CHAPTER 1

INTRODUCTION

Share prices are determined by the expectations of those who are already in the market and those contemplating getting in. The price of a specific security at any one time is determined by the knowledge, hopes, fears and expectations of all those people who already own it or who might be thinking of owning it. In short, it reflects investors’ perception of the value or what people think it is worth.

The objective of all investors, whether institutional or individual, is to maximize expected returns for a certain level of acceptable risk or minimize risk for a certain level of expected returns when they invest in the share market. This leads to the development of various strategies to determine or predict the true value of securities and hence provide guidelines in making investment decisions. Generally, there are 2 approaches to share valuation, namely the technical and the fundamental approach. In addition, the efficiency of the market must not be ignored.

1.1 Technical Analysis

The technical analysis approach in stock valuation suggests that by examining historical prices and volume data, probable future prices can be determined. The technical analysts
or technicians believe that the market price reflects all known information about the individual security. Hence it is not productive to analyze the income statement, balance sheets, company policies or anything fundamental about the company.

The tools of the technicians are indicators and systems, which are used on price and volume charts to analyze the performance of stocks and predict future prices. Examples of commonly used tools are the moving averages, the support and resistance lines and the Japanese candlestick chart, just to name a few.

Edwards and Magee (1958) stated the following assumptions underlying technical analysis:

i. Market value is determined by the interaction of supply and demand.

ii. Supply and demand are governed by numerous factors, both rational and irrational.

iii. Security prices tend to move in trends that persist for an appreciable length of time, despite minor fluctuations in the market.

iv. Changes in a trend are caused by the shifts in supply and demand.

v. Shifts in supply and demand, no matter why they occur, can be detected sooner or later in charts of market transaction.

vi. Some chart patterns tend to repeat themselves.
In essence, the technicians believe that history repeats itself, that is, it is possible to predict future prices by looking at past prices.

1.2 Market efficiency

Fama (1970) argued that “in an efficient market, security prices fully reflect all available information”. He further delineated 3 levels of market efficiency, namely the weak form, semi strong form and strong form.

The weak form efficient market hypothesis suggests that historical stock price movements and historical stock trading volumes are fully reflected in current prices. This implies that investors cannot use historical data to gain returns that is consistently better than a buy and hold strategy. This hypothesis refutes the claims by technical analysts.

The semi strong form of efficient market hypothesis indicates that current prices reflect all publicly available information. This information includes companies’ annual reports, earning reports, announcements and all other information that can be readily gathered. As a result, only insiders with access to valuable or private information can gain returns above the naïve buy and hold strategy.

The strong form postulates that all pertinent information whether publicly available or not is fully reflected in current prices. Distribution of information is so efficient that even investors with inside or private information are not expected to earn abnormal returns.
In general, the efficiency hypothesis indicates that if markets are efficient, then it should be impossible to consistently outperform the market.

1.3 Fundamental Analysis

The fundamentalists believe that all securities have an intrinsic value, which can differ from its market price. This intrinsic value can be determined by using fundamental factors such as company earnings, assets, liabilities, dividends, cost of borrowing, management credibility and the performance of the economy.

The basic assumption of fundamental analysis is that the market will eventually recognize mispriced securities and begin to price them fairly, that is, the market price of a security will gravitate towards its true value eventually. The key strategy for a fundamentalist is to buy when prices are at or below this intrinsic value and sell when overpricing occurs. Examples of commonly used valuation model for determining the intrinsic value of a firm are the dividend discount model and price/earning model.

The efficient market hypothesis postulates that when the market is weak form efficient, technical trading method is rendered useless. This on the other hand does not refute the efficacy of the fundamental analysis.
1.4 *Empirical Findings on the Behaviour of the KLSE Securities Prices*

Several studies have been conducted to test the efficiency of the Kuala Lumpur Stock Exchange (KLSE). Lim (1980) carried out the serial correlation test and spectral analysis on the KLSE and found no evidence that successive monthly price changes were dependent. Out of a sample of 30 stocks, only 4 showed significant departures from independence, indicating no significant deviation from the weak form of the efficient market hypothesis.

Annuar, *et al.* (1994) tested the weak form of the market efficiency in another study using the unit root test. The results indicated that the KLSE is generally weak form efficient with a 13% chance that some securities are inefficiently priced.

Kok and Goh (1994) examined the weak form efficiency of the KLSE by employing the runs, serial correlation, modified Box-Pierce Q and Von Neumann’s ratio tests. The results of the tests suggested that KLSE is weak form efficient with respect to monthly data while the findings using weekly data were fairly mixed. However, the magnitude of the serial dependence in the case of weekly data were too small for any trading systems to be devised to gain abnormal returns.

Based on these findings, it is believed that the KLSE is weak form efficient, indicating that technical trading methods could not be used to gain abnormal returns. However, the weak form efficient market hypothesis does not refute the efficacy of the fundamental
analysis. Therefore we believe that abnormal returns could be gained by taking advantage of mispriced or undervalued securities through careful examination of investment fundamentals. The aim of this study is to check the efficacy of Graham’s stock selection criteria as cited by Blustein (1977) and Rea (1977) in the KLSE. In addition, this study also attempts to check whether the KLSE is semi strong form efficient. If abnormal returns could be gained, then the KLSE is not semi strong form efficient.

1.5   Graham’s Stock Selection Criteria

Oppenheimer (1984) stated that “Benjamin Graham believed in the overall efficiency of securities markets, but he also believed that any conscientious investor could map a high trail through the slough of market efficiency by paying close attention to investment fundamentals and taking advantage of undervaluation and mispricing of individual securities. Among the maps he bequeathed to investors was a list of 10 criteria for identifying undervalued stocks”. The list of 10 criteria, also known as the Graham-Rea approach, provides a mechanical method to identify undervalued securities.

The 10 criteria are:

i. An earnings-to-price yield at least twice the AAA bond yield.

ii. A price-earnings ratio less than 40% of the highest price-earnings ratio the stock had over the past five years.

iii. A dividend yield of at least two-thirds of the AAA bond yield.

iv. Stock price below two-thirds of the tangible book value per share.
v. Stock price below two-thirds of the "net current asset value".

vi. Total debt less than the book value.

vii. Current ratio greater than two.

viii. Total debt less than twice the "net current asset value".

ix. Earnings growth of the prior 10 years at least at a 7% annual (compound) rate.

x. Stability of growth of earnings in that no more than two declines of 5% or more in year-end earnings in the prior 10 years are permissible.

In the Graham-Rea approach, the first five criteria measure ‘reward’ and the second five measure ‘risk’. To be eligible for a portfolio, a security must meet at least one reward criterion and one risk criterion. In addition, each security must be held for either 2 years or until a 50% price appreciation is achieved, whichever comes first.

1.6 Objectives of the Study

The study attempts to find out if superior portfolio performance could be obtained by forming portfolios using Graham's stock selection criteria, namely criteria 3 and 6.

The objectives of the study are:

i. Examine the efficacy of Graham’s stock selection criteria in the KLSE for each 2 year period compared to the market in an overall period from 1988 to 2000.
ii. Examine the efficacy of the selection criteria for four different strategies:

Strategy 1: each security is held for either 2 years or until a 100% price appreciation is achieved, whichever comes first.

Strategy 2: each security is held for either 2 years or until a 75% price appreciation is achieved, whichever comes first.

Strategy 3: each security is held for either 2 years or until a 50% price appreciation is achieved, whichever comes first.

Strategy 4: each security is held for either 2 years or until a 25% price appreciation is achieved, whichever comes first.

Strategy 3 is the strategy recommended by the Graham-Rea approach.

iii. Compare and determine the best strategy.

This study is different from the one conducted by Chia (1987) in the KLSE. In his study, Chia (1987) used 6 different screens; screen A – criteria 1 and 6, screen B – criteria 3 and 6, screen C – criteria 3 and 8, screen D – criteria 1 and 8, screen E – criteria 1, 3 and 6, and screen F – criteria 1, 3 and 8. In addition, he employed only one strategy, that is, the one suggested by the Graham-Rea approach. By comparison, this study uses only one screen, that is, criteria 3 and 6. However, four different strategies are employed to test the efficacy of the selection criteria. This study also attempts to determine the best strategy among the four.
1.7 Scope of the Study

Daily price data of securities listed on the Main Board of the KLSE from the end of March 1988 to the end of March 2000 will be used. In addition, only companies with financial year end later than June will be included in the study to avoid acting on outdated information.

1.8 Organization of the Study

The thesis consists of 5 chapters. Chapter 1 presents the concept of fundamental analysis, technical analysis and efficient market hypothesis. The chapter also explains the reason to choose fundamental analysis as a research topic as well as Graham's stock selection criteria. In addition, the scope and objectives of the study are also included. Chapter 2 reviews the available literature relevant to the study. Chapter 3 discusses the data and methodology employed in the study. Hypotheses, statistical techniques and tests of model validity are also detailed. Chapter 4 conveys the findings of the research. Analysis and discussion are also presented. Chapter 5 presents the summary and conclusions of the study. It also explains the implications of the study. Limitations of the study are discussed and recommendations for further research are made.