

CHAPTER ONE

TECHNICAL ANALYSIS CONCEPTS

Technical analysis is both a controversial and widely used method of stock price prediction. It is based on the idea that price movements are predictable and can be analyzed using mathematical models.

INTRODUCTION

CHAPTER 1

INTRODUCTION

1.1 THE TECHNICAL ANALYSIS CONTROVERSY

Technical analysis is both highly controversial and widely used; some practitioners claim that it is profitable. They say that historical technical figures, such as the past behaviour of the stock's price, give them foresight into future price movements. A study by Strong (1988) showed that the majority of investment professionals believe that using technical analysis enhances investment performance.

Another survey by Taylor and Allen (1992) uncovered that at least 90% of the chief foreign exchange dealers based in London placed some weight on technical analysis when making forecasts, and technical analysis was particularly popular when short investment horizons were considered. Many dealers viewed technical and fundamental analysis as complementary, rather than opposing, forms of analysis.

Many others, however, claim that the practice of looking at past technical data to help predict the future is outlandish and most academics fall into this group. Strong's study showed that over 60% of PhD's do not believe that technical analysis can be used as an effective tool to enhance investment performance.

1.2 TECHNICAL ANALYSIS VS. FUNDAMENTAL ANALYSIS

Generally, stock market analysis falls into two general categories – fundamental and technical. Fundamental analysis is based on examining the company profitability ratio, earning potential and debt position. Technical analysis is based on the theory that price directions and moves can be determined solely from an analysis of the historical price and volume. A person who practices fundamental analysis in determining the securities' price is called a fundamentalist. A person who practices technical analysis in predicting the price's direction is called a technician or chartist. According to one of the famous technical analyst, Murphy (1986), the term “technical analysis” is defined as *a study of market action, primarily through the use of charts, for the purpose of forecasting future price trends*. The term “market action” includes the three principal sources of information available to the technician – price, volume and open interest. In the stock market trading, however, only price and volume are available for the analysis. The term “price action”, which is often used, seems too narrow because most stock market technicians include volume as a part of their market analysis. With this distinction made, the term “price action” and “market action” are used interchangeably in this study.

1.3 PHILOSOPHY OF TECHNICAL ANALYSIS

Most of the technical analysts believe that there are three main reasons that support the practice of technical analysis in forecasting the future price of the stock. These premises are called Philosophy of Technical Analysis. These three premises are:

- (i) Market action discounts everything.
- (ii) Prices move in trends.
- (iii) History repeats itself.

1.3.1 MARKET ACTION DISCOUNTS EVERYTHING

The statement “market action discounts everything” plays a very important role in technical analysis. When this premise is fully understood and accepted, only then will the subsequent premises make sense. The technician believes that anything that can possibly affect the market price of a stock – political, economic condition, company’s debt position and earning potential is actually reflected in the price of that stock. It follows, therefore, that a study of price action is all that is required. As a rule, technicians do not concern themselves with the reasons why price changes. Very often, in the early stages of a price trend or at critical turning points, no one seems to know exactly why a market is performing in a certain way.

It follows then that if everything that affects market price is ultimately reflected in market price, then the study of that market price is all that is necessary. By

studying price charts and a host of supporting technical indicators, the technician, in effect, lets the market tell him or her which way it is most likely to go.

1.3.2 PRICES MOVE IN TRENDS

The concept of trend is absolutely essential to the technical approach. Here again, unless this premise is fully accepted there is no point in studying the technical analysis. The whole purpose of technical analysis is to identify trends in early stages of their development for the purpose of trading in the direction of those trends. In fact, most of the techniques used in this approach are trend-following in nature, meaning that their intent is to identify and follow existing trends.

1.3.3 HISTORY REPEATS ITSELF

Much of the study of market action has to do with the study of human psychology. Chart patterns, for example, which have been identified and categorized over the past few decades, reflect certain patterns that appear on price charts. These pictures reveal the bullish or bearish psychology of the market. Since the patterns have worked well in the past, it is assumed that they will continue to work well in the future. They are based on the study of human psychology, which tends not to change.

1.4 LITERATURE REVIEW

Most of the academics have focused directly on the efficient market hypothesis. Many academics reasoned that if markets are efficient, then technical analysis has no value. Therefore, actual testing of trading with technical analysis leading to abnormal profits would be a waste of time.

Academics have mainly focused their efforts on using statistical techniques, and these have failed to uncover any systematic patterns in price direction. This is in total contradiction with the practitioners of technical analysis. These technicians argue that empirical observation and practical experience yield better evidence that stock price patterns do exist.

Most of the practitioners of technical analysis favor empirical testing to see whether the technical analysis techniques are profitable, and academics prefer developing statistical techniques that describe the nature of markets that will lead them to conclusions about whether technical analysis could work.

Murphy (1986) did an empirical test on whether the use of technical analysis could lead to abnormal profits. After studying sixteen purely technical futures funds during the period from May 1980 to April 1985, Murphy (1986) found no statistically significant evidence that any of the technical funds could outperform a simple buy-and-

hold strategy. He concluded that these findings supported the idea that the futures markets are efficient.

Although many academic treatises have supported the efficient market hypothesis, recent studies have uncovered patterns in stock prices. Lehmann (1990) observed that when a stock fell by a sizable amount one week, the stock price experienced a sizable rise the following week. This pattern did not always occur for all stocks, but the frequency for the pattern was enough for Lehmann (1990) to conclude that price action followed a pattern that enable practitioners of technical analysis to generate sustainable profit.

Jegadeesh (1990) in his study also found predictable patterns in stock prices. In reviewing monthly returns over a long time period (1934 – 1987), he found that stocks that had large losses in one month tended to move in the opposite direction in the following month. Conversely, stocks that had large gains in one month tended to experience large declines in the following month.

Silber (1994) examined twelve futures contracts that were actively traded in Chicago Mercantile Exchange (CME) and London International Financial Futures Exchange (LIFFE) from 1979 to 1991, using simple moving average trading rule. He concluded that the moving average trading rule produces abnormal returns in most of the futures contracts.

Pruitt and White (1998) tested the profitability of a trading system called CRISMA. The CRISMA is a trading system that derived from three component parts, there are cumulative volume, relative strength, and moving average. They proved that trading with this system manage to outperform the buy and hold return. Thus, they argue that the market may not be as efficient as academics believe it to be.

Mohamad, Ong and Mohd Nasir (1995) examined eight counters that were listed on Kuala Lumpur Stock Exchange from 1989 to 1994 by using eight technical indicators. They found that no technical tools were able to consistently outperformed the benchmark portfolio, Kuala Lumpur Stock Exchange Composite Index (KLCI). In conclusion, they suggested that the investors should not based solely on technical indicators in the investment decision making.

Thus, the technical analysis controversy continues. Some academicians rejected technical analysis by testing the randomness of the price series, while some practitioners are strong believers that they can outperform the market by applying technical analysis. More and more writers are beginning to question whether technical analysis may serve as one tool available to those who want to trade profitably in the market. And this is the reason for this project study – to try to shed additional light on its controversy through systematic and unbiased testing of a variety of technical indicators on the Kuala Lumpur Stock Exchange trading.

1.5 OBJECTIVE OF STUDY

The primary objective of this study is to test the profitability of practising technical analysis by examining daily price series of 50 counters that are listed on the Kuala Lumpur Stock Exchange between the period of July 1995 till June 2000. In addition, this study also analyses the differences within each trading method by applying different trading signals or trading rules.

Analysis of Variance will be used to analyse the differences in portfolio returns computed under the various trading signal and trading methods. Tukey test will be used to further analyse the differences if the ANOVA result indicates that the differences in returns are significant. Chi-square test, a non-parametric statistical test will be used to analyse the differences by looking at the number of counters that generate highest return under each trading signal and method.

1.6 OVERVIEW

The presentation of this project paper is as follows. In Chapter 1, the overview of the study is discussed. Then, the objective of this study is outlined. This chapter also reviews the published literature available on various method of technical analysis in different stocks, futures and commodity markets.

Then Chapter 2 describes the data and outlines the methodology used in this study and the analysis that were carried out. Here, stocks price are studied under the four (4) popular technical indicators, using Simple Moving Average (SMA), Moving Average Convergence/Divergence (MACD), Stochastics Oscillator (STOC) and Relative Strength Index (RSI), for Analysis of Variance (ANOVA), two factors analysis of variance is used. Various computer packages were used to ease the workload of computing the results in each technical indicators and test. They are Meta Stock, Statistical Package for Social Science and Excel.

The results are presented in Chapter 3. Finally, Chapter 4 draws conclusions from the analysis of the earlier chapters about the profitability of technical analysis to the Kuala Lumpur Stock Exchange. The bibliography details the referred articles in this study. More details of the analysis are also shown in the Appendices.