CHAPTER 1

INTRODUCTION

The price of a security is the price at which one person agrees to buy and another agrees to sell. This price depends primarily on the investor's expectations. If he expects the security's price to rise, he will buy it; if he expects the price to fall, he will sell it.

There are various strategies used by the investors to guide them in their investment decision, which initiates the trading action. These strategies are used to value or predict the true value of the share. An investor will choose the strategy that he believes will guide him to make profitable decisions. Generally, the common approaches to value the share are the fundamental and the technical approach.

1.1 Fundamental Analysis

Fundamental analysis is the study of economic, industry and company condition to determine the value of a company stock. It typically focuses on company's financial statements to determine if the stock price is correctly valued. To use this strategy, an investor spends time and money studying annual reports and other published material on companies. Some of the information he gets will be valid, but some will be invalid, and he won't know which is which. An investor will gain on the good information, but he will lose on the bad information.

Shamsher, *et al.* (1995) study presents that a fundamentalist believes that all stocks have an intrinsic value. When the stock is traded in the market, the price of the stock may move above or below the intrinsic value, and it will finally being adjusted to reach the intrinsic value. If the market price were below the intrinsic value, the fundamentalist would buy it. If the price were above the intrinsic value, the fundamentalist would either sell the stock or wait for a better deal. The factors that determined the intrinsic value are the company earning, dividends, cost of borrowing, management credibility and the performance of the economy.

There are two assumptions that the fundamentalist holds:

1) The intrinsic value of an asset can differ from its market price
2) The market price of an asset will be adjusted to its true value eventually.

If all the investors can make investment decision logically and emotionlessly, then fundamental analysis will work great. Since everybody has the same logical expectations, prices would only change when company performance reports or any relevant news is released.

1.2 Technical Analysis

Technical analyst assumes that there are patterns in market prices, which means current prices reflect some information about the market and this information can be used to predict the future trend of the market prices. It may not give you a definite answer when to sell or buy but it will improve

your investing, reduces the risk and improves profits. Shamsher, *et al.* (1995) pointed out that a technical analyst believes the price of a security is solely dependent on the interaction between the buyer and the sellers who use past data and volume information. A technical analyst believes that an investor will continue to make the same mistake he has made before.

There are three philosophies on which technical analysis is based:

a) Market action discounts everything. Based on this assumption, the technical analyst will tend to ignore the factors during price movement.

b) Prices move in trends. This assumption is based on Newton's first law of motion. An object in motion tends to stay in motion. Once a trend is established, it will continue in this form until a reversal, which may happen after some period.

c) History repeats itself. This assumption is based on human psychology. Over a long period of time, price patterns will tend to repeat themselves and this opens the opportunity for an investor to perform prediction based on previous price data.

1.3 Trading Techniques

There are 3 trading techniques used in the study, namely buy-and-hold strategy, moving average and Japanese candlestick chart.

1.3.1 Buy-and-Hold Strategy

Buy-and-hold strategy is also known as naïve analysis. Fischer (1971) explains that an investor who uses buy-and-hold strategy will carefully choose the security which represents good value, hold the investment and favour for longer term results. He will be out of the market part of the time. The security will be sold only when the investor needs the money or when he thinks his investment needs change. There is no calculation and analysis involved.

Buy-and-hold strategy has four main advantages:

1) It is easy to manage once we have made decision on the investment. There is no need for an investor to analyse economic or the market outlook, or even go further to make predictions of the market movement.
2) An investor does not run the risk of second-guessing buy and sell decision because he rarely makes them.
3) An investor has greater tax efficiency. As the securities will be traded infrequently, there is no additional tax liability for capital gains incurred.
4) As the investor will rarely sell, he will rarely lose on his investment.

1.3.2 Moving Average

There are few trading rules used by a technical analyst to analyse the performance of securities and make decision when to buy and sell. Moving averages is one of the oldest and most popular technical analysis tools used to

identify trend reversals. It calculates the average value of a stock's price, over a period of time. As the stock's price changes over time, its average price moves up or down. The trading rule is to buy when stock price rises above its moving average and sell when the price is below the moving average.

A moving average shows a trend and the purpose of moving average is to show the trend in a smoothed way. There are two most common approaches of smoothing the price data. One approach gives an equal weighting to each data. The other gives greater weight to the more recent data. The later approach is used in this study as the data will become more sensitive to price change and the signal to buy or sell will come through earlier.

Moving average with different time spans will tell different story. The shorter the time span, the more sensitive the moving average will be to price changes. The longer the time span, the less sensitive the moving average will be.

1.3.3 Japanese Candlestick Chart

Candlestick charts are known as the oldest type of charts used. Way back in 1700s, it was a method used to analyze the price of rice contracts in Japan. During this era in Japan, a rice trader, Munehisa Homma became a legendary rice trader and gained a huge fortune using candlestick analysis.

The Japanese trader gave colorful names to the candlestick chart and their formation. Names such as "counter attack lines" and the "advancing three

soldiers" were given as they believed skill and strategy used in battle is also an important element in the trading battle.

Japanese candlestick charting displays the relationship between the OPEN, HIGH, LOW and CLOSING prices for a given time period. No calculation is involved and it emphases on the opening and closing prices, mainly how investors feel about a security when they start the trading day and how they react when the session closes at the end of the trading day.

The candlestick is drawn as a slender box extending from the opening to the closing price. The formation of candlestick chart conveys the stock trend (bullish or bearish) and pattern (reversal or continuation). It reflects only short-term phenomena; hence it is only used to perform short term forecasting, normally not more than 10 trading days and often much less. The chart can be plotted for any period, but normally it is always used with daily data. An investor can make decision whether to buy, sell or hold the investment by knowing the stock trend.

Nison (1991) explains few reasons why Japanese candlestick chart technique has captured the attention of traders and investors around the world. The reasons are listed as:

1. Candlestick charts are flexible. The charts can be used alone or in combination with other technical analysis methods.

2. Candlestick charting technique is a tradition which has evolved from centuries of trial and error. It implies reliability.

3. The picturesque terms used to describe the patterns give a clearer picture on the stock situation. Term such as "Hanging man" shows signal of a top reversal just as the name implied.

1.4 Fundamental Analysis versus Technical Analysis

Technical analysis is chosen for this study instead of fundamental analysis as it has gained more popularity among traders and investors in stock trading. The following reasons justify the advantage of technical analysis:

There is no psychological component involved in fundamental analysis. This has appeared as a limitation for fundamental analysis. In real scenario, the market is being influenced by emotionalism most of the time. Technical analysis appears to be superior in this aspect where it provides the mechanism to measure the "emotional" component present in the market (Nison,1991).

In addition, technical aspect is an important component of disciplined trading. So long as an investor puts his money in the market, he will be driven by emotion and the impact is in proportion to the money he committed. It is human nature where we want to see the market in the way we want it to be, not as it really is. If the market falls, the investor will gather all the fundamental bullish news and build his confidence that the market will reverse. On the other hand, technical analysis technique will help the investor to trade objectively. Technical analyst will ignore the fundamental news that

are sent to the market, but by using technical analysis techniques, the investor will be alerted of the buying and selling signals, which are the entry and exit points.

As discussed earlier, technical analysis studies the pattern of market prices. The price trend actually is the most direct and easily accessible method to monitor overall supply/demand relationship. The price may convey the fundamental news which is not known yet by the general public. Thus technical analyst is most likely to have an accurate prediction of the market movement.

1.5 Objectives of the study

The study attempts to find out whether technical indicators performed better in stock trading as compared to buy-and-hold strategy. While there are several technical indicators available, the study is restricted to exponential moving average and Japanese candlestick chart.

The objectives of the research are:

a) To investigate whether trading in the Kuala Lumpur Stock Exchange (KLSE) using technical trading techniques will provide a superior profit over buy-and-hold strategy.

b) To find out which of the two technical trading techniques will provide a higher return if technical trading techniques are more profitable.

c) To compare the performance of each trading technique in stock trading for different stock, by sector and by board.

1.6 Scope of the study

Daily price data of 48 securities from KLSE over a 5-year period from 1st of July 1995 to 30th of June 2000 will be used in this study. The data include the daily opening price, day high, day low and closing price for the construction of Japanese Candlestick chart, while daily closing price is sufficient for the use of moving average method.

1.7 Organization of the study

The study is organized into 5 chapters.

Chapter 1 introduces the concept of fundamental analysis and technical analysis. The difference between both concepts is also discussed. In addition, 3 types of trading techniques, namely buy-and-hold strategy, moving average and Japanese candlestick chart which were chosen for the study are briefly explained. Lastly, this chapter also covers the objectives and the scope of the study. Chapter 2 discusses the available literature relevant to the study. Chapter 3 explains the data and methodology. It details how the three trading techniques especially moving average and Japanese candlestick chart are used in stock trading. The assumptions made in the study and the statistical techniques used are also discussed. Chapter 4 conveys the results of the study. The results are grouped and tabulated for convenience and clarity. Chapter 5 rounds up the research study with a conclusion and discusses the implication

of the findings. It also discusses the limitations and proposes some recommendations for future research.