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THE EFFECT OF CAPITAL STRUCTURE AND SYSTEMATIC RISK ON STOCK RETURNS: EMPIRICAL ANALYSIS OF COMPANIES LISTED IN BURSA MALAYSIA

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List of Abbreviations

AR	Actual Return
CAPM	Capital Asset Pricing Model
CDER	Change in DER
CRSP	Center for Research in Security Prices
CVA	Cash Value Added
DER	Debt to Equity Ratio
ER	Expected Return
EVA	Economic Value Added
GDP	Gross Domestic Product
ICAPM	Intertemporal Capital Asset Pricing Model
MM	Modigliani and Miller
NPV	Net Present Value
RAR	Risk-Adjusted Return
ROE	Return on Equity
SPSS	Statistical Package for the Social Science
TBR	Total Business Returns
TR	Treynor Ratio

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Abstract

The main objectives of this research are (1) to determine if capital structure affects stock returns (2) to examine if capital structure dynamic affects stock returns (3) to identify if market risk affects stock returns (4) to determine if market risk affects capital structure. This research used simple regression method to analyze the factors affecting the performance of stocks on companies listed in Bursa Malaysia over the period 2004-2008. This research used expected returns, actual returns, and risk-adjusted returns as proxy for stock returns. The hypothesis is that the capital structure, capital structure dynamics, and systematic risk significantly affect stock returns. The regression model revealed that leverage and changes in leverage significantly affect risk-adjusted return. However, these two variables do not have significant effect on actual return and expected return. Systematic risk significantly affects expected returns. Finally, this research revealed that systematic risk does not affect capital structure (DER, CDER). In general, the findings of this research are consistent with CAPM theory and default risk premium theory.

Keywords: Capital Structure, Systematic Risk, Stock Returns

Chapter 1

Introduction

1.1 Research Background

Investment in capital is important for any firm to manage its business and for future expansion. Sometimes, the capital is inadequate to support the business operation due to high operational costs and inefficiency cash flow management. In this respect, the firm has several options to execute and amongst others are issuing new stocks (equity financing), debt financing (by issuing bonds or borrowing from banks), or a combination of both. Thus, capital structure design is an important aspect of a firm to maintain its business growth where it must decide the optimal composition between equity and debt financing.

Weston and Brigham (1990) proposed that policy regarding capital structure includes trade-off between risk and returns. More debt may increase returns as well as risk for the firm. Relatively high risk will increase the probability of stock price declines. An optimal capital structure optimizes the balance between risks and returns that maximizes stock price. Theory of finance regards capital structure as the most fundamental source of financial risk. Shift in leverage could increase or decrease the financial difficulties of firms. Lintner (1956) argued that there exists optimal debt ratio that can balance the benefit and cost associated with debt. While Modigliani Miller (1958) argued that capital structure is irrelevant. In other word, leverage is independent with the firm value.

Capital structure has been controversial subject since Modigliani and Miller (1958) proposed theories regarding debt financing. The theory suggested that capital structure is impertinent under perfect market whereby there are no taxes, bankruptcy costs, transaction costs, agency costs, and other frictions.

Therefore, firms can determine their capital structure options without affecting their market value. Since the proposition of this theory by Modigliani and Miller (MM), there have been numerous studies examining the capital structure. The topic of capital structure has been an interesting subject due to the criticism and controversy surrounding it. The controversy regarding capital structure whether it is relevant or not has been the main concern that makes this subject becoming more interesting to be further investigated. Numerous studies have been conducted however the puzzle with respect to capital structure has yet to be resolved.

This research made no effort in trying to solve the puzzle, instead of trying to examine if capital structure affects stock returns. Examining the relationship between leverage and stock return may help investor to better understand the stock price dynamics and the implication of firm's capital structure to their investment decisions.

Moreover, this research also examined whether the systematic risk affects the stock returns. This topic is important for several reasons. First, the capital structure can affect the costs of capital and investment opportunities; therefore it definitely may impact on the firm values. Secondly, there are different models regarding capital structure. According to dynamic pecking order model, a change in firm`s leverage may decrease its debt capacity and move future investment down. In line with dynamic pecking order model, trade off theory implied that an increase in leverage may be followed by increase in bankruptcy costs, hence lowering the stock returns. On the other hand, according to default risk premium theory, an increase in leverage will increase the probability of default, therefore investors often demand for premium for holding the stocks. Since there are different theories regarding capital structure, therefore it is essential to identify the theory which is applicable in defining the effects of capital structure onto the stock returns, particularly in Malaysian contexts.

Furthermore, according to Mc Guigan (2006), capital structure decision may be influenced by two forms of risks namely business risk and financial risk. These two risks may include systematic risk and unsystematic risk. Systematic risk refers to risk that can affect most of the companies. On the other hand, unsystematic risk refers to risk that is unique to specific company. Both risks will be elaborated in detail in the following chapter. Thus, it is interesting to investigate whether systematic risk, a factor that influences capital structure decision, has significant relationship with capital structure decision as well as stock returns.

1.2 Problem Statement

The decision regarding capital structure is very crucial since it may impact the cost of capital as well as appraisal of the company and hence its stock price. There are several factors that may influence capital structure decision making. Pecking order theory suggested that companies prefer internal funds in financing the business. However, when they consider funding the business through an external source such as debt, they are exposed to certain risks, especially bankruptcy risk. The higher the percentage of debt, the higher the risk that the companies are exposed.

Previous studies have been conducted regarding capital structure. Academic literature is full of books and articles on this subject. However, not much has been written with a focus on the Malaysia context. Most of the studies examining the Malaysia context have been largely concerned with the determinants of capital structure whilst the discussion on correlation between capital structure and stock returns on Malaysia are still very limited (Suhaila, 2009); (Pandey ,2004); (Pratomo and Ismail, 2004).

Additionally, the previous studies discussing the capital structure and stock returns have mostly relied on the expected returns (Dimitrov, 2005), (Chai, 2006), (Sivaprasad, 2007). However, it is also important to examine using actual return and risk-adjusted return in order to identify which variables serve as better indicators for measuring investor`s wealth.

Finally, the previous studies conducted have been focused on the observed leverage ratio. This approach has some shortcomings. As Myers (1984) suggested that observed leverage ratio may differ from its optimal ratio.

For the above reasons, this paper was prepared to bridge the gap on the previous studies pertaining to capital structure by examining the effect of capital structure dynamics and systematic risk on stock returns using Malaysia as a case study. This research also expanded the variables of stock returns into three types, actual returns, expected returns and risk adjusted returns.

1.3 Research Questions

Substantial part of literature regarding capital structure has been mainly dealt on the determining elements of capital structure. However, it is essential to observe if capital structure and systematic risk affect stock returns. As Modigliani and Miller suggested that capital structure is irrelevant under perfect market assumption. However, this assumption is unrealistic as the market is never perfect, in reality. There are always costs incurred such as agency costs and transaction costs. Therefore it is interesting to investigate if capital structures do affect stock returns. Furthermore, according to default risk premium, the changes in leverage may have impact on stock returns due to the fact that investors often ask for premium for holding the stocks. The implication is that companies with high leverage have lesser debt capacity; hence they may have to forgo future projects with positive NPV. Finally, systematic risk may also affect the decision on capital structure of the company. Companies with high beta, which mean higher risk, tend to have high cost of capital, hence, it may affect the decision of capital structure. Therefore, it is also interesting to investigate whether systematic risk affects capital structure decision-making of a company.

To summarize, the research questions consist of:

- Does capital structure affect stock returns?;
- Does capital structure dynamic affect stock returns?;
- Does systematic risk affect stock returns?; and
- Does systematic risk affect capital structure?

1.4 Research Objectives

Capital structure refers to composition of debt and equity of a firm in financing its asset. Capital structure decision is important since it may affect cost of capital. Optimal composition of capital structure is reached at a point where cost of capital is diminished. Since it may affect firm`s value, there is a need to investigate the effect of capital structure onto stock returns. To summarize, the main objective of this research is to identify the consequence of capital structure and systematic risk on stock returns.

The objectives of this research consist of:

1. To determine whether capital structure affects stock returns
2. To examine whether capital structure dynamic affects stock returns
3. To identify whether systematic risk affects stock returns
4. To ascertain whether systematic risk affects capital structure

1.5 Significance of the Research

Financial performance of a company is an important factor for investment and financing decision. Investor concerns about financial performance as it can be a yardstick to evaluate the efficiency of the firm in utilizing their capital whilst the creditors use financial performance to assess the company's ability to re-pay the debt as well as to establish the appropriate interest rate. The main objective of this research is to enlighten investors in understanding the relationship between capital structure and stock returns.

This research will first elaborate the concept of capital structure and systematic risk. Then, it focuses on the findings arising from the study to confirm whether capital structure and systematic risk affect stock returns. Concurrently, we can find out how capital structure and systematic risk affect the stock returns.

This research is expected to contribute to the capital structure literature as well. This research focuses on specific capital structure area i.e., how capital structure affects stock returns. Furthermore, it is also a response to the limited numbers of papers that examine empirically the capital structure using Malaysia as the samples. The study of emerging market such as Malaysia presents an excellent research to add the current literature about capital structure.

This research also helps investors to improve their investment decision making since this research investigated the factors that may affect stock returns. A further beneficial contribution particularly to investors is the investigation with respect to indicators which provide better measurement, expected returns, actual returns, or risk-adjusted returns.

1.6 Limitations of the Research

There are some limitations that need to be acknowledged and addressed concerning this research. Firstly, the concern is with regard to the limitation of historical data. This research focused only for the 5 years (2004-2008). The period may be considered by some to be short and thus it may lead to the issue of comprehensive and accuracy.

Secondly, the concern is with regard to the extent which the findings can be generalized beyond the research area; this can be explained by two reasons. First, the research did not focus on specific industry that may have different findings. Further empirical researchers are necessary to replicate the findings in different contexts. Secondly; the sample size of the research is relatively small. The relatively small sample size may limit the finding to make general conclusions about findings.

1.7 Assumptions

The assumption of this research is using the theory predicting capital structure influences firm value which suggests that changes in financial leverage may have influence on stock returns. In other words, investors will react to the changes of firms` financial leverage.Furthermore, since systematic risk is one of the factor that influence capital structure decision, it is also assumed that systematic risks will affect stock returns.

1.8 Scope of the Research

In term of the sample, the scope of this research is limited to companies listed in Bursa Malaysia only. Listed companies were chosen as samples for at least two major reasons. Firstly, listed companies have greater flexibility on financing compared to small companies. Secondly, the data and relevant information pertaining the listed companies are easily available compared to small companies.

In term of the subject, the scope of this research is to examine the effect of capital structure and systematic risk on stock return on companies listed in Bursa Malaysia. However, one can extend the scope of the study to examine the subjects for other industry.