CHAPTER I

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Globalisation of world financial markets has resulted in profound changes in international finance during the past ten years. The world equity markets have also experienced a rapid growth in size and strengthened linkage among different national equity markets. The development of the Euro-equity market and various equity instruments like American Depository Receipts (ADR), International Mutual Funds (IMFs) and various Global Country Funds (GCF) also contributed to world stock market integration.

The Indian capital market has also witnessed a tremendous growth in the past ten years, especially since the launching of the New Economic Policy (NEP) in the middle of 1991. An important recent development has been the entry of Foreign Institutional Investors (FIIs) as participants in the primary and secondary markets for industrial securities. In the past several years, among the various investment proposals, the opportunities for equity investment in developing countries have increased remarkably. Among the developing countries, India has received considerable capital inflows in recent years. The liberalization policy of the government of India has now started yielding results and the country is poised for a big leap in the industrial and economic growth. The economy of the country is
mainly based on the development of corporate sector. Funds may be raised through security market for financing corporate growth.

It is a general view that security prices reflect the performance of a company. Various factors both economic and non-economic invariably affect stock return behaviour. As Cootner (1964)\(^3\) says that "the prices of ..... Securities are typically very sensitive, responsive to all events, both real and imagined". Again a major factor responsible for stock return fluctuations is speculative purchase and sale by Foreign Institutional Investors. Indian Financial Institutions also play a major role in equity market leading to stock return fluctuations.

1.1 Statement of the problem:

A bulk of the research on stock market has been carried out on the behaviour of stock returns especially in USA and other developed countries. The classic studies by Fama (1965)\(^4\) and Granger and Morgenstern (1970)\(^5\) on behaviour of stock returns are well documented concluding that stock markets are efficient. There were widespread acceptance of efficient market theory. The Efficient Market Hypothesis (EMH) states that share prices fully reflect all available information and hence past data is not a basis to predict the future share prices. The growing body of efficient market theory and stock price behaviour has been extensively tested in other countries\(^6\).

Prediction of stock returns is necessary for profitable equity investments. Generally, the share prices are expected to fluctuate according to the performance of
the companies. However in the market the bulls and bears usually operate not always on the basis of economic factors but artificially create demand and supply for stocks. Several studies have found that stock prices overreact to new information. Particularly, the studies by Rosenberg et al (1985)\textsuperscript{7}, and Zarowin (1989)\textsuperscript{8} present evidence that stock prices overreact in the short run. They conclude that the stock market is inefficient because arbitrageurs who are aware of the market’s tendency to overreact could earn huge returns by buying losers and selling winners. There are a number of studies available to support/reject the market efficiency, which has however, not yet come to an end and remains unresolved. In fact, the market is either efficient or inefficient depending upon the circumstances and existence of some factors. According to Fama and French (1986)\textsuperscript{9}, “Whether predictability reflects market inefficiency or time varying expected returns generated by rational investor behaviour is, and will remain, an open issue”.

Behaviour of stock returns has been influenced by seasonal anomalies. In recent years there has been a proliferation of empirical studies documenting unexpected or anomalous regularities in security returns. The issue of seasonalities in stock market has attracted the attention of researchers in US and other developed markets. The seasonalities observed in stock returns in those countries can be classified as day of the week effect\textsuperscript{10}, turn of the month effect\textsuperscript{11}, turn of the year\textsuperscript{12} and the size effect\textsuperscript{13}. Since these results contradict the widely accepted random walk
hypothesis, they have been the focus of considerable attention. Again these studies have shown existence of market seasonalities. Even though there is mounting evidence concerning seasonal anomalies in US and other developed markets there are very few studies undertaken in India. In addition, there is no study available with regard to settlement date effect in India. Hence an attempt is made in this study to examine the anomalous patterns in stock returns.

1.2 Objectives of the study:

The study is undertaken with the following objectives:

1. To study the behaviour of stock returns;
2. To study the seasonal anomalies in stock returns; and
3. To study the impact of settlement cycle on stock returns.

1.3 Hypotheses

The following hypotheses are framed and tested:

1. There is no significant difference in stock returns at different phases of stock market cycle.
2. There is no significant difference in stock returns across days of the week.
3. There is no significant difference in stock returns across month of the calendar year.
4. Return of first-half month is not significantly different from the second half.
5. There is no size effect on stock returns.
6. There is no significant difference in stock returns across pre- and post-budget (Government budget) days and

7. There is no influence of settlement cycle on the behaviour of stock returns.

1.4 Data and Sources of Data

The study is based on secondary data collected from Bombay Stock Exchange Official Directory (BSEOD) and various issues of The Hindu Business Line, The Hindu, The Indian Express and Financial Express. The daily average of high and low share price data of 24 most actively traded companies included in both the Bombay Stock Exchange (BSE) sensitive index and National Stock Exchange index (NSE) were collected for the study. The daily closing indices of 30 share Bombay Stock Exchange Sensitive Index, 100 share Bombay Stock Exchange National Index and 50 share National Stock Exchange Index were also taken for the study. The data relating to budget presentation dates and settlement cycles were also collected for the study.

1.5 Period of the study

The study period is determined based on the availability of data. The daily average share prices of 24 selected companies are taken for a period of six years from January 1990 to December 1995.

The study period has been divided by the researcher into five sub-periods on the basis of bull and bear market cycle in India during the study period. The sub-periods are: advancing (Jan. 1, 1990 to Dec. 31, 1991), Stock Scam (Boom) (Jan. 1, 1992 to April 27, 1992), Declining (April 28, 1992 to July 31, 1993), Advancing
(Aug. 2 to Sept. 12, 1994) and Declining (Sept. 13, 1994 to Dec. 31, 1995). The daily closing values of Bombay Stock Exchange Sensitive Index is used over a period of sixteen years from January 1980 to December 1995. For the Bombay Stock Exchange National Index, daily closing data was collected for a period of nearly twelve years from April 1984 to December 1995. National Stock Exchange daily index data is also used over a period of nearly six years from July 5, 1990 to December 1995. The Government of India budget dates were collected for a period of sixteen years from 1980 to 1995. The settlement dates at Bombay Stock Exchange were collected during badla and non-badla\textsuperscript{14} periods during 1992 - 1995.

1.6 Frame work of Analysis of Data

The raw data have been adjusted for bonus issues and changes in the face value (nominal value as stated in the share certificate) of the individual shares. For the purpose of continuity and uniformity, previous day’s share price is taken for non-trading days. The generated data are analysed with the help of appropriate statistical techniques like summary statistical measures, frequency distribution, correlation analysis, autocorrelation, runs analysis, dummy variable regression and event study approach.

1.7 Significance of the study

Since the nineteen eighties the Indian equity market has shown a remarkable growth in the paid up capital of listed companies and market capitalisation. Investment in equity shares gives a higher expected rate of return since equity acts as
a hedge against inflation. The fluctuation of stock returns is due to several economic and non-economic factors. The study seeks to ascertain the behaviour of equity returns during various time periods. The study is undertaken to identify whether seasonal anomalies influence the stock return behaviour. It is hoped that the study will contribute towards a better understanding of behaviour of equity returns during various phases of stock market cycle.

The study will be useful to various investors, viz., individuals, Indian institutional investors and Foreign Institutional Investors in identifying the behaviour of stock returns and timing of purchase and sale of stocks. The study will also be useful to security market regulators and stock exchanges to understand the behaviour of stock returns and the impact of seasonal factors on price fluctuations.

1.8 Limitations of the study

The study concentrates on the behaviour of stock returns for only 24 stocks among more than 7000 stocks listed on Bombay Stock Exchange. Considering availability of sufficient data, sample size is fixed. Moreover continuous data is available only for limited number of stocks. Inference drawn from the analysis of 24 selected stocks, which are actively traded may not be applicable to less actively / not actively traded stocks. Period of study, which covers a period of six years only, is determined based on the availability of data. Eventhough the National Stock Exchange dominates Bombay Stock Exchange in terms of volume of trading, National Stock Exchange index data is not used for testing anomalous effect because
National Stock Exchange was established only in 1994. However the index data is available retrospectively from July 1990.

1.9 Chapter Scheme

The thesis is organised into seven chapters.

The first chapter deals with the statement of the problem, objectives, data and sources of data, period of the study, framework of analysis of data, significance and limitations of the study.

Reviews of theoretical aspects and prior empirical studies are given in the second chapter.

The third chapter deals with the methodology of the study. It comprises of objectives of the study, selection of sample, period of study and analysis of data.

The fourth chapter is devoted to present an analysis of behaviour of stock returns and test of efficient market hypothesis. For this purpose, summary statistical measures, frequency distribution, correlation, autocorrection and runs analysis were used.

The fifth chapter is devoted to test the anomalous effects such as day of the week, size, fortnightly, monthly and budget.

Whether the settlement cycle influences the stock returns behaviour is tested in the sixth chapter.

The final chapter presents summary and conclusions of the study.
Notes and References:

1. ADR (GDRs) are negotiable receipts issued by financial institutions in developed 
countries against shares in foreign companies with the shares held in custody for 
investors.

2. The Government of India has announced that the aggregate investment by FIIIs in 
Indian companies would be up to a maximum of 30 %, a 6 % increase from the 
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5. Granger C.W.J. and O. Morgenstern., Predictability of stock market prices, 
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7. Rosenberg B., K. Reid, and R. Lanstein., Persuasive evidence of market 


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pp. 403-425; Jaffe , Westerfield. and Christopher, A Twist on the Monday Effect


14. Badla refers to carry-forward the transactions to the next settlement period. While in non-badla, the transactions should be settled within the week.

15. Generally, only listed shares are traded in the stock exchanges, but in National Stock Exchange even unlisted shares are also be traded.