CHAPTER ONE

INTRODUCTION

1.1 EFFICIENT MARKET HYPOTHESIS (EMH)

Efficient market hypothesis (EMH) deals with the reaction of market prices to financial and other data. The EMH is related to the random walk hypothesis, which states that at any given point in time, the size and direction of the next price change is random relative to what is known about an investment at that given point in time (Fama, 1965). The EMH is divided into 3 forms as follows: -

(1) Weak form

The weak form of the EMH states that all the information contained in past price movements is fully reflected in current market prices. If this is true, then information about historical trends in a security's price is of no value in stock selection, which means when a stock has risen for the past 3 days, but it would give us no clue as to what the price will be tomorrow.

(2) Semi-strong form

The semi-strong form of the EMH states that current market prices reflect both past price movements and all publicly available information. If this is true, no abnormal returns can be earned by analyzing stocks, which means we do not have to study annual reports or other published data, because the

market prices will have adjusted automatically to any good or bad news released in reports as soon as they are announced.

(3) Strong form

The strong form of the EMH states that current market prices reflect all pertinent information, whether publicly available or privately held. If this were true, then even insiders would find it difficult or even impossible to earn excess returns in the stock market because all information will already be incorporated into the stock prices.

The ramification of EMH is crucial. If EMH holds (strong form), there is no point in analysing data to identify mis-priced shares, because the share prices are the best available estimates of the share's worth. However, many empirical studies have been conducted to test the 3 forms of market efficiency. Most of these studies suggest that the stock markets are indeed highly efficient in the weak form and reasonably efficient in the semi-strong form.

In view of the above, the efficient market theory is a sound working assumption where the analyst has no reason to believe otherwise that the market is less efficient. In addition, this also serves the purpose of this study. If the stock market follows the semi-strong form of the EMH, then it is useless for us to test the proportionality assumption in financial ratios, because the share prices will price in all available public information.

1.2 CAPITAL ASSET PRICING MODEL (CAPM)

The Capital Assets Pricing Model (CAPM) is based on logical and simple economic principles. The fundamental principle is that capital market assets which share the same level of risk will expect the same level of return, or the market will trade the assets until the price reflect accurately the expected risk–return trade-off (William Sharpe, 1970).

The CAPM indicates that the required return on any capital market asset consists of two components: (1) the return on a risk-free security and (2) a premium for the risk-free of the particular asset computed as outlined above. Thus, under the CAPM, each security has an expected return that is related to its risk. The security's systematic movements with the overall market measure this risk, and it cannot be eliminated by portfolio diversification. The formula is shown as follows: -

$$R_I = R_{RF} + (R_M - R_{RF})b_I$$

$$R_I = R_{RF} + RP_I$$

where,

R_I = required rate of return on stock i.

R_{RF} = risk-free rate of return. We generally measure it by the return on three-month Treasury Bill

R_M = required rate of return on a portfolio consisting of all stocks, which is called the market portfolio

RP_M = $R_M - R_{RF}$

= market risk premium, or the price of risk for an average stock

b_i = beta coefficient of stock i

RP_i = $(R_M - R_{RF})\ b_i = (RP_M)\ b_i$

= risk premium on stock i. The stock's risk premium is less than, equal to, or greater than the premium on an average stock depending on whether its beta is less than, equal to, or greater than 1.0.

The relevant risk for capital market assets is assumed to be the systematic risk, where all other risk should be diversified away. This systematic risk is normally referred to as "beta". A beta of 1.0 implies that, in general, the stock will move up and down with the broad market averages, and it will be just as risky as the averages. A beta of 0.5 implies that the stock is only half as volatile as the market. A beta of zero implies that the stock has no correlation with the market, then the expected return will be equal to the risk-free asset return.

The concept of this theory is similar to the concept in financial ratio analysis. In CAPM, investors should hold portfolios of securities, not just one security, so it is best to measure the riskiness of any security in terms of its contribution to the riskiness of a portfolio rather than in terms of its riskiness if held in isolation. In addition, the riskiness of a portfolio is generally smaller than the risk of the individual assets in the portfolio. In financial ratio analysis, it is always better to use a set of financial ratios instead of one financial ratio in terms

of company performance measurement. A set of financial ratios will be able to provide analysts or investors a better or comprehensive approach in financial statement analysis, because a set of ratios consists of various segments in financial statements as compared to only one financial ratio used to conduct the analysis.

The fundamental assumptions of the CAPM are as follows: -

(1) All investors are wealth-maximisers and behave in an economically rational manner including exhibiting risk aversion,

(2) All investors are risk averse and the expected standard deviation of returns is the appropriate tool in measuring risk,

(3) All investors have common time horizons,

(4) All investors have the same expectations about future returns,

(5) Information is costless and equally available to all investors,

(6) There are no transaction costs or other market imperfections,

(7) The value of available investments is fixed and all investments are divisible and marketable,

(8) All investors can borrow or lend at some risk-free rate.

1.3 AN OVERVIEW ON FINANCIAL STATEMENT ANALYSIS

The main technique of financial prediction falls into three categories – operating budget, financial budget, and pro forma financial statements (Frank, 1996). Operating and financial budgets are projections dealing with key elements of the business operation, whereas pro-forma financial statements refer to the business as a whole for future projection, which is represented by the balance sheet and income statements. Therefore, the quarterly or annual audited and published accounts of a listed company are viewed as an important input to the financial analyst's work.

The fundamentals of financial statement analysis are based on two major foundations of knowledge: -

(1) The first foundation involves a good and detailed understanding of the accounting fundamental such as the language, the meaning, the significance, and the limitations of financial communications, which are commonly reflected in audited and published statements.

(2) The second foundation, which relates to and is based on the first, consists of the skills of using the tools of financial statement analysis. This means identifying and analysing the most significant financial and operating factors for purpose of reaching informed conclusions.

All in all, the process of financial statement analysis consists of the application of analytical tools and techniques to financial statements and data in

order to derive the relationships that are significant and useful for decision making. Thus, financial statement analysis can be used as a screening tool in the selection of investments or merger candidates. It can be used as a forecasting tool of future financial conditions and results or as a process of diagnosis of managerial, operating or other problem areas. It can also serve as a tool in the evaluation of management.

Therefore, the role of financial statement analysis in the professional decision making process that leads to the buying, selling, or holding of securities has always been the subject of debate. The financial statement analysis does not reduce the need for judgement but merely establishes a rational and systematic basis for its rational application in financial statement analysis, especially when its applies in financial ratio analysis.

1.4 LITERATURE REVIEW

Past research shows that share prices of the Kuala Lumpur Stock Exchange (KSLE) follow a random walk and cannot be predicted from their past history (e.g. Lim, 1999). Keane (1980), Fama (1970) and Nicolaas (1997) further confirmed that the share markets satisfy the semi-strong form or weak form of the EMH. All the empirical evidence supports the important of financial statement analysis where many professional fund managers are trying to outperform the markets by using financial statement analysis.

In financial statement analysis, there are some methods to use, among them are financial ratio analysis and regression analysis. Definitely, there are some theoretical critique against the financial ratio analysis with the arguments that regression analysis is a more appropriate tool in financial statement analysis than the standard ratio procedure (e.g. Lev and Sunder, 1979; Whittington, 1980; Barnes, 1982). Before this, many empirical studies aim to investigate the classification patterns of financial ratios, where the main objective is to express the maximal amount of information involved in the original financial ratios by a reduced set of factors. Johnson (1978), Laurent (1979), Gombola and Ketz (1983), Ezzamel (1987) and Richardson and Davidson (1984) provided the evidence on the empirical classification patterns of financial ratios.

Lev and Sunder (1979) also commented in their comprehensive review, "it appears that the extensive use of financial ratio by both practitioners and researchers is often motivated by tradition and convenience rather than from theoretical considerations or from careful statistical analysis".

1.5 OBJECTIVE OF STUDY

The purpose of this study is to test empirically the proportionality assumption of financial ratios and the applicability and validity of financial ratios in predicting the company performance for stocks in the KLSE.

In financial statement analysis, there are few techniques such as regression analysis on financial statements' items such as inventory, fixed assets and revenue or financial ratio analysis. Between these two techniques, financial ratio analysis holds well in financial statement analysis, especially when a set of ratios is used to evaluate a firm's performance. It is also assumed that firms of different size can be compared by dividing financial statement items by variables measuring the size of the firm. Therefore, proportionality assumption of financial ratios is very important to indicate that there is a linear relationship between the financial items incorporated in the ratio.

If the results show that the proportionality assumption is valid, then it is valid to carry out the test to verify whether the company performance can be predicted or estimated by using various financial ratios.

1.6 ORGANIZATION OF REPORT

Chapter One discusses briefly the efficient market hypothesis, capital asset pricing model, financial statement analysis, literature review and the study objective. The description of data and methodology of various analysis used in the study will be given in Chapter Two. Chapter Three will present the various financial statements and financial ratios used in the study. Findings and results of the study will be presented and discussed in Chapter Four. Chapter Five gives the conclusion and limitation of this study and suggestion for future research.