the capacity to serve the debt payment based on the improved ROA. With the larger equity base, HLB was able to pay more dividend to shareholders.

4.3.6 AmBank Berhad

AmBank Berhad (AmBank) is the sixth largest domestic commercial banks in Malaysia as of 31 December 2014, with RM130.20 billion worth of assets. The data for AmBank are as follows:

Table 4.8
Data on AmBank Berhad from year 2010 to 2014

Year	Leverage Ratio	Return on Assets (%)	Liquidity Ratio	Dividend (RM)	Growth (%)	Size (RM)	Tangibility Ratio
2010	0.9350	97.73	0.43	0	3.68	73,379,270	0.0025
2011	0.9387	187.88	0.50	1,200,450	10.26	80,910,528	0.0022
2012	0.9255	148.77	0.47	248,035	-0.14	80,798,526	0.0022
2013	0.9207	151.95	0.52	870,816	4.75	84,636,832	0.0016
2014	0.9179	154.06	0.49	400,338	2.54	86,784,659	0.0014

For the 5-year period under review, AmBank recorded the highest leverage ratio in year 2011. During the year, all variables except for tangibility had increased in comparison to the preceding year's figure. The leverage ratio was then decreased in year 2014, which also recorded a decrease in liquidity ratio, dividend pay-out, growth and tangibility. By looking at the trend for these two years, AmBank tends to opt for higher debt whenever it pays higher dividend to shareholders, and more liquid with higher growth rate. AmBank's decision is in line with Pecking Order Theory in respect of dividend and growth. In year 2014, AmBank pays lower dividend in order to have more retained earnings and therefore, lower external financing. As AmBank tends to finance its growth by taking more debt, lower growth may implies lower reliance on external borrowing.

4.3.7 Affin Bank Berhad

Affin Bank Berhad (Affin) is the seventh largest domestic commercial banks in Malaysia as of 31 December 2014, with RM66.67 billion worth of assets. The data for Affin are as follows:

Table 4.9
Data on Affin Bank Berhad from year 2010 to 2014

Year	Leverage Ratio	Return on Assets (%)	Liquidity Ratio	Dividend (RM)	Growth (%)	Size (RM)	Tangibility Ratio
2010	0.9122	97.79	0.59	128,964	16.88	35,453,667	0.0046
2011	0.9164	96.95	0.55	172,714	13.02	40,070,290	0.0041
2012	0.9090	108.05	0.54	227,750	4.01	41,676,054	0.0039
2013	0.9120	112.05	0.53	242,934	8.91	45,390,601	0.0033
2014	0.9021	98.58	0.56	259,977	6.48	48,333,687	0.0029

For the 5-year period under review, dividend pay-out and asset size were in increasing trend whilst tangibility was deteriorating from year 2010 to 2014. Despite the constant movement of the three variables, the level of debt was indeed in fluctuating movement with the lowest ratio noted in the year 2014. During the year, dividend pay-out and assets size recorded the highest ratio with the lowest tangibility. Notwithstanding Affin consistently acquired more assets year by year, the greater portion of acquired assets were likely in intangible form since the tangibility ratio seems to reduce constantly since 2010. Affin paid more dividend to the shareholders in the year 2014 which would in turn, reduce its retained earnings. Affin however opt to have a lower level of debt despite its reduced equity base.

Positive relationship between growth and leverage was noted since year 2011. The empirical finding evidenced that Affin's management prefers debt over equity capital to finance its growth.

The relationship between dividend, size and growth with leverage of Affin was consistent with the industry. The variables were consistent with trade-off theory and pecking order theory respectively.

4.3.8 Alliance Bank Berhad

Alliance Bank Berhad (Alliance) is the smallest domestic commercial banks in Malaysia as of 31 December 2014, with RM51.24 billion worth of assets. The data for Alliance are as follows:

Table 4.10
Data on Alliance Bank Berhad from year 2010 to 2014

Year	Leverage Ratio	Return on Assets (%)	Liquidity Ratio	Dividend (RM)	Growth (%)	Size (RM)	Tangibility Ratio
2010	0.8987	68.00	0.65	87,241	-5.50	26,937,995	0.0043
2011	0.8978	109.39	0.49	94,846	9.07	29,380,878	0.0034
2012	0.9015	118.06	0.44	184,323	11.79	32,844,046	0.0027
2013	0.9029	139.05	0.43	245,616	11.05	36,474,714	0.0022
2014	0.9089	127.63	0.33	293,486	9.80	40,050,829	0.0023

Based on the above Table 4.10, the debt level of Alliance was concurrently increased with ROA, dividend pay-out and asset size since 2011, of which in contrary, the liquidity ratio was moved in opposite direction. This evidenced that Alliance's management tend to choose debt over equity whenever the bank paid more dividend to shareholders. Payment of dividend resulted to decrease in retained earnings and therefore, the bank need to raise more fund through external borrowings. Despite Alliance is

the smallest among the domestic commercial bank in Malaysia, the lender has confidence in granting more borrowing to the bank due to constant and notable increase in ROA and assets base.

The correlation analysis of Alliance is in line with the industry, in respect of ROA, growth and tangibility. The ROA and growth are positively correlated with debt level, whereas tangibility is negatively related with leverage respectively.

4.4 Consistency of Empirical Finding with Capital Structure Theories

The theoretical correlation based on the capital structure theories, and the empirical finding between the leverage ratio and the six (6) variables are summarized in Table 4.11. The following discussion is elaborated whether capital structure decisions that are made in the domestic commercial banks in Malaysia provide empirical support for the existing theories.

Table 4.11
Consistency of Empirical Finding with Capital Structure Theories

Variables	**Theoretical Sign Based on Capital Structure Theories**			**Empirical Finding**	**Consistent Theories**
	TOT	**ACT**	**POT**		
Profitability (ROA)	+	?	-	+	TOT
Tangibility	+	+	-	-	POT
Size	+	?	-	-	POT
Growth	-	-	+	+	POT
Dividend	-	?	+	-	TOT
Liquidity	?	?	?	+	?

Note : ?: Unknown; TOT: Trade-Off Theory; ACT: Agency Cost Theory; POT: Pecking Order Theory

As presented in chapter two and summarized in Table 4.2, this study pursued three capital structure theories i.e. Trade-Off Theory, Agency Cost Theory and Pecking

Order Theory. These theories possess diversified key elements to explain their perspective towards capital structure.

Trade-off theory suggests that optimal capital structure is a trade-off between cost of bankruptcy and net tax benefit of debt financing. Due to information asymmetries that exists between the firm's management and outsiders, pecking order theory deems that firms prefer internal financing over external financing, and risky debt over equity. Agency cost theory illustrates the financial behavior of firms in the context of agent-principal relationship.

The following discussion further recapped the finding based on the associated capital structure theories:

- Profitability is found to be positively related to bank's leverage ratio. This result is consistent with predictions of Trade-Off Theory which states that highly profitable firms tend to maintain high debt ratio.
- The negative correlation observed between leverage and tangibility concurs the assumption of Pecking Order Theory whereby information asymmetry would lead firms with few tangible assets to raise more debt over time.
- Size is found to be negatively related to leverage ratio of the domestic commercial bank in Malaysia. Theoretically, the result is consistent with the prediction of Pecking Order Theory which states larger firm is more capable in issuing equity and should have lower debt.
- The positive relationship between growth and leverage supports Pecking Order Theory whereby firms with high growth rate would rely more on debt.

- Dividend is negatively correlated with leverage, which is consistent with the assertion of Trade-Off Theory. The theory agrees that lower dividend pay-out ratio means a higher equity base and lower bankruptcy cost, which further implies the capacity to have more debt.
- The positive correlation between liquidity and leverage has not supported any of capital structure as all theories were silent on this variable. Despite that, the finding on positive relationship concurs those of previous studies including Yu (2000) and Ozkan (2001).

Generally, three determinant factors consistent with Pecking Order Theory while the other two are in compliance with Trade-Off Theory. Liquidity variable however, has no reliance on any theory as all the theories were silent on this variable.

4.5 Summary of Findings

The findings noted in our analysis and discussed in the above section is summarised in the following two tables. The conclusion and recommendation to address the findings will be presented in Chapter 5.

Table 4.12
Summary of Consistency Between Empirical Finding with Capital Structure Theories and Individual Bank

Variables	Empirical Finding	Consistent Capital Structure Theories	Individual Bank
Profitability (ROA)	+	TOT	MBB, PBB, Alliance
Tangibility	-	POT	RHB, HLB, Alliance
Size	-	POT	PBB, HLB, AmBank, Affin
Growth	+	POT	MBB, CIMB, RHB, HLB, AmBank, Affin, Alliance
Dividend	-	TOT	MBB, PBB, HLB, Affin
Liquidity	+	?	CIMB, PBB, RHB, HLB

Note : TOT – Trade-Off Theory; POT – Pecking Order Theory; MBB – Malayan Banking Berhad; CIMB – CIMB Bank Berhad; PBB – Public Bank Berhad; RHB – RHB Bank Berhad, HLB – Hong Leong Bank Berhad; AmBank – AmBank Berhad; Affin – Affin Bank Berhad; Alliance – Alliance Bank Berhad.

The following is the summary of findings for each individual bank as discussed in Section 4.3 above.

Table 4.13
Summary Findings on Leverage for Individual Bank

Banks	**Summarised Finding on Leverage**
Malayan Banking Berhad	MBB recorded the lowest leverage ratio among all 8 banks; the highest leverage ratio noted in 2010 with the highest profitability in terms of ROA. Prefers more debt whenever it is less liquid, pays lower dividend to shareholders, and having lower rate in terms of assets growth. Since MBB had more tangible assets and higher
	profit in year 2010, therefore more debt were issued during the year as it has more collateral to serve as security and the lender more confident that Maybank has the capacity to service the loan payment.
CIMB Bank Berhad	The lowest leverage ratio noted in 2010 with highest tangibility ratio. In 2010, CIMB having more assets that can be collateralised for external borrowing, paid less dividend and the lowest growth rate. Despite low dividend paid in 2010, it had improved in 2011 to the highest peak in 5-year period under review whereby the Earnings per Share (EPS), Return on Equity (ROE) and Return on Assets (ROA) were increased.
Public Bank Berhad	Gradual deterioration of leverage ratio year by year, with the highest ratio recorded in 2010 whilst the lowest one in 2014. The liquidity and tangibility ratio recorded positive correlation with leverage in 2010 and 2014, while in contrary, the dividend pay-out, asset size and growth rate was negatively correlated with leverage for both years.
RHB Bank Berhad	The highest and the lowest leverage ratio noted in 2012 and 2013 respectively. Growth rate was directly correlated with leverage ratio, which is consistent with the industry. RHB is seeking more debt rather than equity to finance its growth and whenever they have few tangible assets. Likewise, RHB has the capacity to pay the debt when it becomes due and thus, the management may choose to have more debt.

Banks	Summarised Finding on Leverage
Hong Leong Bank Berhad	The highest leverage ratio noted in 2012. There was a significant movement in 2012 as a result of merger exercise with EON Bank Group (EON) on 6 May 2011. Due to this major exercise, the financial position and performance for the period between 2011 and 2013 may be largely affected by the integration of EON's operations into HLB and not solely on the management's financial decision and concern. In 2014, the financial position seems to be more stable after 3 years of merger. During the year, HLB recorded the lowest leverage ratio for the period under review, with the highest profitability ratio in terms of ROA, dividend pay-out and size in terms of assets. HLB's management seems to favour equity capital rather than debt, despite HLB has the capacity to serve the debt payment based on the improved ROA.
AmBank (M) Berhad	The highest leverage ratio noted in 2011 while the lowest one in 2014. In 2011, all variables except for tangibility had increased in comparison to the preceding year's figure. AmBank tends to opt for higher debt whenever it pays higher dividend to shareholders, and more liquid with higher growth rate. In 2014, AmBank paid less dividend, more retained earnings and therefore, lower external financing. As AmBank tends to finance its growth by taking more debt, lower growth may implies lower reliance on external borrowing.
Affin Bank Berhad	The dividend pay-out and asset size were in increasing trend whilst tangibility was deteriorating from year 2010 to 2014. Despite the constant movement of the three variables, the level of debt was indeed in fluctuating movement with the lowest ratio noted in the year 2014. Positive relationship between growth and leverage was noted since year 2011. The result evidenced that Affin's management prefers debt over equity capital to finance its growth.
Alliance Bank Malaysia Berhad	The debt level was concurrently increased with ROA, dividend pay-out and asset size since 2011, of which in contrary, the liquidity ratio moved in opposite direction. Despite Alliance is the smallest among the domestic commercial bank in Malaysia, the lender has confidence in granting more borrowing to the bank due to constant and notable increase in ROA and assets base.

4.6 Chapter Summary

The correlation analysis was deployed to assess the relationship between leverage and six (6) variable that determines the capital structure. It is the most simplified method to determine relationship among variables and the value is ranged between -1 and +1, which implies negative and positive correlation respectively.

Based on the analysis, it can be concluded that the leverage ratio is directly correlated with three variables and indirectly related to the remaining three variables, respectively. Further, the analysis results shows consistency with pecking order theory and trade-off theory.

CHAPTER 5

CONCLUSION AND RECOMMENDATION

5.1 Introduction

This paper examines the relationship between the capital structure determinants and the leverage ratio of domestic commercial banking institutions in Malaysia. Six variables were selected as the determinants of capital structure which includes profitability, tangibility, size, dividend, liquidity and growth. This study employed correlation analysis in estimating the relationship between leverage and the multiple variables mentioned above.

In this chapter, summary of the findings is encapsulated according to the research objectives as stated in Chapter 1 of this paper. The significance of the findings will then be highlighted in respect of its implications on the theoretical, practical and policy associated with banking industry in Malaysia. A discussion on the limitations and recommendation for future research conclude the chapter.

5.2 Summary of Findings

The main objective of this study is to examine the relationship between capital structure determinants and leverage ratio of domestic commercial banking institutions in Malaysia. The study also aimed to identify the capital structure strategies deployed by the domestic commercial banking institutions in Malaysia, whether they relied more on debt or equity capital. The analysis was based on historical data for 5-year

period, from 2010 to 2014, which obtained from the financial statements available in the bank's official website.

The following table summarized the theoretical relationship of each variables against leverage ratio, the result of analysis conducted in this paper and the theories that consistent with the observed result.

Table 5.1
Result of Correlation Analysis and Its Consistency with Capital Structure Theories

Variables	**Theoretical Sign Based on Capital Structure Theories**			**Observed Result**	**Consistent Capital Structure Theories**
	TOT	**ACT**	**POT**		
Profitability (ROA)	+	?	-	+	TOT
Tangibility	+	+	-	-	POT
Size	+	?	-	-	POT
Growth	-	-	+	+	POT
Dividend	-	?	+	-	TOT
Liquidity	?	?	?	+	?

Note : ?: Unknown; TOT: Trade-Off Theory; ACT: Agency Cost Theory; POT: Pecking Order Theory

The analysis result revealed that three variables (profitability, growth and liquidity ratio) established positive relationship and the remaining three variables (tangibility ratio, size and dividend pay-out) showed negative relationship with leverage ratio.

As a result, profitability variables attained a direct relationship with leverage measure that supports trade-off theory, but opposes the pecking order theory. This suggests that highly profitable domestic commercial banks in Malaysia maintain higher proportion of debt to equity and they utilise more debt sources as compared to equity for making their capital structure.

Positive relationship between growth and leverage supports pecking order theory whereby domestic commercial banks in Malaysia with high growth rate would rely more on debt.

Despite there was no prediction of capital structure theories in respect of liquidity relationship with leverage, the observed result of direct relationship between these two variable was found to be in line with previous studies by Yu (2000) and Ozkan (2001). This implies that the management of highly liquid domestic commercial banks in Malaysia prefers more debt equity as they have higher capacity to pay the debts when they become due.

Tangibility variable has indirect relationship with leverage which consistent with pecking order theory. Malaysian commercial banks with low tangibility ratio prefer to raise more debt rather than equity.

Size variable displayed a negative relation with leverage. Larger domestic commercial banks in Malaysia maintain low debt since the management tend to issue more equity capital as they are having the required capacity and more capable of doing it. This result is consistent with pecking order theory.

As conclusion, positive relationship between leverage ratio and the profitability, growth and liquidity ratio implies that highly profitable banks, banks with high potential growth and high liquidity prefer debt over equity capital. Conversely, an indirect relationship between leverage ratio and tangibility ratio, size and dividend pay-out ratio implies that larger banks, banks with high tangible assets and higher dividend pay-out ratio prefer equity over debt capital.

In respect of capital structure theories, it seems that the pecking order theory and trade-off theory are partially accepted in commercial banking sector of Malaysia, though there is more evidence and bias for pecking order theory. There was however no indication of compliance with agency cost theory.

The study also aimed to identify the capital structure strategies deployed by the domestic commercial banking institutions in Malaysia, whether they relied more on debt or equity capital.

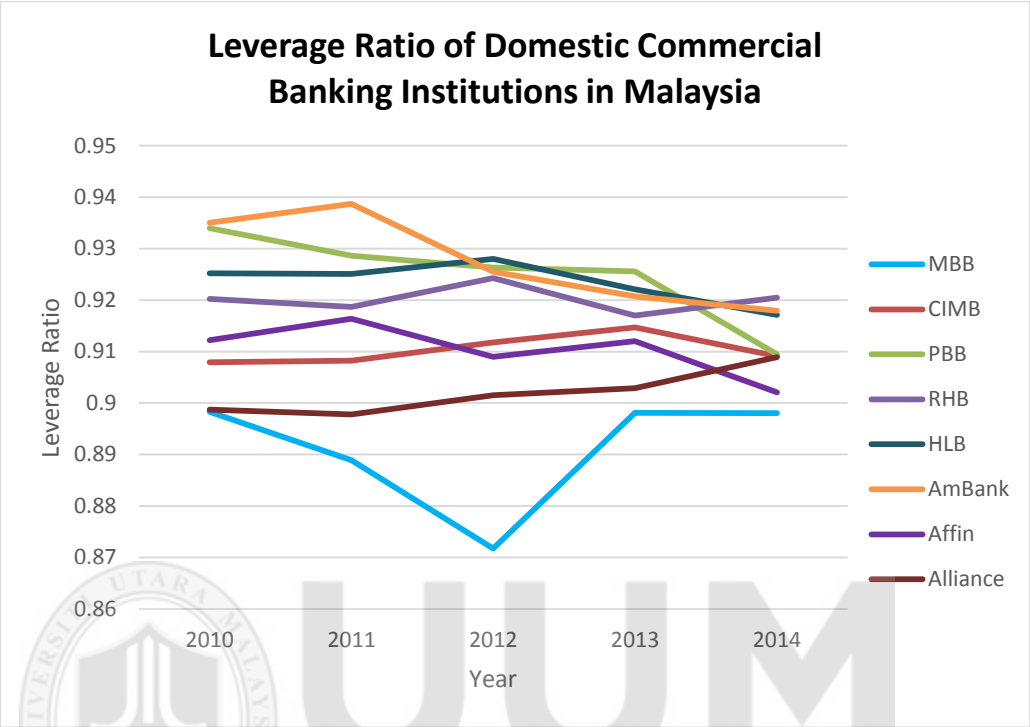
Table 5.2
Leverage Ratio of Domestic Commercial Banking Institutions in Malaysia for 5-year Period Under Review

Year	MBB	CIMB	PBB	RHB	HLB	AmBank	Affin	Alliance
2010	0.8983	0.9079	0.9340	0.9202	0.9252	0.9350	0.9122	0.8987
2011	0.8889	0.9082	0.9286	0.9187	0.9251	0.9387	0.9164	0.8978
2012	0.8717	0.9118	0.9263	0.9243	0.9280	0.9255	0.9090	0.9015
2013	0.8981	0.9147	0.9256	0.9170	0.9221	0.9207	0.9120	0.9029
2014	0.8980	0.9091	0.9095	0.9205	0.9171	0.9179	0.9021	0.9089

Note : MBB – Malayan Banking Berhad; CIMB – CIMB Bank Berhad; PBB – Public Bank Berhad; RHB – RHB Bank Berhad, HLB – Hong Leong Bank Berhad; AmBank – AmBank Berhad; Affin – Affin Bank Berhad; Alliance – Alliance Bank Berhad.

Based on Table 5.2, it can be concluded that all eight (8) domestic commercial banking institutions in Malaysia were relied more on debt rather than equity capital. MBB has recorded the lowest leverage ratio among the banks for the entire 5-year period under review which implies that as the largest financial services group in Malaysia, MBB has the capacity to leveraged more but at the same time has the capacity to tap the equity capital market better than other seven (7) banks.

Figure 5.1
Leverage Ratio of Domestic Commercial Banking Institutions in Malaysia for 5-year Period Under Review



Based on Figure 5.1 above, the leverage ratio fluctuated from year to year but confined within the range of 0.87 to 0.94. The lowest ratio was recorded by Maybank in 2012 with 0.8717 point, whilst AmBank recorded the highest leverage ratio for the industry in 2011. Since then, the leverage ratio for AmBank keep deteriorating till 2014 which implies that the bank's management has constantly reduced the debt proportion in the capital structure of the bank. In contrast, a different approach was noted for Alliance whereby the leverage ratio was increased constantly since 2010 to 2014. There was no significant movement in leverage ratio for the 5-year period for all the banks, except for a 1.9% decrease of MBB's leverage ratio from 0.8889 in 2011 to 0.8717 in 2012, which also the lowest leverage ratio noted for the review period.

5.3 Research Implications

The findings of the study are deemed to benefit stakeholders of banking institutions including investors, bank's management, lenders, academicians and policy makers in Malaysia. Based on the findings discussed in earlier chapters and sections, the writer has drawn the following implications to the respective stakeholders:

- The investors and shareholders should recognise the variables that determine the capital structure of a particular banking institutions and observe the performance prior to making decision, whether to buy or sell the particular stock.
- The management of the banks which may include its financial and operational managers, should define the standards to determine the proportion of debt to equity ratio i.e. acceptable leverage level, by taking into consideration the findings presented in this study to make appropriate capital structure decision that best fit the financial requirements of the banks.
- The lender should consider the capital structure determinants discussed in this paper in order to assess and predict the risk associated with the lending including the ability of the banks in providing covenants, and to ensure that the lender's interest is adequately safeguarded.
- The study by Mooij, Keen and Orihara (2013) concluded that higher bank leverage will increase the likelihood of financial crisis. In addressing the issue of excess leverage in Malaysian banking institutions, the Central Bank of Malaysia has consistently strengthen the supervision on the bank's capital adequacy via the implementation of Basel III, which is required to be complied by the banking institutions in several phases until 2019 (Putri, 2013). Despite the capital

requirements has been set by the Central Bank, the bank-specific capital structure determinants should also be taken into consideration to further enhance the quality of capital maintained by the banking institutions.

5.4 Recommendations for Future Research

The limitations of this study provide avenue and opportunity for future research. The recommendations for future research would include the following:

1) This study focuses on the analysis to gauge the relationship between the leverage ratio and capital structure determinants, but ignoring the significance level of each capital structure determinants in influencing the decision whether to raise debt or equity capital.
2) The analysis result would be more precise if the dependent and independent variables are defined, and the regression analysis is used in order to determine the relationship between dependent and independent variables with adequate number of observations.
3) This study only covers data for 5-year period, i.e. 2010 to 2014, due to non-availability of some historical data. It would be much better if the coverage period is extended to 10-year period for a more well-defined and precise result.
4) Other important external or macroeconomic variables, in particular, country-specific variables such as inflation, GDP growth, interest rate, legal framework and corporate governance, should be analysed as well in addition to the bank-specific factors. This would provide a robust understanding about whether and to what extent macroeconomic conditions influence capital structure decision of Malaysian commercial banks.

5) This study only confined to domestic commercial banking institutions in Malaysia. It might be more interesting to extend this research to other financial service institutions in Malaysia, e.g. investment banks, Islamic banks etc.

5.5 Conclusion

The purpose of this study was to examine the relationship of capital structure determinants against the leverage ratio and the capital structure approach adopted by the domestic commercial banking institutions in Malaysia. Correlation analysis method was used to analyse the 5-year period of data i.e. 2010 to 2014, for all eight domestic commercial banks.

In contrast to earlier studies conducted by other researchers in Malaysia as well as other countries, this study mainly focused on domestic commercial banks, which is within the financial services industry in Malaysia. Globally, previous studies on capital structure determinants mostly emphasised on non-financial firms and limited study was conducted by Malaysia researchers in the area of capital structure.

As a result of this research, it was observed that leverage ratio is in direct relationship with profitability, growth and liquidity, whilst indirect relationship was noted with tangibility, size and dividend pay-out. This concludes that highly profitable banks, banks with high potential growth and high liquidity prefer debt over equity capital while larger banks, banks with high tangible assets and higher dividend pay-out ratio prefer equity over debt capital. In relation to capital structure theories, trade-off theory and pecking order theory are seems to be partially accepted by domestic commercial banking industry in Malaysia.

Based on the observation on the trend of leverage ratio for all 8 banks in the review period, it was found that all banks relied more on debt rather than equity capital, with MBB, the largest domestic commercial bank in Malaysia maintain the lowest leverage ratio for the entire review period. This is consistent with the finding that larger bank prefer equity over debt, though all banks are required to comply with the statutory capital adequacy under the Basel requirements which governed by the Central Bank of Malaysia.

Despite compliance with the capital requirement under the Basel frameworks, the individual bank's management is to closely monitor the leverage level maintained by the bank at any point of time, in order to mitigate the risk of bank's failure and ensure the bank has the capacity to absorb losses caused by any economic crisis which may likely affect the banking sector. Berger et al. (2008) highlighted the assertion that it is difficult to predict how the banks will respond to supervisory or economic changes without having good understanding on the bank's capital requirement, including the level of capital and capital cushions.

Through this study, the writer intended to contribute to the limited research conducted in capital structure determinants, in particular, capital structure of commercial banks in Malaysia. In spite of recommendations highlighted for future research, the writer deemed that the findings of this study might in any way, benefit the stakeholders of commercial banking sector in Malaysia, i.e. the policy maker, investor, shareholder, lender as well as the bank's management, in making informed decisions to their interest and advantage.

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