Chapter 1

INTRODUCTION

1.1 Introduction

Planned economic regimes have enabled many countries to attain long term growth and development. But the crisis in these country’s economies has led them to reconsider the socialist nature of their economies where state acts as a central power and provides planned development strategies. The post-liberalization era has posed new challenges to the world economy, especially to the emerging economies of Asia and Latin America. Fundamental changes have taken place in the global financial system and such changes have slowly penetrated into different countries. The main reasons for this sea change are the financial institution design, policies and more importantly, the governance is not effective to meet the challenges of the 21st century.

The present financial crisis which has shaken the entire economic and financial resources of the world is a result of the lack of proper regulatory mechanism in the global financial system. Consequently, the world financial architecture has begun to focus on the stability and proper flow of capital from country to country, especially from the developing and underdeveloped countries. Stephany Griffith-Jones’s comment is very important in this regard. According to him,

It should be stressed that a development-oriented international financial architecture would benefit not only developing countries. Stable growth in these countries provides growing markets for developed-country exporters and profitable opportunities for investors.
More generally, avoidance of crises in developing countries reduces the risk of crises spilling over to the developed economies. (82)

Indeed, unplanned and misguided implementation of policies has wreaked havoc on the financial stability of the world. So, the global financial system has to concentrate on the management of this crisis, since the crisis is an ongoing phenomenon in the world. However, the sustainability of the global financial reforms is also a matter of concern.

India is among the emerging economies of the world which is largely as a result of the Economic planning. The economic planning has been instrumental in removing backwardness, improving GDP, developing industrial base, reorienting agriculture and improving the performance of the public sector. The state policies have enhanced the Indian economy, but the implementation of policies has created a major imbalance in input and output level. Indian economy underwent structural changes in 1990-1991 and during the period the economy was passing through a tough phase. The scaling down in the Forex reserves, debt repayment problems and balance of payment deficit, etc have resulted in the decrease of the country’s credit rating in international market.

The economic growth in the country suffered during the initial phase of economic liberalization. Even though India implemented liberalization policies, the state has considerable control over the economy. Before the Great depression, it was believed that liberalization meant little state control over the economic matters of the country. However, the Great depression showed that this kind of liberalization is not suitable for capitalist economies. J.M. Keynes argues that state intervention is highly
essential for the sustainable growth of economy. The Keynesian model argues that full employment is essential for the growth of capitalism and to ensure that state intervention is highly required. During the time of recession, state intervention helped many economies to bail out the problems.

As a result of the neo-liberal policies of the government of India, so many structural changes have taken place in the financial system. The Ministry of Finance and Reserve Bank of India are the two main authorities that control the financial system which also includes the securities market. The constitution of Securities Exchange Board of India (SEBI) to regulate and promote the securities market which was earlier done by the controller of capital issue is a landmark in the history of Indian financial system. SEBI is a comprehensive body covering the whole aspects of capital market. It acts as regulator as well as promoter of the capital market.

Money market is concerned with short term loans and advances and the RBI and commercial banks are the main players of this particular segment. However, the capital market includes industrial securities market, government securities market, and long term loan market and is mainly concerned with long term loan and advances. Industrial security’s market is concerned with new issue market and stock exchange whereas new issue market or primary market is concerned with the new issue of financial claim but the secondary market or stock exchange is concerned with the purchasing and selling of securities already issued.

Stock market plays an important role in the functioning of any economy. It mobilizes the financial resources of individuals and businesses and channelizes them into productive purposes. Though many people invest in the market, their returns from
the market are not steady and safe. “Over ninety per cent of the traders who go into the market without knowledge or studies usually lose in the end”, observes W. D. Gann (1951). This is largely due to the scant knowledge that people have about the functioning of stock market. Two of the major factors that control stock market are emotions and strategies. If a trader wants good returns from the market he should act without emotions, and follow certain strategies to gain from the market.

Table 1.1
Performance of BSE and NSE (Rupees in Crores)

<table>
<thead>
<tr>
<th>Year</th>
<th>BSE Market Capitalization</th>
<th>Turnover</th>
<th>NSE Market Capitalization</th>
<th>Turnover</th>
</tr>
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<tr>
<td>1993-94</td>
<td>3087923</td>
<td>84536</td>
<td>-</td>
<td>-</td>
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<tr>
<td>1994-95</td>
<td>4761482</td>
<td>67749</td>
<td>1710615</td>
<td>1805</td>
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<td>1995-96</td>
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<td>50063</td>
<td>4492716</td>
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<td>124284</td>
<td>5130178</td>
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<td>6022696</td>
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</table>

Source: SEBI

1.2 Stock Exchanges and Technical Analysis

Technical Analysis is an emerging field in the forecasting sciences. It predicts the future stock price movements based on past price movements (Brock et al, 1992). Several forms of technical analysis have been used in the stock markets since its
inception. However, the usage of present form of technical analysis has started with the advent of Dow Theory. Technical analysis uses a wide variety of charts and indicators that show the price trend over time (Gup, 1973). With the advent of computer and information technologies, the use of technical analysis has increased. Market participants have different opinion about technical analysis. Most of the academic writings conclude that it has no meaning in itself (Fama, 1970 & Singal, 2004). However, certain studies support the validity of technical analysis in the stock market (Levy, 1967; Treynor & Ferguson, 1985; Neftci, 1991). However, as a result of the telecommunication revolution, its use has increased immensely. Technical analysis predicts patterns and trends in stock markets and also studies investors’ behavior and its effect on subsequent price action of a financial instrument. This behavior is collectively called market sentiment. But it relies heavily on historical price, time, and volume information.

Hence, technical analysis concentrates on the identification of trend and criticizes the concept of Efficient Market Hypothesis. Technicians believe that information such as fundamental, psychological, political will be reflected in price and the study of price action is important in the market. According to Pring (1997),

“prices are determined by the expectation of those already in the market and those contemplating getting in . . . .The art of technical analysis is to try to identify trend changes at an early stage and maintain an investment or trading posture until the weight of the evidence shows or proves that the trend has reversed” (42).
Technical analyst converts historical price data into chart form to understand the movement of price and thereby predict the future movement of price trend. Hence, technical analysis is also known as the science of charting and the person who prepares the charts is called chartist. Numerous technical trading rules and applications are available in the market. Technical analyst believes that there exist certain trends and patterns in the financial market that can be identified and utilized.

The history of technical analysis begins from 1700 onwards and in its inception it was extensively used by the Japanese rice traders to understand the movement in rice prices. In the beginning of the 1900s, many investors in the stock market began using technical analysis after Charles Dow’s publication in the Wall Street Journal. It was Charles Dow who laid the Foundation stone for technical analysis. Later many authors researched on Technical analysis and found that it could be applied in all segments of capital market such as cash market, derivative market, bond market and tradable instrument in the stock market. However, it should be noted that the changes in prices is due to demand and supply forces. The essential thing in technical analysis is price and its trend. Hence a technical analyst should capitalize on these trends and reap the benefit out of it.

1.3 Significance

The role of technical analysis has been mired in controversies since its inception. Several studies have argued that it is not valid or useful in the market. Friedman (1953), Cootner (1964) and Fama (1966, 1970) have done some important studies on the viability of technical analysis and identified that technical analysis is futile. At the same time, studies in the 1980s and the 1990s show that some traditional
or simple forms of technical analysis have displayed a radical forecasting power. Murray (1964) explains that technical analyst can anticipate higher amount of cyclical swing in the market than that of capital market analyst. Grossman and Stiglitz (1980) have argued that since the information is costly, prices cannot perfectly reflect the available information. Brown and Jennings (1989) have argued that usage of past prices to infer private information has a value in a model in which prices are not fully revealing and traders have rational conjectures about the relation between prices and signals. Brock \textit{et al} (1992) explain that technical trading rule can outperform the market. Blume, Easley and O’ hara (1994) show that technical analysis is valuable to traders in an economy where the uncertainty arises from the underlying information structure. Murphy (1999) informs that technical analysis relies on the following three premises: a) market action discounts everything; b) Price moves in trend; and c) history repeats itself. Rodriguez, Martel, and Rivero (2000) have opined that simple technical trading rule is always superior to a buy-and-hold strategy in the absence of trading costs. Wong, Manzur and Chew (2002) observe that member firms of the stock exchange make substantial profit by applying technical indicators.

The present study is important in the contemporary era of economic liberalization which has led to a rise in the number of trading activities in the market and increased the use of technical analysis in the financial field. Moreover, the affordability of computer and internet facilities, increasing number of technical software, and the availability of technical analysis in every broking firm have increased the scope and significance of technical analysis.
Problem Defined

Though many people invest in the market, their returns from the market are not steady and safe. They use different types of analysis for their trading in the market. Technical analysis is one of the important analyses used by the market participants in every stock market in the world. However, most of the academic writings have argued that technical analysis is not effective in the market for predicting the trend. In India, both academicians and a section of investor’s community have a preconceived notion that technical analysis is futile and the investors cannot predict the future price movement by using it. Moreover, most of the earlier studies have concentrated on the U.S and European and a few Asian Markets which are considered to be highly developed. Further, the studies have never concentrated on the applicability of technical trading rules in Indian Stock Market. Hence, the present study focuses on the evaluation of technical analysis in Indian stock market in general and stock specific indicators such as moving averages, relative stock index and trading volume- which are considered to be an integral part of technical analysis. The Study has set the following objectives:

1.4 Objectives:

1) To analyze the importance of technical analysis in the formulation of Trading Strategies.

2) To study the importance of Moving Averages as technical indicators

3) To verify the importance of relative strength index as a stock specific indicator

4) To verify the impact of market volume on share price
The present study concentrates on technical analysis and stock specific indicators such as Moving Averages, Relative Stock Index and Trading volume which are considered to be integral parts of technical analysis. In order to study the above objectives, the following hypotheses have been formulated

1.5 Hypothesis

H1: Technical analysis is important in the formulation of trading strategies.

H2: Moving average does play an important role as a technical indicator.

H3: Relative Strength Index does play an important role as stock specific indicator.

H4: Volume does have an effect on share prices.

1.6 Methodology

The study uses descriptive methodology. It focuses on the importance of technical analysis and its indicators such as moving averages, relative strength index and trading volume in Indian Stock Market.

Data

The data has been collected from both primary and secondary sources. The primary data has been collected through questionnaire, which includes forty four questions out of which ten are open-ended and thirty four are close ended questions. The questions specifically focus on the objectives of the study. The primary data has been collected from SEBI registered brokers but Sub brokers have been excluded from the analysis, since almost all sub brokers take recommendations from the main brokers.
Sample

The study has used stratified random sampling method for collecting sample for primary data analysis. The entire population of brokers from different stock exchanges has been stratified and the strata from Kolkata, Chennai, Mumbai and Delhi have been selected. The four metros have been taken because of three major reasons: large number of broking firms, older stock exchanges and the presence of vibrant investors and traders. In Kolkata, a sample of 112 brokers has been taken from a population of 960; In Chennai 77 have been taken from a population of 181, In Mumbai (NSE and BSE were considered), a sample of 300 has been taken from a population of 1978 and in Delhi, 95 brokers have been selected from population of 374, for seeking responses regarding technical analysis. A total number of 584 have been taken from the total population of brokers of 3493 and it constitutes 16.71% of the total population. The secondary data has been collected from the websites, Journals, Periodicals and leading National and International dailies. Price and volume data has been collected from the NSE websites.

Period of Study

The study covers a period of five years starting from 01-03-2002-03 to 31-03-2006-07. This period has been deliberately chosen because Indian market condition was almost stable then and most of the constituents of Nifty remained unchanged during this period. Prior to the introduction of SEBI, scams and price rigging activities had been prevalent in Indian Stock Market. However, after the establishment of SEBI, Stock Market in India has registered a steady Growth, though most of the reforms and developments came into effect from 2002 onwards.
Introduction of Derivative Market, Retail debt market and many other companies are coming up in the stock market to raise the finance. Most of the accounting standards came into force during 2001-02 accounting year.

**Tools of Data Analysis**

In order to test the hypothesis, the study has used Chi Square test and ANOVA test for primary data analysis and for secondary data analysis, the Granger Causality Test and the methodology of Brock *et al* have been applied (1992).

**1.7 Chapterisation**

The study is divided into nine chapters. The first chapter is a general introduction to the topic and it covers the significance, hypothesis, objectives, methodology as well as the limitations of the study. The second Chapter examines the various literatures pertaining to technical analysis. However, the main focus is on technical analysis and stock specific technical indicators such as moving averages, relative strength index and trading volume. The third Chapter discusses the theoretical foundations of technical analysis and it also discusses the efficient market theory on which the study is based. The fourth chapter analyses the importance of the usage of technical analysis in making an investment decision, the types of analysis used by brokers, applicability of technical analysis in different kinds of markets, profitability of technical analysis and the different kinds of technical patterns and technical indicators, for the identification of trend. The fifth and sixth chapters discuss moving average as a technical trading rule. The fifth chapter takes up for discussion the opinion of brokers about moving averages and the sixth chapter analyses the secondary data sources pertaining to moving averages. The seventh
chapter deals with the effectiveness of relative strength index as a technical indicator and it includes both primary and secondary data analysis. The eighth chapter discusses price-volume relationships and the mainly focus falls on the impact of trading volume on share price. The last chapter lists the conclusions of the research and extends certain suggestions as well.

1.8 Limitations

The study focuses on three major technical indicators for the analysis and has used price and trading volume information from National Stock Exchange (NSE). Selected Individual shares have been used for the analysis. Questionnaire was supplied only to SEBI registered brokers and sub brokers have been avoided. Moreover, brokers from OTCEI, ISE have been excluded from study.