Chapter 1: Introduction

1.1 Background

Capital structure is the proportion of debt and equity financing of a firm. It indicates how the company operation of a business is financed. A firm with significantly more debt than equity is regarded as highly leveraged. Vice versa, a firm with significantly more equity than debt is considered to be low leveraged.

Debt finance is usually cheaper and preferred than equity finance. This is because debt finance is safer from a debt holder's point of view. Interest has to be paid before dividend. In the incident of liquidation, debt finance is paid before equity. This makes debt a safer investment than equity and hence, debt holders demand a lower rate or return than equity investors. Debt interest is also corporation tax deductible (unlike equity dividends), making it even cheaper to a tax paying company. Arrangement costs are generally lower on debt finance than equity finance and likewise, unlike equity arrangement costs, they are also tax deductible.

Although debt is attractive because of its cheap costs, its disadvantage is that interest has to be paid. If it is over-borrowed, the company may not be able to obligate the interest and principal payments and thus, liquidation may follow. Therefore, there are bankruptcy costs to be borne by the company if the company uses debt financing. The level of a company's borrowings is usually measured by the gearing ratio (the ratio of debt finance to equity finance) and companies must make sure that this does not become too high. Comparisons with other companies in the industry or with the company's recent history are useful here.

Contrary to debt financing, equity financing is capital provided by the shareholders. It does not have to pay fixed interest to the shareholders but only pay dividends to shareholders when the company makes profit from the business. In the event of liquidation, the shareholders will only be paid after settlement to all debt holders have been made. In this condition, equity capital is riskier for the investors but constitute a lower financial risk to company because it is not obligated to pay dividends to its shareholders when the company is not profitable. However, this comes with price.

Firstly, large issues of equity could lead to dilution of EPS if profits from new investments are not immediate. This may disappoint shareholders and lead to falling share price. Secondly, a large issue of shares to new equity investors could change the voting control of a business. If the founding owners hold over 50% of the equity, they may be reluctant to sell new shares to outside investors, as their voting control at the AGM may be lost. Moreover, if the company raises equity finance in a period of falling share prices, the price received will be too low and this will reduce the wealth of the existing owners.

In view of the cost and risk involved in debt and equity financing respectively, it is crucial for the managers to choose a suitable capital structure policy for their company, as the financial leverage is one of important factors that will impact the performance of the company. Some empirical studies in Malaysia (Wong, 2004; Suto, 2003) showed that the capital structure of the firm is negatively related to the performance of companies in different industries in Malaysia. These results imply to us that proper management of the capital structure will generate better returns to the company. Therefore, it will be valuable to managers to know the factors that may impact the capital structure of a firm so that they can control the determinants of the capital structure to maximize firm's profit.

1.2 Statement of the problem

Empirical studies showed that the capital structure is one of important determinants affecting the performance of a company. For instance, the results of a study by Wong (2004) showed that capital structure is positively related to common stock returns and risk. Furthermore, Wong (2004) also found that a company's performance measured by ROE has negative relationship with long-term debt ratio in construction companies. Therefore, it is obvious that managing capital structure is one of the primary financial decisions that are related to corporate value maximization. But, how does a firm decide on its optimal capital structure? Should the managers use more debt or equity? Is there an optimal capital structure? If so how do the managers determine the target debt level? These are questions faced by managers today. At the same time, these questions also raise the curiosity of academic researchers and inspire them to explore the background and effects around the topic.

In fact, many studies have been done on this issue all the while. Before the Modigliani-Miller theory (1958) came into existence, people accept in minimizing the capital cost by balancing the proportion of debt and equity to maximize the corporate value.

However, this conventional view was challenged by Modigliani-Miller model which argues on the irrelevance of the capital structure in determining firm value and future performance (1958). Nevertheless, some challenged the MM theory by arguing that the assumptions of the theory is too rigid and only worked in a perfect capital market. Hence, some have extended the theory by adding in other factors into the model, such as agency cost, tax benefit and bankruptcy cost so that the theory reveals more closely to the real world and is practical to the corporate world.

As a result, in the recent development, pecking order theory, tradeoff theory and signal effect theory becomes influential and important in the study of capital structure. A number of empirical researches are found to support these theories under different conditions. Some of these results complement each other, but some also contradict each other. Until today, the contradictions of the theory remain unsolved. Thus, the theory of capital is a puzzling issue in the field of corporate finance. Undoubtedly, researchers will carry on the study of these issues to find out more empirical evidence or new theoretical models.

However, the previous studies about capital structure still focus on the relationship of firm-related characteristics on capital structure. Many studies have provided empirical evidence that firm-related characteristics such as profitability, tangibility, firm growth, firm size and etc. are important determinants on capital structure. Even though studies have found these characteristics to have significant effects on a firm's capital structure, they explain only a small portion of across-firm variations. Other, yet unidentified, factors apparently are at play. One area that remains unexplored is the effect of strategic variables on capital structure (Harris and Raviv, 1991). International diversification plays a key role in the strategic behavior of large firms (Hitt et al 1994) and is important in improving the financial performance of multinational firms (Hull and Lee, 1999). Internationalization has also been shown to be an important determinant of capital structure (Burgman, 1996).

With the globalization and liberalization of economy, many firms choose to invest oversea. The purposes of going abroad are to capture new markets, achieve economy of scales by selling existing products to new customers, spreading the business risk or political risk from one sole country to other safer countries and gaining new

technological know-how and management skills if firms from emerging countries invest in developed countries.

Therefore, internationalization seems to be one strategic movement for the firms to maximize its value. Going internationalization can be exercised in different methods. One of the popular ways is through exports of the products. The exports of the firms' products to new regional markets can help the firms to achieve economies of scales. Revenue is estimated to increase and this will enhance the debtors' confidence towards the firms' ability to obligate their debt payment. So, internationalized firms are expected to have higher debt ratio. Another method of internationalization is through establishment of foreign offices or manufacturing plants in the regional markets. Offices and manufacturing plants are large amount of tangible assets that can serve as collateral for the debt financing and reduces the default risk for the debtors. The value of tangible assets is positively related to the debt ratio.

In other hand, internationalized firms may encounter political risks in operating oversea especially when firms invest in the emerging markets. The firms need to incur more operating cost to oversee their tangible property in the markets. This political risk may hinder the debtors from borrowing fund to the firms. Besides, firms that earn revenue through exports may internalize its retained earnings to fund their further business operation rather than borrowing from debtors. Therefore, these two situations may result in decreasing the debt ratio of the internationalized firms.

In this context, there is a need to study the capital structure of internationalized firms. Furthermore, many studies regarding capital structure of internationalized firms are mainly focused on developed countries like United Kingdom and United States, while evidence in developing countries like Malaysia is very little.

The financial crisis has a very big impact on the firms in Malaysia. Manufacturing sector suffers the most damage in the financial crisis. During the peak of the financial crisis, Malaysia's export decreased by 28 percent in January 2009 and it was the biggest reduction in the country history since year 1982. Malaysia is an export-based country. Most of the manufactured products are exported oversea. Therefore, manufacturing sector plays an important role in Malaysia's economy. During this financial crisis, many manufacturing companies lost their assets and their share value depreciated. Some companies have undergone capital restructuring. And unlucky ones even ran into bankruptcy.

Leverage can enhance company value to a certain degree when the investments of firms eventually succeed. Unfortunately, if the investment fails, and these companies are not able to pay their debtors, it may have to declare bankruptcy. Therefore, when managers become over-optimistic on their investment and over rely on debt financing, they become vulnerable to financial crisis. In fact, financial crisis is a very good lesson to the management and has showed us that the management of capital structure is very critical to the survival of a company besides value maximization. Essentially, management has to know how to determine the capital structure in order to maximize corporate, so that bankruptcy can be avoided.

All the issues highlighted above are urgent and compelling to the internationalized company managers and academic researchers. It is very important for managers to know the determinants of capital structure so that they can make sound decisions in capital structure policy in alignment with their international diversification strategies. Thus, this study is expected to address this issue.

1.3 Objectives of the study

The objectives of the study are to test various hypotheses concerning the determinants of capital structure of internationalized firms in the manufacturing sector that are listed in Bursa Malaysia.

We measure the firm's debt to assets ratio as the representative of capital structure in this study. The debt to assets ratio is measured based on book value. The explanatory variables included in this study are internationalization, profitability, firm size, company growth rate and tangibility. The internationalization is measured by foreign sales over total sales ratio. The profitability is measured by EBIT over total assets. The tangibility is measured by dividing fixed assets over total assets. The firm size is represented by natural logarithm of total assets and the company growth rate explained by market-to-book values.

1.4 Research Objectives

i- To examine the determinants influencing the capital structure of public listed manufacturing firms in Malaysia.

ii- To investigate the influence of internationalization on the leverage of public listed manufacturing firms in Malaysia.

1.5 Conceptual Framework

This study examines two different types of variables: the independent and dependent variables. The independent variables are the determinants that are hypothesized to have certain influences on the dependent variables.

The independent variables in this study are the internationalization, firm size, company growth, profitability and tangibility. The dependent variable in this study is the capital structure. It is measured by the debt over total assets ratio of the company.
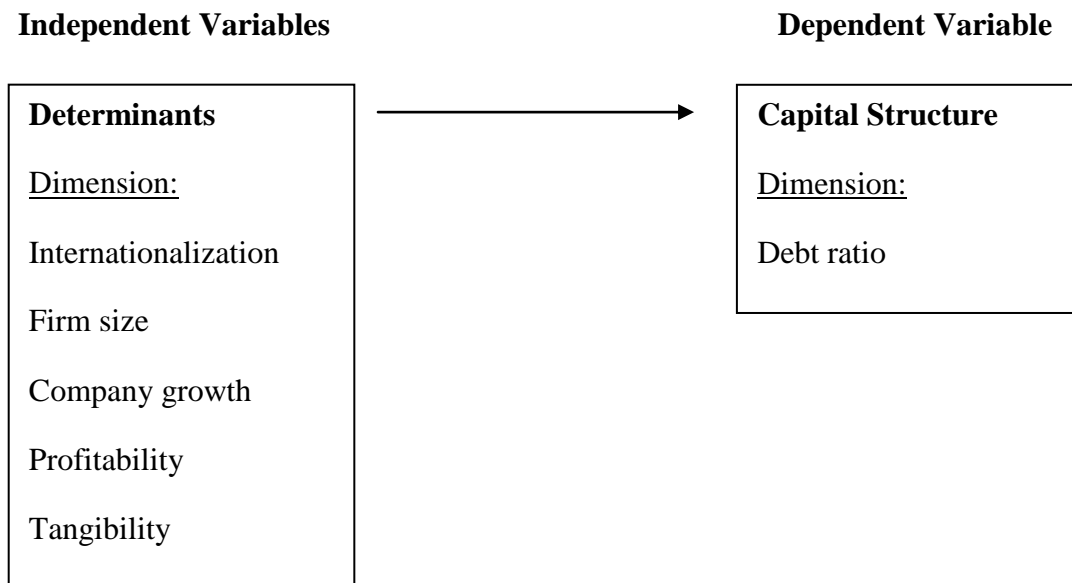
Independent Variables   **Dependent Variable**

Determinants	**Capital Structure**
Dimension:	Dimension:
Internationalization	Debt ratio
Firm size	
Company growth	
Profitability	
Tangibility	

Figure1 Conceptual framework

1.6 Significance of the study

Firstly, there is good reason to suspect that the pattern of capital structure for the internationalized firms in manufacturing sector. Malaysia has introduced the Third Industrial Plan (IMP3) in 2006. IPM3, 2006-2020 outlines the industrial strategies and policies which form part of the country's continuing efforts towards realizing Malaysia's objective of becoming a fully developed nation by 2020, as stated in Vision 2020. The Plan leverages upon the strengths and capabilities of manufacturing sector to enhance its competitiveness and resilience in the global platform. With exercise of several Free Trade Agreements (FTAs) with ASEAN, China and Japan, reduction of tariff will potentially create better and bigger regional markets that favor and attract the Malaysian manufacturing firms to penetrate into that new markets. Firms may need to extra fund to run their international diversification. However, the

potential benefits come along with the challenges from the competitiveness of other FTAs member countries. Firms with weak management in international investment may encounter failure and result in difficulties in debt repayment. Thus, study with the most recent data of the internationalized firms in manufacturing sector will be able to test and confirm the determinants of these firms' capital structure and the findings might provide the managers in the relevant sectors who wish to employ international diversification strategies with valuable insights in capital structure decisions making process.

1.7 Organization of the study

The rest of this paper is organized as follows: Chapter Two will discuss the capital structure theories, determinants of capital structure, internationalization strategy and the results of the existing empirical studies. Chapter Three focuses on research methodology. In this chapter, research methodology, hypotheses and variables of the study will be discussed in detail. Then in Chapter Four, the results and analysis of this study will be discussed. Lastly, Chapter Five summarizes the entire study and will also highlight the limitations of the study as well as suggestions for future study.

Chapter 2: Literature Review

2.1 Capital Structure Theories

The modern theory of capital structure started with the seminar paper of Modigliani and Miller (1958). MM theorem states that in the absence of transaction costs, corporate income taxations, or other market imperfections, the value of firms are independent of its financial structure. A firm's value is determined by real assets, it cannot be changed purely by financial transactions. Therefore, if markets are perfect, it should not be possible to create value by merely shuffling the paper claims on a firm's assets.

However, as we know, markets are not perfect and asymmetric information problems exist even in the developed financial markets like United States. Thus, if there are imperfections such as taxes, underdeveloped financial markets and inefficient legal systems, financial structure become relevant to the firms. Firms have to decide whether to issue debt or equity to minimize the costs attributed by these imperfections.

Existing theories have focused on two different financing choices made by firms: "agency" theory stress on conflicts of interests between owners, creditors, and managers; other theories give emphasis on tax effect and corporate strategies. Empirical evidences show that differences in the capital structures of firms in industrial and developing countries can be attributed to factors such as asset composition, liquidity constraints, industry classification, growth opportunities, and uniqueness as well as to the tax advantages of debt financing in many countries.

In view of restriction on the assumptions imposed on MM theorem, various theories have been developed to explain the capital structure of the company in the existing

studies. The most influential theory of capital structure is static trade-off theory and pecking-order theory. The static trade-off theory views that a firm decides the mixture of debt-equity that optimizes its value. The trade-off theory argues for the existence of an optimal capital structure by adding various imperfections to capital markets assumed by the MM theorem, but retaining the assumptions of market efficiency and symmetric information. Major imperfections that lead to an optimal capital structure are as follows. First, higher taxes on dividends will lead to more leverage as suggested by MM. Second higher cost of financial distress will lead to more equity. These two imperfections constitute the trade-off between benefits and cost from borrowing.

On the other hand, under the pecking-order theory, a company has no well-defined target capital structure. The perking-order theory assumes that market inefficiency and asymmetric information exist in the financial market. And these imperfections influence corporate finance policy. Myers and Majluf (1984) revealed that external investors discount a firm's equity when managers issue equity instead of debt. In order to avoid issuing equity at a discount, managers will prefer to use internal finance rather than external finance. If internal finance is not sufficient to finance investment opportunities and external finance is to be chosen for the investment, the company will prefer debt financing than equity financing (Myers, 1984). Firstly, the interest expenses is tax deductible, therefore debt is preferred over equity. Secondly, equity financing is least preferred because equity attracts unwanted monitoring and dilution in control.

Previous studies showed that different countries adopt different theories due to differences in their respective tax and legal systems as well as efficiency levels on the various markets. For instance, Kjeliman and Hansen (1995) showed that most of the listed companies in Finland seek to keep a target capital structure, while US

companies indicate a preference for pecking-order theory (Pinegar and Wilbricht 1989) in view of institutional difference. However, for Malaysia, although the majority executives in Malaysia expressed a preference for the same financing hierarchy as US companies, the results of the survey reveal that they ranked the issuance new ordinary shares through right issues ahead of debt (Kestar and Mansor 1994).

2.2 Determinants of Capital Structure

Despite the many researchers done, there is a surprising lack of consensus even about many basic empirical facts, such as the determinants of capital structure. Thus, as was the case with leverage measures, there also exist problems of finding, defining and measuring the determinants of capital structure. As Harris and Raviv (1991) showed in their review article, the motives and circumstances that could determine capital structure choices seem nearly uncountable. Generally, the factors that determine capital structure choices observed in the previous study can be categorized into macroeconomic factors such as profitability and firm size, industry specific factors, management control factors and legal factors.

Booth et al (2001) investigated the relationship of debt measures and a set of independent macroeconomic variables and firm specific and institutional variables based on the three principal theoretical models of capital structure: the Static trade-off theory, the Pecking-order theory and the Agency theory.

Macroeconomic variables tested in the regression models are stock market value over GDP, liquid liabilities over GDP, real GDP growth rate, inflation rate and tax term. Some interesting generalizations emerge from the regression results. Firstly, all three debt ratios vary negatively with the equity market capitalization, whereas, except for the long-term market ratio, the debt ratios vary positively with the proportion of liquid

liabilities to GDP. As equity markets become more developed, they become a viable option for corporate financing and firms make less use of debt financing. Similarly, more highly developed debt markets are associated with higher private sector debt ratios. On the other hand, real economic growth tends to cause the book-debt ratios to increase, and higher inflation causes them to decrease. Despite inflation pushing up the monetary value of the firm's assets, the higher interest rate and monetary risk caused by inflation causes book-debt ratios to fall. Finally, the tax term is positively related to the debt ratios. This means that more debt is used in those countries that assign a higher tax advantage to debt financing.

In the Static trade-off theory, capital structure moves towards a target that reflects tax rates, asset type, business risk and profitability. In the agency theory, potential conflict of interest between internal and external investors determines an optimal capital structure that trades off agency costs against other financing costs. The nature of a firm's assets and growth opportunities are important factors affecting agency costs. In the Pecking-order theory, financial market imperfections are central. Transaction costs and asymmetric information link the firm's ability to undertake new investments to its internally generated funds. If the firm must rely on external funds, as the Myers and Majluf (1984) model, then, it prefers debt to equity due to the less impact of information asymmetry.

Ooi (1999) examined the capital structure determinants of 83 property companies quoted in UK by using the panel data methodology. The study regressed the firm's total debt ratios (book value and market value base) against ten explanatory variables, which was categorized into three groups. The first group of variables is industry specific factors, which includes property asset intensity, type of property company and level of development undertakings. The second group of variables is firm specific

factors namely, company size, growth rate, profitability and system risk tax. The third group of variables is time variant attributes, in which interest rate and stock market condition are included.

The three statistically insignificant regressors are growth rate, profitability and tax rate. The results confirm that firms with higher property asset intensity employ more debt in their capital structure. The results showed a significant positive relationship between development activity and leverage, indicating that companies with heavy commitments in property development employ more debt. An inverse relationship between firm size and leverage is observed. This is mainly because property companies use more debt when interest rates are low. Debt capital is likely to be substituted with equity capital when property stocks are performed well. Conversely, the debt ratio of property companies increases in a declining property market.

On the other hand, Panno (2003) has divided the explanatory variables into four groups, namely (i) deviation from target debt levels, (ii) proxy for target ratio which included firm size, operation risk and asset composition, (iii) liquidity ratio, (iv) profitability and other variables such as payout ratio, the number of directors and the price-earning ratio.

The deviation from the target ratio is defined as the difference between the target and the ratio's current value. The later is taken as the ratio that the company would have immediately after making the issuance, if it chose to raise debt. This presumably is the figure that the company would be concerned with, since it takes full account of the effect of the size of the proposed issue on the debt ratio.

The company size is measured by the firm's total assets, which are represented by the natural logarithm of total assets. The size of the company should be positively related

to the leverage ratio. The rationale for this theory is supported by Warner (1997) and Ang et al (1982) that the ratio of direct bankruptcy costs to the value of the firm decreases as the value increases.

The operational risk is represented by Beta or systematic risk of the company, defined as the ratio of the covariance of the company's return with the market and the variance of return of the market. A negative relationship is expected between the beta and the financial leverage.

The proxy for asset composition is defined as fixed to total assets ratio. The higher the proportion of fixed assets in place, the higher one would expect a company's long-term debt ratio to be.

Liquidity ratios are used mainly to judge a firm's ability to meet its short-term obligations. The liquidity ratio may have a mixed effect on the structure decision working in opposite directions. First, firms with higher liquidity ratios might support a relatively high debt ratio, due to a greater ability to meet short-term obligation. Thus, under this scenario, one should expect a positive relationship between a firm's liquidity ratio and its debt ratio. On the other hand, firms with greater liquid assets may use these assets to finance their investments. If this is the situation, there will be a negative relationship between the firm's liquidity ratio and its debt ratio. Moreover, the liquidity of the firm's assets can show the extent to which these assets can be manipulated by shareholders at the expense of bondholders.

Profitability is derived from the ratio of pre-tax profit to total sales. The profitability of a firm provides an opportunity to the firm to use retained earnings over external finance. Thus it is expected that profitability of a firm should have an inverse relationship with financial leverage.

Furthermore, the result of the study done by Porta, Lopez, Shleifer and Vishny (1997) also showed that both legal rules and their enforcement matter for the size and the extent of a country's capital markets. This is because a good legal environment protects the potential financiers against expropriation by entrepreneurs; it raises their willingness to surrender funds in exchange for securities and hence expands the scope of capital markets.

Mehran(1992) uncovered that management control factors affect the leverage of the firms. The results in Mehran (1992) indicated a positive relationship between the firm's leverage ratio and 1) percentage of executives' total compensation in incentive plans, 2) percentage of equity owned by managers, 3) percentage of investment bankers on the board of directors and 4) percentage of equity owned by large individual investors. These findings are consistent with the predictions of agency theory.

Braitsford et al (2002) evidenced that the distribution of equity ownership among corporate managers and external blockholders has a significant relationship with leverage based on agency framework. The empirical results provide support for a positive relationship between external blockholders and leverage, and curvilinear relationship between the levels of managerial share ownership and leverage. Similarly, Mohd, Perry and Rimbey (1998) also found that institutional shareholders play a disciplinary role on the debt in the capital structure. The result showed that the institutional shareholders variable has inverse relationship with the debt levels. The results also proved that outside shareholders have little influence on debt levels when outside shareholders are diffused. While the investigation in Friend and Lang (1988) found that the level of debt decreases as the level of management shareholding in the

firm increase, reflecting the greater non-diversifiable risk of debt to management than to public investors for maintaining a low leverage.

Schmukler and Vesperoni (2000) study the relation between firm's financing choices and financial integration form emerging countries. The explanatory variables of financial leverage are grouped into four different categories: (1) firm specific characteristics, (2) access to international capital markets, (3) macroeconomic factors (namely financial liberalization, crises and financial development), and (4) country effect.

The specific variables included are logarithm of firms' net assets (which is proxy for size of the firm), the ratio of firm's net assets over total assets to represent the asset tangibility, profitability defined as the ratio of firms profits after tax over total sales and production mix which is a time-invariant dummy variable that takes a value of one if the firm is a producer of tradable goods and zero otherwise.

The results of the study showed that larger firms with more tangible assets extend their debt maturity. Higher profits are associated with more internal financing, less leverage and shorter debt maturity. Firms producing tradable goods in East Asia have shorter maturity and higher internal financing. The data suggest that firms with access to international markets increase their long-term debt and lengthen their debt maturity structure. And when more equity is traded in international markets, firm increases short-term loan. The results show that the financial liberalization is positively correlated with internal financing and negatively related to both short-term and long-term debt equity ratios. Moreover, leverage ratios tend to increase during crisis times.

According to Harris and Raviv (1991), the consensus is that "leverage increases with the fixed assets, non-debt tax shields, investment opportunities, and firm size

decreases with volality, advertising expenditure, the probability of bankruptcy and uniqueness of the product."

In this study, the capital structure determinants which will be used are internationalization, tangibility, profitability, firm size and company growth. We limit ourselves to these factors because these factors have shown up most consistently as being correlated with leverage in previous studies (Wong 2004, Bevean and Danbolt 2002).

2.2.1 Internationalization

Firms pursue strategies of internationalization for various reasons, for example in order to generate economies of scale, or to achieve efficient utilization of resources, market expansion, and diversification as a means of controlling political and financial risks. The impact of this internationalization on firm performance has been a major focus of corporate strategy research for many years now. Researchers have long been interested in internationalization. Internationalization is defined as firms' expansion across the borders of global regions and countries into different geographic locations, or markets (Hitt et al. 1997).

Internalization theory explains that multinational firms exist because they optimally internalize international transactions within the boundaries of the firm and increased performance results from such an organizational form (Kobrin, 1991). Firms that operate in more than one country are able to reap benefits that are not available to purely domestic firms. Operating in multiple environments allows firms to leverage location differences that exist in each of them. Firms that have operations and sales in more than one country can shift them from less-profitable ones to more-profitable ones as markets fluctuate (Thomas and Eden, 2004). Operating in multiple locations also offers increased opportunities for learning and knowledge acquisition (Hitt et al.,

1997). Given these advantages, firms across the globe have greatly increased their international sales and operations during the last half of the twentieth century. Further, the empirical research previously cited indicates that there are clear advantages to increased international diversification.

In term of internationalization on capital structure, debt levels can be expected to increase with firms' internationalization given that the increasing international diversification into many less than perfectly related countries should decrease the variability of a company's cash flows and lower bankruptcy costs. But, empirical data point to the opposite direction with debt levels declining with firms' internationalization as debt capacity of such firms can be expected to be lower because of the additional risks of foreign operations (Burgman, 1996).

In Chkir and Cosset (2001) research, they examined the relationship between the capital structure of multinational companies (MNCs) and their strategy of international and product diversification by using a sample of US firms. They find that the financial leverage of MNCs increases with firms' diversification level. In other hand, Kwok and Reeb (2000) tested the relationship between international diversification and leverage using "upstream-downstream" hypothesis. They employed data from 32 countries. They proposed the relationship between international diversification and capital structure is dependent on the relative risk of the MNC home country and the target country. The findings confirm that international diversification is negatively related to leverage for US-based firms. However, their results show that international diversification is positively related to leverage for emerging-market-based firms. In their explanation, MNCs from emerging markets could reduce their risk by going international (upstream- they go to safer markets), while firms from developed countries increase their risk by going abroad

(downstream- they go to riskier markets). Similarly, the "upstream-downstream" hypothesis by Kwok and Reeb (2000) is partially supported by the study of Low and Chen (2004). Low and Chen (2004) investigated the effect of international diversification on capital structure of 232 firms from 30 countries. They found that international diversification is negatively related to the financial leverage. Further analysis indicated that this mainly attributed to the US firms. However, as for non-US firms, unlike Kwok and Reeb (2000) who found a significant and positive relationship between international diversification and leverage, this study fails to obtain any significant result for the effect of international diversification on leverage. The difference in results may be due to differences in either the sample or the methodology between the two studies.

In Mexico, Thomas (2006) investigated the relationship of international diversification and company performance by using Mexican firms' data. It finds that Mexican firms initially experience negative performance as a result of international expansion as they face the costs of foreignness due to their inexperience in foreign markets and the institutional constraints of emerging markets. However, over time, they are able to reap the benefits from increased international diversification which results in positive returns because they gain knowledge and experience in foreign markets. Hence, this research indicates that although emerging market firms face challenges when expanding internationally, they are overcome in time and with experience. The results from this paper indicate that emerging market firms can reap enormous positive benefits from international diversification including the ability to spread risks over various countries, achieve economies of scale and scope in operations, sell to new customers, and earn additional returns from investments in marketing and innovation. Although, these benefits only occur after the firm has

engaged in initial resource exploration, incurring short-term costs. The benefits from both exploration and exploitation of resources through increased international diversification result in higher profitability over time.

Aggarwal and Kyaw (2010) examined the inter-relationship of international diversification and dividend payout ratio upon the company capital structure. By using data of a total 3988 companies from period 1996 – 2005, they found that multinational firms have lower debt ratio compared to the domestic firms. Besides, the multinational firms tend to pay out higher dividends than domestic firms. The result supports the Pecking-order theory that predicts that profitable firms would internalize retained earnings for dividend payout and future investment. International diversification seems a strategic movement for spreading risk and achieving greater profitability. The results of their study imply that financial stability could be achieved through international diversification as it is likely to be risk reducing and investors can expect multinational firms to have lower debt ratio and higher dividend payout.

However, in Taiwan, Lin and Hung (2012) analyzes capital structure between the internationalized and domestic electronic industries in Taiwan from 1999 to 2008 as the reference for financing strategies and decision. The evidence shows that the leverage and the payout cash dividend ratio in the internationalized electronic firms are lower than those in domestic electronic firms. Due to the uniqueness and the high profitability of the internationalized electronic firms in the Taiwan, they have more earnings and inside capital so that the leverage is lower. The internationalized electronic industries tended to pay out cash dividend since 2004 due to the implement of combining two taxes and dividend balance policy in Taiwan.

Another empirical study done by Taiwanese academic researchers, Chen and Yu (2011) has defined the international diversification into two different modes: foreign direct investment (FDI) and export. They studied the effects of FDI and export on the debt ratio of 566 Taiwanese firms. The results indicated that firms with FDI abroad have higher debt ratio than the domestic firms. This is consistent with the "upstream-downstream" hypothesis by Kwok and Reeb (2002) that proposed firms from emerging market go international and are likely to reduce their risk. Thus, they have higher debt capacity. However, Chen and Yu (2011) also found that the firms expand operation internationally through using export mode are leading to a lower debt ratio. Creditors most often find themselves difficult to monitor the selling activities abroad due to the complexity of operation oversea. Thus, creditors are less motivated to lend more funds to the exporting firms.

Following the study of Singh et al (2003), Thomas (2006), Kwok and Ramirez (2010) and Aggarwal and Kyaw (2010), the proxy used for internationalization here is the foreign sales over total sales ratio in all Malaysian manufacturing firms.

2.2.2 Firm Size

The effect of the firm size to leverage of firms depends on the maturity of the debt. For instance, Titman and Wessels (1998) and Hall et al (2000) found that corporate size is positively related to long-term financial leverage but negatively related to short-term financial leverage. Nevertheless, most of the studies still show that the total debt ratio of firms in positively related to firm size. This evidenced by the results in Suto (2003).

Large firms are often thought to have diversified product lines and thus less volatile compared to small and medium companies which do not have many product lines to

endure the cyclical downturn of business. A firm's size can be considered as a good proxy for its business risk. A large and multi product company is more stable therefore the business risk is low compare to a small and single product company. As a result, the possibility to bankrupt for larger companies are low and they can sustain a higher level of debt. Incidentally, large companies will be able to enjoy economies of scales in issuing long-term debt, and have a strong negotiating power with lenders. Therefore, according to trade-off theory, larger firms tend to have higher debt ratio.

Large companies also have bigger turnover and higher total assets. These large firms tend to have long uninterrupted trade records and will be highly regarded by banking institutions and investors. Therefore, large companies are likely to have better access to external financing from capital markets when they need funding. Furthermore, large companies are normally listed on Bursa Malaysia and they have to disclose timely information to the public according to the regulation of Bursa Malaysia. Therefore, the pecking-order theory also predicts negative relationship between the corporate size and capital structure, as large companies have lesser asymmetric information problem.

The study by Crutchley and Hansen (1989) also proved that larger firms are characterized by lower managerial ownership, increased leverage and increased dividend payout, as larger firms incur lower per dollar of floatation costs.

Chen (2004) investigated the determinants of capital structure of Chinese-listed companies. She employed 88 leading large Chinese public-listed firms for the period of 1995-2000. The results indicated that firm size is negatively related to the long term debt. It is consistent with the Pecking-order theory that predicts negative relationship between firm size and debt ratio. Chen (2004) explained that the negative

relationship between firm size and long term debt is mainly due to the larger firms have better access to the capital market for equity financing because of their higher reputation in the markets. Besides, the bankruptcy cost in China is low and the legal system is incomplete. There is insufficient legal protection for the creditors in the event of default.

The Pecking-order theory is also pertinent in another emerging market India, when Chakraborty (2010) analyzed the factors influencing the non-financial firms in India, using a panel data of 1169 firms listed in Bombay Stock exchange or National Stock exchange over period 1995 – 2008. The firm size is significantly negative related to the debt ratio of the companies. The result supported the Pecking-order theory that postulates a negative relationship between firm size and debt ratio due to the low informational asymmetries in the capital market. Hence, large firms tend to issue equity more than smaller firms.

However, Krishnan and Moyer (1997) examined the capital structure and firm performance of 81 corporations from Korea, Singapore and Malaysia. They found out that firm size is positively related to the debt ratio. The larger firms have lower risk of bankruptcy and thus, have greater debt borrowing capacity. Besides, Krishnan and Moyer (1997) also explained the Chaebol corporate structure in Korea or institutional patronage structure in Malaysia that feature the close tie between corporate conglomerate groups and banks, lead to a better access to debt borrowing in bank.

Sheikh and Wang (2011) tested the determinants of manufacturing firms in Pakistan. The study was performed using panel data for a sample of 160 companies listed on Karachi Stock Exchange during 2003 -2007. They found that firm size has a positive and significant impact on the debt ratio. This finding is consistent with the

implications of the trade-off theory suggesting that larger firms should operate at high debt levels due to their ability to diversify the risk and to take the benefit of tax shields on interest payments.

Different empirical studies use different variables as the proxy for firm size. For instance, net sales and natural logarithm of total assets are used as proxy of firm size by Suto (2003). Large company would tend to have more assets compared to smaller ones and therefore, assets can be used as an indicator of firm size. We shall use natural logarithm of total assets as a proxy for firm size.

2.2.3 Profitability

In Harris and Raviv's (1991) review, it is found that the results of the effect of the profitability are in conflict. For instance, Chang (1987) showed that profitability is positively related to debt ratio, while Ross (1977) and Panno (2003) showed the profitability is negatively related to debt ratio.

The conflicting results of the relationship between the profitability and financial leverage can be explained from different points of view based on static trade-off theory and pecking-order theory. Firstly, the static trade-off theory predicts a positive relationship between profitability and leverage because a firm with higher profit would require a greater tax shelter and would be able to take up a higher financial leverage.

On the other hand, according to pecking-order theory, managers will prefer internally generated funds to external financing when they cannot credibly convey inside information to outsiders. First, managers will choose internal finance. Secondly,

managers will choose to borrow when their investment cannot be met by internal finance. The managers will only issue the equity as the least preferred choice when the options of borrowing were exhausted. Furthermore, as mentioned earlier, debt financing is obligated to a fixed interest payment regardless of the company's performance. Thus, in the short run, if debt financing is the dominant mode of external financing, the changes in profitability will be negatively correlated with changes in leverage. Rajan and Zingales (1995) showed that firm profitability has a negative relationship with debt ratio in 4 of 7 industrial countries. Similarly, several studies for firms in Malaysia like Suto (2003) and Wong (2004) showed that the capital structure of the firm is inversely related to the profitability of companies in different industries in Malaysia. As profitable firms are likely to have more retained earnings, we expect a negative relationship between profitability and leverage.

Chen and Yu (2011) had examined the effects of FDI, export and firm-related characteristic variables on the debt ratio of 566 Taiwanese firms. Their results showed that profitability has inverse relationship with the debt ratio. It provides further confirmation to the Pecking-order theory that suggests firms with higher profitability had large amounts of internally-generated funds that they used for their operations, as opposed to external debt financing.

When Chen (2004) investigated the determinants of capital structure in Chinese-listed firms, she found that profitability decreases the debt ratio of companies. This is in line with the Pecking-order theory. However, Chen (2004) explained that there are maybe other reasons for this negative relationship rather than those proposed by Pecking-order theory. The listed firms are attracted by equity finance due to the substantial capital gains in the secondary markets. In addition, the corporate governance problems and the lack of enforcement of company laws provide no adequate

investment protection to the individual shareholders. Share capital has become somewhat a ''free'' source of finance. The management prefers equity financing rather than debt financing. Tax effects predicted by the trade-off model are rather limited in China. This is because the state is still the controlling stakeholder of firms and the owner of banks as well as the beneficiary of tax, which reflects China's status as a centrally planned economy. This induces firms to use equity finance as much as possible.

Another study by Sheikh and Wang (2011) tested the determinants of manufacturing firms in Pakistan using panel data for a sample of 160 companies listed on Karachi Stock Exchange during 2003 -2007. They found that profitability is inversely related to the debt ratio of firms in Pakistan, which confirms that firms finance their activities following the financing pattern implied by the pecking order theory. Moreover, high cost of raising funds might also restrict the Pakistani firms to rely only on internally generated funds because of relatively limited equity markets combined with lower levels of trading. This study is supported by the research by Chakraborty (2010) which suggests negative relationship between profitability and debt ratio of Indian companies.

Many indicators used to represent the profitability are mostly based on profit margin or return on assets. Hall et al (2000) defined profitability as ratio of pre-tax profit to sales while Booth et al (2001) and Bevean and Danbolt (2002) used earnings before tax and EBITDA over assets respectively. Here, we use EBIT over total assets as a proxy of firm's profitability.

2.2.4 Company Growth

In a growing company, the agency problems are likely to be more severe as the managers have more flexibility in their choice of future investment. Myer (1977) argued that the more discretion over the firm's investment policies increase debt agency cost. Moreover, Titman and Wessels (1998) also noted that firms usually attempt to invest in sub-optimal projects in order to transfer wealth from bondholders. As the cost associated with agency problem is higher in a higher growth firms, therefore firms use less debt in order to avoid this cost. For this reason, the relationship between company growth rate and borrowing should be negative.

Eldomiaty (2008) investigated the determinants of corporate leverage in Egypt, using panel data of 99 non-financial firms from period 1998-2004. The results showed that company growth is significantly inversely related to the debt ratio. The findings fit well with the agency theory that assumes the high agency cost of debt induces the creditors less motivated to lend fund to companies.

On the other hand, growth can increase the firm's borrowing ability in the future, because as a company expands, the company will acquire more assets and this will lead to higher leverage of the company. Hall et al (2000) suggests that growth is likely to increase retained earnings in the future and push firms to borrow and thus be positively related to leverage. Gupta (1969) suggests that a company with rapid growth will tend to finance the growth with debt financing. In addition, the pecking-order theory predicts that high growth firm typically with large financing needs, will have high debt ratio because of manager's reluctance to issue equity.

In the research by Singh et al (2003), they employed panel data of 1127 US firms over period 1994-1996 and tested the impact of corporate diversification strategies on the

debt ratio. Their results showed that company growth is positively related to the debt ratio of domestic companies, while multinational companies' growth has no relationship with leverage significantly. They proposed that growth itself causes uncertainty of future cash flows. Such uncertainty would be more severe in the case of growth in multinational operations. In this scenario, one should expect the relation between future growth opportunities and leverage to be negative for MNCs and positive for domestic firms.

In China, the study by Chen (2004) revealed that Chinese-listed company growth has positive relationship with the debt ratio. Under the hypothesis of Static Trade-off theory, firms holding future growth opportunities, which are a form of intangible assets, tend to borrow less than firms holding more tangible assets because growth opportunities cannot be collateralized. The Static Trade-off theory cannot fit in China situation because most of the listed companies are in the manufacturing sectors. They possesses more tangible assets like machinery and manufacturing plants compared and less intangible assets such as good will, advertising, and thus have limited growth opportunity. This is a reflection of low technological expertise level in the general Chinese firms.

A commonly thought proxy for growth determinants is the co-called market-to-book ratio: the ratio of the market value of assets over book value. Other measures such as capital expenditure over total assets (Titman and Wessels, 1998) also had been used as proxy for growth opportunity in the existing literatures. The proxy for company growth used here is the market-to-book ratio.

2.2.5 Tangibility

Bevean and Danbolt (2001) showed that tangibility is positively correlated to total and long-term debt ratios respectively but inversely related to short-term debt ratio. This supports the maturity matching principles: long-term debts are used to finance fixed assets, while the non-fixed assets are financed by short-term debt. From a trade-off perspective, firms with a lot of fixed assets find it easier to issue bonds or get loan from banks because the fixed assets of the company will be able to serve as collateral for the borrowing and reduces the default risk for the lenders. Under the pecking-order theory, the greater the value of the tangible assets, the smaller the asymmetric information, therefore, it is expected that the collateral value might be positively related to the debt ratio. Many previous empirical studies supported this hypothesis. For instance, Rajan and Zingales (1995) supported this hypothesis in industrialized countries. Suto (2003) also supported this hypothesis in Malaysia.

In the study of Chakraborty (2010) that analyzed the determinants of capital structure in India firms, the results indicated that the tangibility has positive relationship with the debt ratio of Indian firms. The findings are consistent with the Static Trade-off theory that which postulates a positive relationship between long-term debt ratio and tangibility. The result implies that the firms with more fixed assets which can be used as collateral have a higher leverage ratio.

However, unlike the study by Chakraborty (2010) that showed positive relationship between tangibility and debt ratio in India, Sheikh and Wang (2011) tested the factors influencing capital structure of manufacturing firms in Pakistan and revealed that tangibility is inversely related to the debt ratio. However, this finding is consistent with the assumptions of the agency theory predicting that the tendency of managers to

consume more than the optimal level of perquisites may produce an inverse relationship between collateralizable assets and the debt levels.

Many studies such as Bevean and Danbolt (2002) and Suto (2003) used tangible fixed assets over total assets as a proxy for tangibility of a firm and show a significant result in their studies. Therefore, this proxy will be adopted in this study as well.

2.3 Studies on Capital Structure in Malaysia

Some of the studies that have been conducted in Malaysia on the subject of capital structure are studies by Wong (2004), Kam (2001), Mohamad (1995) and Kester and Mansor (1994).

Wong (2004) studied the effects of capital structure and firm size on company performance in the construction sector from 1999 to 2003. The study found that capital structure is negatively correlated to company performance and the relationship is very strong and significant suggesting that the capital structure is an important factor determining company performance. However, firm size was found not correlated to company performance.

Kam (2001) has studied the 174 sample firms listed on Bursa Malaysia from 1990 to 1999 and found that the capital structure proxy by total debt over total assets ratio were significantly different across industries during pre-crisis period. Its finding on the stability of capital structure over time was mixed with some sector showing significant difference over time, while others did not. The share of long-term debt in total financing differed across industry was generally stable over time within the same sector.

Mohamad (1995) conducted a study to examine the determinants of firms' capital structure in Malaysia. The study covers the period of study from 1986 to 1990 by using a sample of 108 large companies in Malaysia. The study found that firm's size and industry classification play a significant role in determining a firm's capital structure and there is significant inter-industry difference in the capital structure of large Malaysian companies. Furthermore, the study also found that highly leveraged firms are more likely to earn higher profit than lowly leveraged firms.

Kester and Mansor (1994) conducted a survey among the Chief executive officers of companies that are listed on Bursa Malaysia in order to find out their view on capital structure policy. Though the majority of executives in Malaysia expressed a preference for similar financing hierarchy as US companies, the results of the survey reveal that they ranked new ordinary shares through right issues ahead of debt. In view of the debt market development in Malaysia, the result may not be so surprising as the debt market in Malaysia is still undeveloped.

Pandey (2007) conducted a study regarding to the determinants on capital structure of 208 Malaysian companies. The results showed a positive relationship between size, assets, tangibility and capital structure, while growth, risk and ownership have negative relationship with capital structure.

2.4 Industrial Master Plan 3

The government had formulated and implemented two Industrial Master Plans in the past two decades, which had contributed to the development and transformation of the manufacturing. While the First Industrial Master Plan, 1986-1995 formed the foundation for the manufacturing sector to become the primary growth sector of the economy, the Second Industrial Master Plan (IMP2), 1996-2005 contributed to the

further development of the sector, by strengthening industrial linkages, increasing value-added activities and increasing productivity.

The Third Industrial Master Plan (IMP3), 2006-2020 outlines the industrial strategies and policies which outline part of the country's continuing efforts towards realizing Malaysia's objective of becoming a fully developed country by 2020, as stated in Vision 2020. The Plan leverages upon the strengths and capabilities of existing industries and the country's resources to enhance competitiveness and resilience. It also builds upon the experience and successes of the previous two Plans, with fine-tunings to reflect developments and opportunities in the global, regional and domestic environments.

The principal objective of the IMP3 is to achieve global competitiveness through innovation and transformation of the manufacturing and service sectors. Emphasis is given to technological upgrading, attracting and generating quality investments, developing innovative and creative human capital, and integrating Malaysian industries into the regional and global network.

The target of IMP3 is to achieve Gross Domestic product (GDP) growth at 6.3 percent during the entire Plan period. This target is premised on the average annual rate of 4.6 percent during the Second Industrial Master Plan (IMP2) period, the economy is expected to grow higher at 6.5 percent during 2011-2020. Besides, the manufacturing sector will continue to remain an important sector, growing at 5.6 percent annually during the IMP3 period and contributing 28.5 percent to the GDP in 2020. The total trade in manufacturing sector is targeted to grow almost three-fold from RM967.8 billion in 2005 to RM2.8 trillion by 2020. From this total trade figure, export trade

plays its major role and is expected to increase 2.7 times from RM 533.8 billion to RM 1.4 trillion by the entire IMP3 period (MITI, 2006).

The theme for the IMP3 is "MALAYSIA – TOWARDS GLOBAL COMPETITIVENESS". This theme is to ensure that the country is able to sustain a high level of performance in competitiveness, against the backdrop of a global trade and investment environment, which is increasingly influenced by the rising trend in liberalization and globalization. In striving towards global competitiveness, Malaysia will need to enhance its competitiveness position. In the Global Competitiveness Index 2012-2013, Malaysia was ranked 25th among 144 countries, decreased from rank 21st in 2011-2012 (World Economic Forum, 2012). Therefore, strategies are needed to position Malaysia as a major trading nation and meet the challenges in the international trade. As mentioned before, export trade is the major contributing segment in manufacturing sector. One of the strategies to enhance Malaysia's global competitiveness is to intensify the exports of products to regional and global markets.

2.4.1 Export Trade

The government continued to progressively liberalize the economy during the Second industrial Master Plan (IMP2), 1996-2005. As a result, Malaysia became increasingly integrated into the global economy, in terms of trade and investment flows. The extent of Malaysia's link with the global economy was reflected in its position as the 19th most globalised country in 2005, based on A.T. Kearney's globalization index. The integration of Malaysia into the global economy has contributed towards the economic growth of the country. Total exports, as a percentage of GDP, increased from 77.7 percent in 1996 to 118.3 percent in 2011. In term of manufacturing sector, exports of manufactured products accounted for 67.7 percent of Malaysia's total

exports in 2011, increased by 2 percent compared to 2010 (MIDA, 2012). During the IMP2 period, one most dynamic movement in export trading was registered by the People's Republic of China with export expanded at an average annual growth rate of 21.8 percent during this period and achieved RM 35.2 billion in 2005. The major exports to China are manufactured products included chemical products, electric & electronic products, machinery and appliances (MIDA, 2012).

2.4.2 International Trade Arrangements

International trade arrangements include initiatives by countries to facilitate trade through Free Trade Agreement (FTA). The use of FTA is to liberalize international trade by promoting free trade among the FTA member countries. With the progressive movement to enhance international trade, Malaysia also involves in several FTAs.

1- ASEAN Free Trade Area

Under the AFTA, import duties on all products will be eliminated by 1 January 2010 for Brunei, Indonesia, Malaysia, the Philippines, Thailand and Singapore, and by 1 January 2015 for Cambodia, Laos, Myanmar and Vietnam.

2- ASEAN Free Trade Agreements with the Dialogue Partners

ASEAN is extending its scope of engagement with its dialogue partners. ASEAN is negotiating FTAs with China, India, Japan, Republic of Korea, Australia and New Zealand. Under these FTAs, reductions of tariff will apply to manufactured goods, services, investments and other areas of economic cooperation.

With exercise of these two FTAs, there are potential benefits to be realized such as creation of an economic region with 1.7 billion consumers, a regional GDP of USD 2 trillion and total trade estimated at USD 1.2 trillion. Besides, the reduction of tariff is

estimated to increase exports by ASEAN countries to China by 48 percent. The exports value from ASEAN countries to Japan will increase by USD 20.6 trillion by 2020. The domestic manufacturing firms in Malaysia are encouraged to get prepared to diversify its product sales into the regional markets such as ASEAN countries or China and Japan when AFTA, ASEAN-China FTA and ASEAN-Japan FTA are fully implemented. In the other hand, the implementation of these FTAs, competition is getting increased in either domestic or regional markets. As a result of liberalization, domestic manufacturing firms will encounter competition by regional firms from other FTA member countries as well as the Malaysia firms which internationalize their sales in the FTA regional market will compete with other member countries together. Therefore, the domestic manufacturing firms with the hope to benefit from these FTAs must be prepared to manage the potential risk of internationalization in other regional markets (MITI, 2006).

Chapter 3: Research Methodology

3.1 Data Description

Secondary data will be used to measure the debt ratio and the determinants of capital structure. All the data are collected from database Datastream5 and Bloomberg for the companies listed in Bursa Malaysia under manufacturing sectors. The criteria for the companies are as follow:

a) The companies must contain complete financial information for the period 5 years (2007-2011).

b) The companies must have debt financing in their capital structure.

c) The companies must have positive equity because a negative market-to-book equity ratio would not be meaningful to indicate a company's growth opportunity.

After eliminating the outliers, the final sample size is 311 companies with a total of 1486 observations.

3.2 Research Hypothesis

Capital structure, which is defined as total debt to total assets at book value. In this study, our dependent variable capital structure will be measured by total debt over total assets ratio. We use this measure because it provides information to a firm's policy for both short-term and long term debt.

International diversification leads to a lower volatility of earnings as the MNC has cash flows in imperfectly correlated markets. This leads to a reduction in bankruptcy risk and enables the MNC to utilize more leverage in its capital structure (Shapiro, 1992). Thus, the diversification hypothesis predicts a positive relationship between

international diversification and financial leverage. Empirical evidence, however, is inconsistent with this assumption. Burgman (1996) and Chen et al. (1997) find a negative relationship between international diversification and leverage. One possible explanation for this is that "the effect of higher agency costs of debt for MNCs, as a result of international capital and labor market imperfections and complexity of international operations exceeds the possible benefits of international diversification and leads to lower debt ratios for MNCs" (Chkir and Cosset, 2001). Kwok and Reeb (2000) propose that the relationship between international diversification and capital structure is dependent on the relative risk of the MNC home country and target country. According to this hypothesis, the capital structure of MNCs can differ between developed countries based and emerging countries based firms. They provide empirical evidence that international diversification is negatively related to leverage for US based firms and positively related to leverage for emerging market-based firms. Based on ISA (International Standard of Accounting) and GAAP (Generally Accepted Accounting Principles), frequently the amount of at least 10 percent foreign sales mentioned as a base for effective internationalization. Hence, all the Malaysian manufacturing firms that have equal or more than 10 percent foreign sales are considered as internationalized firms (dummy =1), while the Malaysian manufacturing firms with less than 10 percent foreign sales are domestic firms (dummy = 0).

Thus, we hypothesize that:

Research Hypotheses 1:

Internationalization is negatively related to debt ratio. β_1 = negative and significant.

Size is considered to be the first important characteristic of firm. The Trade-off theory proposes that the larger a firm is, more needs have to be diversified and this is the reason for it to apply more leverage in its capital structure. This theory also proposes that larger firms can reduce bankruptcy costs by diversifying their businesses. Therefore, from the perspective of trade- off theory, it can be said that there is a positive relationship between the size of firm and leverage. Many empirical studies have shown a mixed result. For example, Rajan and Zingales (1995) reported a positive relationship between firm's size and leverage in the US, UK, Japan and Canada, while the result of their study in France show a negative relationship. Thus, we hypothesize that:

Research Hypotheses 2:

Firm size is positively related to debt ratio. β_2 = positive and significant.

Profitability is considered as another important characteristic of firms that can affect capital structure. Based on the Pecking Order theory, companies prefer to be financed by their internal resources. Retained earnings are the first option, then debt is considered as the next option and finally the new equity will be the last resort. As a result, firms with high level of profitability should have the low level of debt. Therefore, according to The Pecking order theory, there is a negative relationship between profitability and leverage. In contrast, the Trade-Off theory depicts a positive relationship between profitability and leverage because the theory states that profitable companies can use more debt to take advantages of the tax-shield. Empirical evidences from previous studies seem to be in line with the pecking order theory. The results of most studies show negative relationship between profitability and leverage. For instance, the results of studies by Cassar and Holme (2003) affirm a

negative relationship between profitability and leverage. However, the finding of Petersen and Rajan (1994) is inconsistent with Pecking-Order theory because they reported a positive relationship between profitability and leverage. From the perspective of Pecking-Order theory, larger firms tend to internalize their retained earnings first for further investment rather than borrowing. Thus, we hypothesize that:

Research Hypotheses 3:

Profitability is negatively related to debt ratio. β_3 = negative and significant.

Growth is defined as the market-to-book ratio. Higher growth opportunities provide incentives to invest sub-optimally, or to accept risky projects that expropriate wealth from debtholders. This raises the cost of borrowing and thus growth firms tend to use internal resources or equity capital rather than debt. In addition, high growth firms whose value comes from intangible growth opportunities do not want to commit themselves to debt servicing as their revenue may not be available when needed. For this reason, the relationship between company growth rate and borrowing should be negative. Thus, we hypothesize that:

Research Hypotheses 4:

Company growth is negatively related to debt ratio. β_4 = negative and significant.

Bevean and Danbolt (2001) showed that tangibility is positively correlated to total and long-term debt ratios respectively but inversely related to short-term debt ratio. From a trade-off perspective, firms with a lot of fixed assets find it easier to issue bonds or get loan from banks because the fixed assets of the company will be able to serve as collateral for the borrowing and reduces the default risk for the lenders. Under the pecking-order theory, the greater the value of the tangible assets, the smaller the asymmetric information, therefore, it is expected that the collateral value might be

positively related to the debt ratio. Many previous empirical studies supported this hypothesis. For instance, Rajan and Zingales (1995) supported this hypothesis in industrialized countries. Suto (2003) also supported this hypothesis in Malaysia. Thus, we hypothesize that:

Research Hypotheses 5:

Tangibility is positively related to debt ratio. B_5 = positive and significant.

3.3 Variables Measurements

This study investigates two types of variables: dependent variable and independent variables. The measurements of variables used are as follows:

a) Dependent variable

The capital structure of a firm indicates the proportion of debt and equity used to finance the assets of the firm. Debt ratio is used as the proxy of capital structure in this study. The higher the debt ratio, the bigger debt element is in the capital structure of a firm.

$$\text{Debt ratio} = \frac{Total\ debt}{Total\ assets}$$

The debt ratio is measured by using book value. According to Bowman (1980), the cross-sectional correlation between the book value and market value of debt is very large. There is possibility of mis-specification by using book value is considerably small.

b) Independent variables

We adopt internationalization, firm size, profitability, company growth and tangibility as the independent variables.

1. Internationalization $= \dfrac{Foreign\ sales}{Total\ sales}$

2. Firm size = *ln (fixed assets)*

3. Profitability $= \dfrac{EBIT}{Total\ assets}$

4. Company growth = *market-to-book ratio*

5. Tangibility $= \dfrac{Fixed\ assets}{Total\ assets}$

The cross sectional panel data used in this study is based on the models in Rajan and Zingales (1995), Booth et al (2001) and Bevan and Danbolt (2002).

3.4 Research Design

This study used panel data analysis because the sample contained data across firms and overtime. The use of panel data increases the sample size considerably and is more appropriate to study the dynamics of change. In order to estimate the effects of independent variables on the debt ratio, we used two estimation models, namely, pooled ordinary least squares (OLS) and the fixed effects model. Since panel data contained observations on the same cross-sectional units over several time periods there might be cross-sectional effects on each firm or on a set of group of firms. Several techniques are available to deal with such problem such as the fixed effects model. The fixed effects model takes into account the individuality of each firm or cross-sectional unit included in the sample by letting the intercept vary for each firm but still assumes that the slope coefficients are constant across firms. Therefore, we employed the Hausman specification test to determine which estimation model to best explain our estimation.

In this study, we use Eview7 software to run the regression model. Eview7 combine the technology of the best modern software with the cutting edge features for data

handling. It is a statistical tool for modeling, analyzing, and forecasting. Moreover, it can estimate and show the amount of coefficients and their probabilities at the same time in a table. We use Eview7 to evaluate how the dependent variable is associated with the independent variables specified in the regression model. The regression model of the relationship between debt ratio with internationalization, firm size, profitability, company growth and tangibility is expressed below:

$$DRATIO = \beta_0 + \beta_1\ INTL + \beta_2\ SIZE + \beta_3\ PROFIT + \beta_4\ GROWTH + \beta_5\ TANG + \varepsilon$$

Where DRATIO represents debt ratio, INTL represents internationalization, SIZE represents firm size, PROFIT represents profitability, GROWTH represents company growth and TANG represents tangibility. β_0 is constant, β_1, β_2, β_3, β_4, and β_5 are coefficients of the independent variables. ε represents error term.

Chapter 4: Results and Findings

4.1 Introduction

This chapter presents the results and finding of the research. The research attempts to explain the determinants of capital structure of internationalized firms in manufacturing sector that are listed in Bursa Malaysia over the 2007-2011 period. This study employed cross sectional panel data. We used pooled ordinary least squares (OLS) regression to estimate the coefficient of the independent variables and the Fixed Effect Model approach to examine the effect of independent variables on debt ratio on the basis of cross sectional variation. The results of the relationship between debt ratio with the independent variables namely internationalization, firm size, profitability, company growth and tangibility are as follows.

4.2 Analysis of Findings

	DRATIO	GROWTH	INTL	PROFIT	SIZE	TANG
Mean	0.227842	1.087024	0.254291	0.04719	12.23138	0.354075
Median	0.202564	0.78	0.1344	0.058164	12.09845	0.343511
Maximum	2.175584	22.73	1	1.277148	17.15271	0.937667
Minimum	0	-3.33	0	-2.13588	8.742415	0
Std. Dev.	0.18453	1.357458	0.298406	0.13432	1.269866	0.179515
Skewness	1.71035	7.527527	0.9948	-5.46293	0.625615	0.29013
Kurtosis	13.69299	88.56739	2.814721	79.24028	3.829348	2.825381

Table 4.1: Summary of descriptive statistics

Table 4.1 demonstrates the descriptive findings for both dependent and independent variables. It can be seen that on average the manufacturing firms in Malaysia have 22.8 percent of debt in their capital structure. This indicates that Malaysian manufacturing firms employ very low level of debt in their capital structure. Besides,

tangible or fixed assets account 35.4 percent on average in the firms' total assets. In term of internationalization, on average the manufacturing firms in Malaysia establish stable international diversification by achieving 25.4 percent of foreign sale over their total sale. This confirms that Malaysia is an export-based nation and manufacturing firms contributed most major role in Malaysia's export.

	DRATIO	GROWTH	INTL	PROFIT	SIZE	TANG
DRATIO	1.000000					
GROWTH	-0.10365	1.000000				
INTL	-0.06997	-0.00203	1.000000			
PROFIT	-0.16267	0.22334	-0.06191	1.000000		
SIZE	0.146603	0.153085	-0.05992	0.294231	1.000000	
TANG	0.22406	-0.06053	-0.04501	-0.04459	0.02162	1.000000

Table 4.2 Correlation Matrix

Table 4.2 presents the correlation matrix for the sample companies. It shows that company growth and profitability have negative correlation with debt ratio. The negative correlation between debt ratio and profitability affirms the pecking-order theory that firms tend to internalize retained earnings first for further investment and debt financing would serve as second option. Company growth has negative correlation with tangible assets and debt ratio. This implies that when the firms' growth increases, they do not favor in investing in tangible assets but tend to invest in riskier intangible projects. This increases the cost of borrowing and default risk for the debtors, thus results in lower level of debt ratio. The most striking finding in this correlation matrix is that internationalization has negative correlation with the major firm characteristics namely company growth, profitability, firm size, tangibility and debt ratio. Although Malaysia is an export-based country but the recent financial crisis has damaged the manufacturing sector harshly. Firms that have foreign

operation or business suffer shrink in term of profitability, growth and firm size from this financial crisis. From another perspective, this also indicates that Malaysian manufacturing firms encounter huge competitiveness from other rivalry countries in the global platform. The competition is predicted to be more aggressive when the FTAs are implemented fully in future.

Variables	Coefficient	t- statistic	Probability
INTL	-0.01252	-3.2770	0.0011
GROWTH	-0.01089	-3.2140	0.0013
PROFIT	-0.27288	-4.0500	0.0001
SIZE	0.03103	26.0213	0.00
TANG	0.20967	11.4182	0.00
C	-0.19448	-8.6124	0.00
R-squared	0.118928		
Adjusted R-squared	0.115951		
F-statistic	39.95427		
Prob(F-statistic)	0.00		

Table 4.3 Multiple regression results – Pooled OLS Model

The table 4.3 shows the result of multiple regressions for the pooled OLS model. The results support the all the research hypothesis in this study. The t-statistics of the all five independent variables are statistically significant at 0.05 level. Therefore, the entire research hypotheses are supported. This means that internationalization, profitability and company growth are in negative relationship with debt ratio significantly. Meanwhile, firm size and tangibility are positively related with debt ratio.

The F-test is used to test the fitness of the regression model. From the table 4.3, the value of F-test (F= 39.9542) is significant at 0.05 level (P=0.00). Therefore, this explains that the data used in this study is appropriate for the model. The value of R-Squared (R^2 = 0.1189) indicates that all the five independent variables together explain 11.89 % of the variance in the capital structure of manufacturing firms.

As we employed cross sectional panel data, it is possible that some of the partial correlations under pooled OLS are the result of omitted variables bias such as the independent variables are correlated with some firm specific omitted variables. By using the Fixed Effects Model, it can eliminates the omitted variables bias arising from unobserved variables that are constant over time and from unobserved variables that are constant across firms.

Variables	Coefficient	t- statistic	Probability
INTL	-0.02537	-2.41921	0.0157
GROWTH	-0.01154	-2.29417	0.0220
PROFIT	-0.08554	-2.91429	0.0036
SIZE	0.03081	2.28263	0.0226
TANG	0.13724	2.53906	0.0114
C	-0.16735	-0.92544	0.3549
R-squared	0.799376	Hausman Test (Chi-sq Stat)	20.5684
Adjusted R-squared	0.745362	Prob (Chi-sq Stat)	0.001
F-statistic	14.79938		
Prob(F-statistic)	0.00		

Table 4.4 Multiple regression results- Fixed Effects Model

Table 4.4 presents the multiple regression results for the Fixed Effects Model. Similarly, the t-statistics of the all five independent variables are significant at 0.05 level. All the research hypotheses are supported. In other words, internationalization, profitability and company growth are inversely related with debt ratio significantly. However, firm size and tangibility are positively related with debt ratio.

The value of F-statistic (F=14.7994) with its associated probability (P=0.00) affirms the fitness of this regression model.

	Pooled OLS Model			Fixed Effects Model		
Variables	Coefficient	t- statistic	Prob	Coefficient	t- statistic	Prob
INTL	-0.01252	-3.2770	0.0011	-0.02537	-2.41921	0.0157
GROWTH	-0.01089	-3.2140	0.0013	-0.01154	-2.29417	0.0220
PROFIT	-0.27288	-4.0500	0.0001	-0.08554	-2.91429	0.0036
SIZE	0.03103	26.0213	0.00	0.03081	2.28263	0.0226
TANG	0.20967	11.4182	0.00	0.13724	2.53906	0.0114
C	-0.19448	-8.6124	0.00	-0.16735	-0.92544	0.3549
R-sq	0.118928			0.799376	Hausman Test (χ^2)	20.5684
Adj R-sq	0.115951			0.745362	Prob (χ^2)	0.001
F-statistic	39.95427			14.79938		
Prob(F-statistic)	0.00			0.00		

Table 4.5 Summary of Multiple Regression Results

Table 4.5 summarizes the comparison of multiple regression results between Pooled OLS Model and Fixed Effects Model. Both models confirm and support all the research hypotheses significantly at 0.05 level. However, the R-Squared value (R^2 = 0.7994) under Fixed Effects Model is much higher than the value of R-Squared (R^2 = 0.1189) under pooled OLS. The Hausman test with its associated probability (P=0.001)

also reveals that the results under Fixed Effects Model have better explanatory power compared to results under pooled OLS.

4.3 Discussion

4.3.1 Internationalization

Empirical results show that research hypothesis 1 is supported, thus, internationalization is negatively related to the debt ratio. The findings are consistent with the studies done by Burgman (1996), Low and Chen (2004), Aggarwal and Kyaw (2010) and Lin and Hung (2012).

Burgman (1996) and Low and Chen (2004) investigated and revealed that the negative relationship between internationalization and debt ratio is mainly attributed to US firms. According to "upstream-downstream" hypothesis (Kwok and Reeb, 2000), firms from developed countries increase their risk when they go abroad (downstream- they go to riskier markets) and this leads to a lower debt capacity. Meanwhile, the leverage of firms from emerging markets increases when they could spread the risk by going international (upstream- they go to safer markets). However, the "upstream-downstream" hypothesis cannot fit well in Malaysia situation since Malaysia is an emerging country. The negative relationship in this study can be explained through Pecking-order theory. Firms from emerging countries can achieve economies of scale, access to new market and spread the business risk when they pursue strategy of international diversification. Given these advantages, internationalized firms have greatly increased their foreign sales and profitability. As Pecking- order theory predicts, profitable firms would first internalize the retained earnings for future investment rather than borrowing debt. Thus, leverage of these firms would decrease. It is supported by the studies by Aggarwal and Kyaw (2010)

and Lin and Hung (2012) as their research results indicated that internationalized firms generate greater profitability and have lower debt ratio compared to domestic firms.

The inverse relationship between internationalization and debt ratio is also consistent with the implications of agency theory. Malaysia is an export-based country. Most of the listed manufacturing firms enter foreign markets through exporting goods abroad. Agency cost of debt increases when creditors often find themselves difficult to monitor the selling activities oversea due to the complexity of foreign operation. Therefore, creditors become less willing to lend funds to the exporting firms. Chen and Yu (2011) presented findings that are consistent with this agency theory when their investigation showed that exporting firms have lower debt ratio meanwhile firms with FDI abroad have higher leverage.

4.3.2 Firm Size

The empirical findings supported research hypothesis 2, thus, firm size is positively related to the debt ratio. The findings are consistent with the studies of Krishnan and Moyer (1997), Titman and Wessels (1998), Hall et al (2000), Suto (2003) and Sheikh and Wang (2011). The result confirms the static trade-off theory that postulates larger firms should operate at higher leverage level in order to take the benefits of tax shield on debt interest payment. Besides, a large and multi product company is more stable therefore the business risk is low compare to a small and single product company. As a result, the possibility to bankrupt for larger companies are low and they can sustain a higher level of debt. Incidentally, large companies will be able to enjoy economies of scales in issuing long-term debt, and have a strong negotiating power with lenders. Thus, larger firms tend to have higher debt ratio.

4.3.3 Profitability

The empirical results supported the research hypothesis 3, thus, profitability is negatively related to the debt ratio. The findings are in line with studies by Ross (1977), Rajan and Zingales (1998), Suto (2003), Panno (2003), Wong (2004), Chen (2004), Chakraborty (2010), Chen and Yu (2011) and Sheikh and Wang (2011). The results are as expected by the Pecking-order theory. According to pecking-order theory, managers will prefer internally generated funds to external financing when they cannot credibly convey inside information to outsiders. First, managers will choose internal finance. Secondly, managers will choose to borrow when their investment cannot be met by internal finance. The managers will only issue the equity as the least preferred choice when the options of borrowing were exhausted. Furthermore, as mentioned earlier, debt financing is obligated to a fixed interest payment regardless of the company's performance. Thus, in the short run, if debt financing is the dominant mode of external financing, the changes in profitability will be negatively correlated with changes in leverage.

4.3.4 Company Growth

The empirical results supported the research hypothesis 4, thus, company growth is negatively related to the debt ratio. The findings are consistent with studies of Titman and Wessels (1998) and Eldomiaty (2008). The inverse relationship between company growth and debt ratio fits well with the assumptions of agency theory. Most often, higher growth opportunities provide incentives to invest sub-optimally, or to accept risky projects that expropriate wealth from debtholders. This raises the cost of borrowing lead to the unwillingness of creditors to lend more funds. Thus, growth firms tend to use internal resources or equity capital rather than debt. In addition, high

growth firms whose value comes from intangible growth opportunities do not want to commit themselves to debt servicing as their revenue may not be available when needed.

4.3.5 Tangibility

The empirical results supported the research hypothesis 5, thus, tangibility is positively related to the debt ratio. The findings are in line with many previous studies such as Rajan and Zingales (1995), Bevean and Danbolt (2001), Suto (2003), Pandey (2007) and Chakraborty (2010). The positive relationship between tangibility and debt ratio can be explained by the static trade-off theory and Pecking-order theory. From a static trade-off perspective, firms with a lot of fixed assets find it easier to issue bonds or get loan from banks because the fixed assets of the company will be able to serve as collateral for the borrowing and reduces the default risk for the lenders. Under the Pecking-order theory, the greater the value of the tangible assets, the smaller the asymmetric information, therefore, it is expected that the collateral value might be positively related to the debt ratio.

Chapter 5: Conclusion and Recommendation

5.1 Summary of the study

Capital structure seems to play a crucial role in determining the value of a firm. It is a good reason to understand not only the optimal capital structure but also the determinants of capital structure. Through better understanding of the capital structure, corporate managers of policy makers can make better decision in order to maximize the firm value and the shareholders' wealth. Besides, the capital structure information provides better guidelines to the investors in their security selection decision.

Most of the previous studies about capital structure still focus on the relationship of firm-related characteristics on capital structure. Many studies have provided empirical evidence that firm-related characteristics such as profitability, tangibility, firm growth, firm size and etc. are important determinants on capital structure. Even though studies have found these characteristics to have significant effects on a firm's capital structure, they explain only a small portion of across-firm variations. With the globalization and liberalization of economy, international diversification plays a key role in the strategic behavior of large firms and is important in improving the financial performance of multinational firms.

Furthermore, Malaysia, as an export-based country encountered the biggest hit during the financial crisis when Malaysia's export dropped 28 percent in 2009. Besides, with the implementation of Free Trade Agreement in ASEAN countries, Malaysian manufacturing firms are foreseen to face stronger and more rivalry either in local and foreign markets. Thus, it is urgent to examine the current capital structure of the

manufacturing firms in Malaysia and hopefully the findings in this study provide valuable insights in the capital structure decision when they go international.

Therefore, this study is to investigate the influence of selected variables namely internationalization, firm size, profitability, company growth and tangibility on the capital structure of internationalized manufacturing firms that are listed on the Bursa Malaysia. This study selected 311 companies with panel data which cover period 2007-2011. With using Eview5 software, the data is analyzed under pooled OLS and Fixed Effects Model.

The result of both pooled OLS and Fixed Effects Model supported all the research hypotheses. The results reveal that firm size and tangibility are significantly positively related to the debt ratio. Besides, internationalization, company growth and profitability are significantly inversely related to the debt ratio. All the relationships are significant indicate that the Pecking-order theory, static trade-off theory and agency theory are pertinent in Malaysia situation.

5.2 Implications of the Study

The empirical evidence from this study showed that internationalized manufacturing firms have lower debt ratio than the domestic manufacturing firms. This documented important implications to the internationalized firm managers, policy makers, investors and academic researchers who are interested in international finance.

For example, the internationalized firm managers and policy makers should encourage the company to engage on international diversification. According to Pecking-order theory, companies that pursue international diversification can spread

the business risk from one solely market to other regional markets. Besides, the results of this study showed that internationalized firms are likely to have lower leverage. Thus, the firms are considered less risky as the firms do not much obligation in paying the debt interest payment. This is even risk-reducing as the firms are less borne to the bankruptcy costs when facing financial crisis.

In the view of equity investors, the stock of internationalized firms is preferred than the stock of domestic firms. As explained above, internationalized firms have lower debts, the reduced bankruptcy costs and less debt interest payment obligation make the firms less risky and more financially stable.

Vice versa, the debt investors should invest by lending the fund in the domestic firms. The agency problem such as monitoring costs can be mitigated as the debt investors can assess these domestic firms without extra monitoring costs compared to internationalized firms. Therefore, this study portrayed the consistent results that domestic firms have higher debt ratio.

5.3 Limitation of the Study

The 5 years sample from 2007-2011 may be a short period to be a good representative of a complete business cycle. Furthermore, manufacturing sector suffered damage during the financial crisis in year 2008-2009. This event may affect the analysis resulting in inconsistency with expectation of the theory.

Only listed manufacturing firms are selected in this study. However, there are many manufacturing firms that exercise international diversification but are not listed on Bursa Malaysia. Therefore, the results may be bias towards the big and well-established firms. This is not a good representative for the population of manufacturing sector.

5.4 Recommendation for Future Research

Future research may extend this study in more details by adopting more independent variables. It is suggested to include other definitions of capital structure such as short-term debt ratio and long-term debt ratio. The decomposition of capital structure can give clearer insights in the relationships of the determinants with the capital structure. Besides, financial data should cover longer period such as 10-years period in order to give more consistent insight for the complete business cycle.