SUMMARY REPORT OF THE THESIS
ON
TECHNICAL AND FUNDAMENTAL ANALYSES OF SENSEX REPRESENTATIVE COMPANIES

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Supervised By:
Dr. S.D. Vashishtha
Professor,
Department of Commerce
M.D.University, Rohtak

Submitted By:
Rajesh Kumar
Regd. No. 03-NGR-309

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SUMMARY REPORT

TECHNICAL AND FUNDAMENTAL ANALYSES OF SENSEX REPRESENTATIVE COMPANIES

There are seven chapters in the thesis. The first chapter deals with the introductory part relating to investment, security analysis, Indian capital market, Bombay Stock Exchange and SENSEX. The second chapter is related with review of related literature and third chapter is related to research methodology. The fourth chapter is devoted to reasons of replacement of SENSEX companies and profitability analysis of SENSEX representative companies. The fifth chapter deals with volatility and application of Ralph Nelson Elliott Wave Theory. The sixth chapter is related to trends analysis of the shares prices on the basis of Oscillators and last chapter is devoted to findings and suggestions. Here, some main contents are summarized.

Investing in various types of financial assets is an interesting activity that attracts people from all walks of life irrespective of their occupation, economic status, education and family background. When a person has more money than he requires for current consumption, he would be coined as a potential investor. The investor who is having extra cash could invest it in securities or in any other assets like gold, silver, or real estate or could simply deposit it in his bank account. The companies that have extra income may like to invest their money in the extension of existing firm or undertake new venture. All of other activities in a broader sense mean investment. Investment is the employment of the funds on assets with the aim of earning income or capital appreciation. Investment has two attributes namely time and risk. Present consumption is sacrificed to get a return in the future. The sacrifice that has to be born is certain but the return in the future may be uncertain. This attribute of investment indicates that risk factor. The risk is undertaken with a view to reap some return from the investment.

SECURITY ANALYSIS

Security analysis refers to the analysis of trading securities. It analyses the share price returns and the risk involved in the investment. Every investment involves the
risk and the expected return is related to the risk. The security analysis will help in understanding the behavior of security prices and the market.

Security analysis refers to the analysis of securities from the point of view of their prices, returns and risks. The analysis of risk and return related to the securities will help in understanding the behavior of security prices, market and decision making for investment. If the analysis includes scrip it is called microanalysis of a company. If it is an analysis of a market with various securities it is known as macro picture of the behavior of the market. The entire process of estimating return and risk of a security is known as security analysis.

Approaches of security analysis:

(a) Fundamental Analysis
(b) Technical Analysis
(c) Risk and Return Analysis
(d) Efficient Market Hypothesis

THE BOMBAY STOCK EXCHANGE

The Indian stock market is one of the oldest markets in Asian Markets. Its history dates back to two centuries when the record of securities dealing in India was meager and obscure. The East India Company was dominant institutions in those days and business in its loan securities was transacted towards the close of the eighteenth century.

By the 1830s, business in corporate stock and share in bank and cotton presses took place in Bombay through the trading list was broader in 1839, there were only half a dozen brokers recognized by bank and merchants.

In 1860-61, the American civil war broke out and cotton supply from the United State of America and Europe was stopped. This resulted in the “share mania” for cotton trading in India. The number of brokers increased to between 200 -250.

At the same time, broker found a place in Dalal Street, Bombay, where they could conveniently assemble and transact business. In 1875,318 peoples formally established the “Native Share and Stock Brokers Association”. In 1895, the
associations acquired premises in the same street; it was inaugurated in 1899 as the Bombay Stock Exchange.

In 1956, the BSE became the first stock exchange to be recognized by Indian Government under Securities Contracts Regulation Act. The Bombay Stock Exchange developed the BSE SENSEX in 1986, giving the BSE a means to measure overall performance of the exchange. In 2000, the BSE used this index to open its derivatives market, trading SENSEX future contacts. The development of SENSEX option along with equity derivatives followed in 2001 and 2002, expanding the BSE’s trading platform. Historically an open-cry floor trading exchange, the Bombay Stock Exchange switched to an electronic trading system in 1995.

JUSTIFICATION OF THE STUDY

After review of literature, it was found that many studies have been made on technical analysis to gain about the capital market, to know technical traders and trading strategies, to examine the ability of technical indicators to predict future movements of the stock market, to evaluate the efficiency of technical analysis, to know the profitability of technical trading rules, profitability of moving average based trading rules, technical analysis profitability for currencies prices and examined the oscillators. Many studies have also been made on fundamental analysis to know fundamental variables and equity returns, GDP growth and stock returns, macroeconomic factors and stock market, importance of fundamental analysis, relationship between company fundamental variables, fundamental analysis and abnormal returns and role of fundamental analysis in the stock market. But, no study has been made on Application of Ralph Nelson Elliott Wave theory. Many research works had been made on technical and fundamental in foreign capital markets. But in Indian context, a little research had been made on technical and fundamental analysis and separate research work has been done on technical and fundamental analysis. Therefore, the present study entitled “technical and fundamental analyses of Sensex representative companies” has been conducted to solve the problem.
NEED OF THE PRESENT STUDY

Capital market has always been susceptible to the variety of variables pertaining the prices, trading, behaviour, settlement, liquidity, economy and listed companies. Every time one kind of formula or principle does not work that’s why the researcher plans to dwell upon research work on the present topic.

Technical and fundamental analyses are the important tools for the security analysis. If we think about security analysis then it is easy to predict the future stock price trend on the basis of technical analysis and show the profitability position on the basis of fundamental analysis. All stake holders (investors, brokers, management, merchant bankers, regulatory agencies, Government and researchers etc.) of the stock market have benefited by taking the use of technical and fundamental analyses. That is why the researcher has decided to conduct a study on “technical and fundamental analyses of SENSEX Representative Companies”.

SCOPE/AREA OF THE STUDY:

There are thousands of companies listed on the Bombay Stock Exchange. There are many indices in the Bombay Stock Exchange i.e. BSE-30/SENSEX, BSE-100, BSE-200, BSE-500, BSE-IT and BSE-FMCG etc. It is very difficult to conduct technical and fundamental analyses of all listed companies on BSE or all indices of BSE. So, the researcher decided to study the BSE-SENSEX because BSE-SENSEX is the barometer of Indian Capital Market and all the companies of SENSEX are well established and financially sound, and dominant company in their respective

SELECTED COMPANIES FOR STUDY

The researcher has selected all the seventeen companies in the present study which have survived (not replaced) in SENSEX during the study period (April, 2005 to June, 2012). The researcher has done Technical and Fundamental Analyses of all the seventeen companies.
OBJECTIVES OF THE STUDY:

The objectives of the present are:

1. To identify the reasons of inclusion and exclusion (Replacement) of SENSEX Companies,
2. To identify market trends shown by Companies Scrips on the basis of Oscillators,
3. To find out the application of Ralph’s wave theory on the stock prices of the companies,
4. To examine the profitability of companies on the basis of fundamental analysis’s tools and
5. To suggest a model/import workable suggestions on the basis of results of technical and fundamental analyses.

RESEARCH METHODOLOGY

RESEARCH DESIGN:

A research design is the arrangement of conditions for collection and analyses of data in a manner that aims to combine relevance of the research purpose with economy in procedure. The present study is empirical-cum-analytical in nature. It has verified the theories of technical analysis on the basis of observation or experience. So, it is empirical by nature. It has examined the profitability of companies with the help of suitable statistical tools. So, it is analytical by nature.

SAMPLING DESIGN (POPULATION, SAMPLE SIZE AND SAMPLING TECHNIQUE):

All the companies listed on Bombay Stock Exchange or all indices of Bombay Stock Exchange is the population/universe. In the present study, BSE-SENSEX has been considered. To achieve first objective, replaced (included and excluded) companies of BSE-SENSEX during study period (from April, 2005 to June, 2012) have been taken. For second, third and fourth objectives 17 (Seventeen) companies which have survived (not replaced) in BSE-SENSEX during the study period have been taken. Non-probability sampling technique was used for the study.
NATURE, SOURCES AND COLLECTION OF DATA:

In the present study, both types of data- secondary as well as primary have been used. The primary data collected by interview of stock brokers (Nos. 10) at Delhi. Secondary data was collected from financial statements of the companies, PROWESS (database of CMIE), Capitaline Database, website of SEBI, website of BSE, and websites of the companies.

TIME PERIOD OF THE STUDY:

The period of seven years and three months from April, 2005 to June, 2012 have been taken to carry out the present study.

VARIABLES STUDIED:

The profitability position BSE-SENSEX companies have been calculated on the basis of some fundamental analysis tools like, return on capital employed, return on net worth, gross profit ratio, net profit ratio, earning per share and dividend per. The valuation of companies has been calculated on price-earning ratio and price to book ratio.

HYPOTHESES:

To achieve the objectives in an effective manner, the following hypothesis were framed:

H$_1$: There is no significant difference in Return on Capital Employed Ratios of the companies during the study period.

H$_2$: There is no significant difference in Return on Net Worth Ratios of the companies during the study period.

H$_3$: There is no significant difference in Gross Profit Ratios of the companies during the study period.

H$_4$: There is no significant difference in Net Profit Ratios of the companies during the study period.

H$_5$: There is no significant difference in Earning Per Share Ratios of the companies during the study period.
H₆: There is no significant difference in Dividend Per Share Ratios of the companies during the study period.

H₇: There is no significant difference in Price-Earning Ratios of the companies during the study period.

H₈: There is no significant difference in Price to Book Ratios of the companies during the study period.

**STATISTICAL TECHNIQUES/TOOLS USED:**

To analyses the collected data, various simple statistical techniques like Average, Standard Deviation, Annual Average Growth Rate and t-test have been used. The tools of technical analysis/Oscillators (MACD, ROC and RSI) have been used.

**LOGARITHMIC STRAIGHT LINE:** It is the method generally used by the researcher while analyzing the data of a long period (i.e. the period consisting the several years). This method, (also known as simple exponential curve method) is used as expression of the secular movement when the data is increasing or decreasing at regular interval of time. Generally, the Economic/ Business data have such characteristics.

The equation of this method is:

\[ Y = a b^t \]

When this equation is solved with the help of Logarithm, then it may be written as:

\[ \log Y = \log a + t \log b \]

To find out the value of ‘a’ and ‘b’, two normal equations are used. These are:

\[ \Sigma \log y = N. \log a + \Sigma t. \log b \]

\[ \Sigma (t. \log y) = \Sigma t. \log a + \Sigma t^2 . \log b \]

The Annual Average Growth Rate in case of exponential trend is obtained as

\[ AAGR = (\text{Antilog } b-1) \times 100 \]

In the analysis of this time series data concerning Return on Capital Employed Ratio, Return on Net Worth Ratio, Gross Profit Ratio, Net Profit Ratio, Earning Per
Share Ratio, Dividend Per Share Ratio, Price- Earning Ratio and Price to Book Ratio have been treated with the same method. We have used the rotation as:

Y= Required Trend value

\[ t = \text{unit of time} \]

\[ a = \text{constant and Y-intercept} \]

\[ b = \text{slope of Y} \]

The statistic of t-test is:

\[ t = \frac{b}{\text{standard error (b)}} \]

\[ \text{standard error(b)} = \sqrt{\text{variance (b)}} \]

Degree of freedom =\( n-k \) (\( n-2 \))

\( b = \text{least squares of estimate} \)

\( \text{Variance of b= estimated variance of b} \)

\( n = \text{sample size} \)

**OSCILLATORS:**

**MACD:** (formula has been given in chapter 1) has been calculated by taking short-term moving average for five months (period) and long-term moving average for nine months (period).

**ROC:** (formula has been given in chapter 1) has been calculated by taking five months (period).

**RSI:** (formula has been given in chapter 1) has been calculated by taking five months (period).

**LIMITATIONS OF THE STUDY:**

The present research work had following shortcomings/limitations:

1. The researcher has not taken into account all indicators/techniques/tools of technical analysis i.e. Dow Theory, charts, support and resistance level, Fibonacci number and stochastic etc because of certain reasons. The reasons of avoiding or leaving any item are terminals limitation, constraint or beyond the “reach” item, on account of times and monetary impediments for any individual researcher. If all these techniques are taken into consideration for any research project of technical
analysis, it will require team of researchers. That is why; studying with these limitations the present research work was delimited to oscillators and Ralph Nelson Elliott wave theory only.

2. In case of fundamental analysis only company analysis (Profitability analysis) was taken up as an analytical tool. The economy and Industry analyses have not been considered because every company as constituents of BSE-SENSEX basically explicates the whole industry to which it belongs. Moreover, all 30 companies were almost all the industries of Indian economy. That is why; the economic and industry analyses were also left out from this research project.

3. Due to Non-availability of financial statements of the HUL Ltd. for the year 2007-08 required as such, fundamental analysis (profitability analysis) of this company could not be exercised. Only technical analysis has been done.

FORMAT OF WRITING BIBLIOGRAPHY

Broadly, in the area of research, two main styles of bibliography viz. American Psychological Association (APA) and Modern Language Association (MLA) are used. In this study, APA style has been used for writing bibliography.

MAIN FINDINGS OF THE STUDY

- All the seventeen companies under study were found as the constituents of the BSE-SENSEX on the basis of five reasons (Listed History, Liquidity, Market Capitalization, Industry Representation and Track Record) during the study period. Some companies were also the constituents of BSE-SENSEX by virtue of merger/demerger/amalgamation.

- All the seventeen companies were excluded from the BSE-SENSEX due to the reasons of Liquidity and Market Capitalization during the study period. Some companies were also excluded from BSE-SENSEX by virtue of merger/demerger/amalgamation, delisted by SEBI, delisted by BSE, and a company voluntarily got delisted

- Six profitability ratios and two ratios pertaining earnings and market-prices were calculated to adjudge the profitability position being a part of
fundamental analysis. These ratios were related to **State Bank of India** and those ratios were: ROCE, RONW, GP, NP, EPS, DPS, PE and PB. These ratios from 2005-06 to 2011-12 were tested by applying statistics, t-test. It was found that the growth rates of EPS ratio and DPS ratio were found significant at 95 percent confidence level. (t=5.252, d.f.=5, critical value=2.571 for EPS ratio and t=5.904, d.f.=5, critical value=2.571 for DPS ratio). Rest of the ratios (ROCE, RONW, GP, NP, PE and PB) relating to fundamental analysis were found non-significant in terms of growth rates. It was found that annual average growth rates of ROCE ratio, EPS ratio, DPS ratio, PE ratio, PB ratio were positive and RONW ratio, GP ratio, NP ratio were negative during the study period.

- Six profitability ratios and two ratios pertaining earnings and market-prices were calculated to adjudge the profitability position being a part of fundamental analysis. These ratios were related to **HDFC Ltd.** and those ratios were: ROCE, RONW, GP, NP, EPS, DPS, PE and PB. These ratios from 2005-06 to 2011-12 were tested by applying statistics, t-test. It was found that the growth rates of all the eight ratios (ROCE, RONW, GP, NP, EPS, DPS, PE and PB) were found non-significant at 5 percent level of significance. There was consistency in all the eight ratios. It was found that annual average growth rates of ROCE ratio, PE ratio were positive and RONW ratio, GP ratio, NP ratio, EPS ratio, DPS ratio, PB ratio were negative during the study period.

- Six profitability ratios and two ratios pertaining earnings and market-prices were calculated to adjudge the profitability position being a part of fundamental analysis. These ratios were related to **Maruti Suzuki Ltd.** and those ratios were: ROCE, RONW, GP, NP, EPS, DPS, PE and PB. These ratios from 2005-06 to 2011-12 were tested by applying statistics, t-test. It was found that growth rates of GP ratio, NP ratio and DPS ratio were found significant at 5 percent level of significance. (t=3.71, d.f.=5, tabulated value=2.571 for GP ratio, t=3.525, d.f.=5, tabulated value=2.571 for NP ratio and t=3.4, d.f.=5, tabulated value=2.571 for DPS ratio). There was consistency in rest of the ratios (ROCE, RONW, EPS, PER and PBR)
relating to fundamental analysis. It was found that annual average growth rates of EPS ratio, DPS ratio and PE ratio were positive and ROCE ratio, RONW ratio, GP ratio, NP ratio and PB ratio were negative during the study period.

- Six profitability ratios and two ratios pertaining earnings and market-prices were calculated to adjudge the profitability position being a part of fundamental analysis. These ratios were related to **Infosys Ltd.** and those ratios were: ROCE, RONW, GP, NP, EPS, DPS, PE and PB. These ratios from 2005-06 to 2011-12 were tested by applying statistics, t-test. It was found that growth rates of RONW ratio, GP ratio and EPS ratio were found significant at 5 percent level of significance. (t=3.753, d.f.=5, tabulated value=2.571 for RONW ratio, t=5.053, d.f.=5, tabulated value=2.571 for GP ratio and t=3.736, d.f.=5, tabulated value=2.571 for EPS ratio). There was consistency in rest of the ratios (ROCE, NP, DPS, PE and PB) relating to fundamental analysis. It was found that annual average growth rates of GPR ratio, EPS ratio, DPS ratio were positive and ROCE ratio, RONW ratio, NP ratio, PE ratio, PB ratio were negative during the study period.

- Six profitability ratios and two ratios pertaining earnings and market-prices were calculated to adjudge the profitability position being a part of fundamental analysis. These ratios were related to **Tata Steel Ltd.** and those ratios were: ROCE, RONW, GP, NP, EPS, DPS, PE and PB. These ratios from 2005-06 to 2011-12 were tested by applying statistics, t-test. It was found that growth rates of ROCE ratio, RONW ratio and GP ratio were found significant at 5 percent level of significance. (t=4.47, d.f.=5, tabulated value=2.571 for ROCE ratio, t=7.926, d.f.=5, tabulated value=2.571 for RONW ratio and t=2.791, d.f.=5, tabulated value=2.571 for GP ratio). There was consistency in rest of the ratios (NP, EPS, DPS, PE and PB) relating to fundamental analysis. It was found that annual average growth rates of EPS ratio and PE ratio were positive and rest of the ratios were negative during the study period.
Six profitability ratios and two ratios pertaining earnings and market-prices were calculated to adjudge the profitability position being a part of fundamental analysis. These ratios were related to **Tata Motors Ltd.** and those ratios were: ROCE, RONW, GP, NP, EPS, DPS, PE and PB. These ratios from 2005-06 to 2011-12 were tested by applying statistics, t-test. It was found that growth rates of ROCE ratio, RONW ratio, GP ratio, and NP ratio were found significant at 5 percent level of significance. (t=2.932, d.f.=5, tabulated value=2.571 for ROCE ratio, t=2.688, d.f.=5, tabulated value=2.571 for RONW ratio, t=3.521, d.f.=5, tabulated value=2.571 for GP ratio and t=3.508, d.f.=5, tabulated value=2.571 for NP ratio). There was consistency in rest of the ratios (EPS, DPS, PE and PB) relating to fundamental analysis. It was found that annual average growth rates of PE ratio was positive and ROCE ratio, RONW ratio, GP ratio NP ratio, EPS ratio, DPS ratio, PB ratio were negative during the study period.

Six profitability ratios and two ratios pertaining earnings and market-prices were calculated to adjudge the profitability position being a part of fundamental analysis. These ratios were related to **Bharti Airtel Ltd.** and those ratios were: ROCE, RONW, GP, NP, EPS, DPS, PE and PB. These ratios from 2005-06 to 2011-12 were tested by applying statistics, t-test. It was found that the growth rates of RONW ratio and PB ratio were found significant at 95 percent confidence level. (t=3.415, d.f.=5, critical value=2.571 for RONW ratio and t=6.97, d.f.=5, critical value=2.571 for PB ratio). Rest of the ratios (ROCE, GP, EPS, DPS, NP and PE) relating to fundamental analysis were found non-significant in terms of growth rates. It was found that annual average growth rates of EPS ratio was positive, DPS ratio was zero and ROCE, RONW, GP, NP, PE and PB were negative during the study period.

Six profitability ratios and two ratios pertaining earnings and market-prices were calculated to adjudge the profitability position being a part of fundamental analysis. These ratios were related to **L&T Ltd.** and those ratios were: ROCE, RONW, GP, NP, EPS, DPS, PE and PB. These ratios from 2005-06 to 2011-12 were tested by applying statistics, t-test. It was found
that the growth rates of all the eight ratios (ROCE, RONW, GP, NP, EPS, DPS, PE and PB) were found non-significant at 5 percent level of significance. There was consistency in all the eight ratios. It was found that annual average growth rates of GP ratio, NP ratio, EPS ratio were positive and ROCE, RONW, DPS, PE, PB were negative during the study period.

- Six profitability ratios and two ratios pertaining earnings and market-prices were calculated to adjudge the profitability position being a part of fundamental analysis. These ratios were related to **ITC Ltd.** and those ratios were: ROCE, RONW, GP, NP, EPS, DPS, PE and PB. These ratios from 2005-06 to 2011-12 were tested by applying statistics, t-test. It was found that the growth rates of ROCE ratio and RONW ratio were found significant at 95 percent confidence level. \( t=3.934, \text{d.f.}=5, \text{critical value}=2.571 \) for ROCE ratio and \( t=3.143, \text{d.f.}=5, \text{critical value}=2.571 \) for RONW ratio). Rest of the ratios (GP, NP, EPS, DPS, PE and PB) relating to fundamental analysis were found non-significant in terms of growth rates. It was found that annual average growth rates of all the eight ratios (ROCE, RONW, GP, NP, EPS, DPS, PE and PB) were positive during the study period.

- Six profitability ratios and two ratios pertaining earnings and market-prices were calculated to adjudge the profitability position being a part of fundamental analysis. These ratios were related to **BHEL** and those ratios were: ROCE, RONW, GP, NP, EPS, DPS, PE and PB. These ratios from 2005-06 to 2011-12 were tested by applying statistics, t-test. It was found that the growth rate of PE ratio was found significant at 95 percent confidence level. \( t=2.811, \text{d.f.}=5, \text{critical value}=2.571 \) for PE ratio). Rest of the ratios (ROCE, RONW, GP, NP, EPS, DPS, and PB) relating to fundamental analysis were found non-significant in terms of growth rates. It was found that annual average growth rates of RONW ratio, GP ratio, NP ratio were positive and rest of the ratios were negative during the study period.

- Six profitability ratios and two ratios pertaining earnings and market-prices were calculated to adjuge the profitability position being a part of
fundamental analysis. These ratios were related to Reliance Industries Ltd. and those ratios were: ROCE, RONW, GP, NP, EPS, DPS, PE and PB. These ratios from 2005-06 to 2011-12 were tested by applying statistics, t-test. It was found that growth rates of ROCE ratio, RONW ratio and NP ratio were found significant at 5 percent level of significance. (t=2.815, d.f.=5, tabulated value=2.571 for ROCE ratio, t=5.057, d.f.=5, tabulated value=2.571 for RONW ratio and t=3.004, d.f.=5, tabulated value=2.571 for NP ratio). There was consistency in rest of the ratios (GP, EPS, DPS, PE and PB) relating to fundamental analysis. It was found that annual average growth rates of PE ratio was positive and ROCE ratio, RONW ratio, GP ratio NP ratio, EPS ratio, DPS ratio, PB ratio were negative during the study period.

Six profitability ratios and two ratios pertaining earnings and market-prices were calculated to adjudge the profitability position being a part of fundamental analysis. These ratios were related to Hindalco Industries Ltd. and those ratios were: ROCE, RONW, GP, NP, EPS, DPS, PE and PB. These ratios from 2005-06 to 2011-12 were tested by applying statistics, t-test. It was found that growth rates of ROCE ratio, RONW ratio, GP ratio, and NP ratio were found significant at 95 percent confidence level. (t=5.402, d.f.=5, tabulated value=2.571 for ROCE ratio, t=5.169, d.f.=5, tabulated value=2.571 for RONW ratio, t=17.139, d.f.=5, tabulated value=2.571 for GP ratio and t=6.578, d.f.=5, tabulated value=2.571 for NP ratio ). There was consistency in rest of the ratios (EPS, DPS, PE and PB) relating to fundamental analysis. It was found that annual average growth rates of PE ratio was positive and ROCE ratio, RONW ratio, GP ratio NP ratio, EPS ratio, DPS ratio, PB ratio were negative during the study period.

Six profitability ratios and two ratios pertaining earnings and market-prices were calculated to adjudge the profitability position being a part of fundamental analysis. These ratios were related to ONGC Ltd. and those ratios were: ROCE, RONW, GP, NP, EPS, DPS, PE and PB. These ratios from 2005-06 to 2011-12 were tested by applying statistics, t-test. It was found that growth rates of ROCE ratio, EPS ratio, DPS ratio, and PB ratio
were found significant at 95 percent confidence level. \( t=3.328, \) \( d.f.=5, \) \( \text{tabulated value}=2.571 \) for ROCE ratio, \( t=3.147, \) \( d.f.=5, \) \( \text{tabulated value}=2.571 \) for EPS ratio, \( t=3.434, \) \( d.f.=5, \) \( \text{tabulated value}=2.571 \) for DPS ratio and \( t=3.157, \) \( d.f.=5, \) \( \text{tabulated value}=2.571 \) for PB ratio). There was consistency in rest of the ratios (RONW, NP, GP and PE) relating to fundamental analysis. It was found that annual average growth rates of NP ratio was positive and ROCE ratio, RONW ratio, GP ratio NP ratio, EPS ratio, DPS ratio, PB ratio were negative during the study period.

- Six profitability ratios and two ratios pertaining earnings and market-prices were calculated to adjudge the profitability position being a part of fundamental analysis. These ratios were related to **HDFC Bank** and those ratios were: ROCE, RONW, GP, NP, EPS, DPS, PE and PB. These ratios from 2005-06 to 2011-12 were tested by applying statistics, \( t \)-test. It was found that the growth rates of all the eight ratios (ROCE, RONW, GP, NP, EPS, DPS, PE and PB) were found non-significant at 95 percent confidence level. There was consistency in all the eight ratios. It was found that annual average growth rates of ROCE ratio, GP ratio, NP ratio EPS ratio, DPS ratio were positive and RONW ratio, PE ratio, PBR ratio were negative during the study period.

- Six profitability ratios and two ratios pertaining earnings and market-prices were calculated to adjudge the profitability position being a part of fundamental analysis. These ratios were related to **ICICI Bank** and those ratios were: ROCE, RONW, GP, NP, EPS, DPS, PE and PB. These ratios from 2005-06 to 2011-12 were tested by applying statistics, \( t \)-test. It was found that the growth rates of EPS ratio and DPS ratio were found significant at 95 percent confidence level. \( (t=4.31, \) \( d.f.=5, \) \( \text{critical value}=2.571 \) for EPS ratio and \( t=5.523, \) \( d.f.=5, \) \( \text{critical value}=2.571 \) for DPS ratio). Rest of the ratios (ROCE, RONW, GP, NP, PE and PB) relating to fundamental analysis were found non-significant in terms of growth rates. It was found that annual average growth rates of ROCE ratio, GP ratio, NP ratio, EPS ratio, DPS ratio were positive and RONW ratio, PE ratio, PB ratio were negative during the study period.
Six profitability ratios and two ratios pertaining earnings and market-prices were calculated to adjudge the profitability position being a part of fundamental analysis. These ratios were related to Wipro Ltd. and those ratios were: ROCE, RONW, GP, NP, EPS, DPS, PE and PB. These ratios from 2005-06 to 2011-12 were tested by applying statistics, t-test. It was found that the growth rates of ROCE ratio and RONW ratio were found significant at 95 percent confidence level. (t=2.87, d.f.=5, critical value=2.571 for ROCE ratio and t=3.436, d.f.=5, critical value=2.571 for RONW ratio). Rest of the ratios (GP, NP, EPS, DPS, PE and PB) relating to fundamental analysis were found non-significant in terms of growth rates. It was found that annual average growth rates of EPS ratio and DPS ratio were positive and rest of the ratios were negative during the study period.

The Ralph Nelson Elliott Wave Theory was fully implemented on the share prices of State Bank of India, HDFC Ltd., Bharti Airtel Ltd. and L&T Ltd. because dominant trend (five wave pattern) and corrective trend (three wave pattern) of Elliott Wave’s theory have been completed during the study period.

The Ralph Nelson Elliott Wave Theory was partially implemented on the share prices of Maruti Suzuki Ltd., Infosys Ltd., Tata Steel Ltd., Tata Motors Ltd., BHEL, Hindalco Industries Ltd., ONGC Ltd., HDFC Bank, ICICI Bank and Wipro Ltd. because only three waves of dominant trend (five wave pattern) of Elliott Wave’s theory have been completed during the study period.

The Ralph Nelson Elliott Wave Theory was partially implemented on the share prices of ITC Ltd. and HUL Ltd. because only dominant trend (five wave pattern) of Elliott Wave’s theory has been completed during the study period.

The Ralph Nelson Elliott Wave Theory was partially implemented on the share prices of Reliance Industries Ltd. because only four waves of dominant trend (five wave pattern) of Elliott Wave’s theory have been completed during the study period.
• The Share prices of SBI (S.D. 71.79), Infosys Ltd. (S.D. 65.07) and Larsen & Toubro Ltd. (S.D. 51.04) were found highly volatile during the study period (from April, 2005 to June, 2012). (The results are given in Table 5.18). The lower volatile shares were ITC Ltd., Tata Motors Ltd. and HUL Ltd. The standard deviations of 3.23, 6.46 and 7.43 respectively.

• A technique of technical analysis when applied in form of MACD, ROC and RSI. It was observed that RSI and ROC give more accurate results about the trends of share prices of all the seventeen companies and MACD is also able to interpret shares prices trends most of time of all the seventeen companies.

Suggestions

• On the basis of findings of the study, the researcher finds that all the seventeen companies under study were excluded from the BSE-SENSEX due to the reasons of Liquidity and Market Capitalization during the study period. Hence, it may be suggested that the companies already as the constituents of BSE-30 should take care of their Liquidity position with parental supervision and efforts should be made to increase the Trading Frequency, Number of Trades and Value of Shares trades. The Market Capitalization increases automatically when the Trading Frequency, Number of Trades and Value of Shares trades increase.

• On the basis of findings of the study, the researcher finds that RSI and ROC provide accurate results about the trends of share prices of selected companies. So, the companies and market players should follow the RSI and ROC for identifying the trends and predicting the future stock prices.

• On the basis of findings of the study, the researcher finds that the Elliott Wave Theory was fully implemented on the share prices of State Bank of India, HDFC Ltd., Bharti Airtel Ltd. and L&T Ltd. So, the companies and market players should follow Elliott Wave Theory for identifying the trends and predicting the future stock prices of above said companies in particular and others in general.
On the basis of findings of the study, the researcher finds that the Elliott Wave Theory was partially working on the share prices of HDFC Bank, Infosys Ltd., Tata Steel Ltd., Tata Motors Ltd., BHEL, Reliance Industries Ltd., ONGC Ltd., ITC Ltd., HUL Ltd., Maruti Suzuki Ltd., Hindalco Industries Ltd., Wipro Ltd., and ICICI Bank. So, the companies and market players should follow other techniques/tools/theories/models of technical analysis for identifying the trends and predicting the future stock prices of above said companies.

**For State Bank of India:** Two ratios (EPS and DPS) of the company have been positive annual average growth rates and significant at 95 percent confidence level. It is suggested that the company should make the efforts to improve these ratios so that the company may stand in the BSE-30. Three ratios (RONW, GP and NP) of SBI have been negative annual average growth rates and non-significant at 5 percent level of significance. The efforts should be made to bring the positive growth rates of these ratios in spite of the fact negatively growth rates were found non-significant statistically.

**For HDFC Ltd.:** Six ratios (RONW, GP, NP, EPS, DPS and PB) of HDFC Ltd. have been negative annual average growth rates and non-significant at 5 percent level of significance. The efforts should be made to bring the positive growth rates of these ratios in spite of the fact negatively growth rates were found non-significant statistically.

**For Maruti Suzuki Ltd.:** Two ratios (GP and NP) of the company have been negative growth rates and significant at 95 percent confidence level. DPS ratio has been positive growth rate and significant at 5 percent level of significance. It is suggested that the company should make the efforts to improve and strong these ratios/variables so that the company may survive in the SENSEX. Three ratios (ROCE, RONW and PB) of Infosys Ltd. have been negative annual average growth rates and non-significant at 95 percent confidence level. The efforts should be made to bring the positive growth
rates of these ratios in spite of the fact negatively growth rates were found non-significant statistically.

- **For Infosys Ltd.:** RONW ratio of the company has been negative growth rate and significant at 95 percent confidence level. Two ratios (GP and NP) have been positive growth rates and significant at 5 percent level of significance. It is suggested that the company should make the efforts to improve these ratios/variables so that the company may survive in the SENSEX. Four ratios (ROCE, NP, PE and PB) of Infosys Ltd. have been negative annual average growth rates and non-significant at 95 percent confidence level. The efforts should be made to bring the positive growth rates of these ratios in spite of the fact negatively growth rates were found non-significant statistically.

- **For Tata Steel Ltd.:** Three ratios (ROCE, RONW and GP) of the company have been negative growth rates and significant at 5 percent level of significance. It is suggested that the company should make the efforts to improve these ratios/variables so that the company may survive in the BSE-SENSEX. Three ratios (NP, DPS and PB) of Tata Steel Ltd. have been negative annual average growth rates and non-significant at 95 percent confidence level. The efforts should be made to bring the positive growth rates of these ratios in spite of the fact negatively growth rates were found non-significant statistically.

- **For Tata Motors Ltd.:** Four ratios (ROCE, RONW, GP and NP) of the company have been negative growth rates and significant at 5 percent level of significance. It is suggested that the company should make the efforts to sound and positive growth rates of these ratios so that the company may stand in the BSE-30. Three ratios (EPS, DPS and PB) of Reliance Industries Ltd. have been negative annual average growth rates and non-significant at 95 percent confidence level. The efforts should be made to bring the positive growth rates of these ratios in spite of the fact negatively growth rates were found non-significant statistically.
For Bharti Airtel Ltd.: Two ratios (RONW and PB) of the company have been negative growth rates and significant at 95 percent confidence level. It is suggested that the company should make the efforts to sound and positive growth rates of these ratios/variables so that the company may survive in the BSE-SENSEX. Four ratios (ROCE, GP, NP and PE) of Bharti Airtel Ltd. have been negative annual average growth rates and non-significant at 95 percent confidence level. The efforts should be made to bring the positive growth rates of these ratios in spite of the fact negatively growth rates were found non-significant statistically.

For L&T Ltd.: Five ratios (ROCE, RONW, DPS, PE and PB) of L&T Ltd. have been negative annual average growth rates and non-significant/consistent at 95 percent confidence level. The efforts should be made to bring the positive growth rates of these ratios in spite of the fact negatively growth rates were found non-significant statistically.

For ITC Ltd.: Two ratios (ROCE and RONW) of ITC Ltd. have been positive growth rates and significant at 5 percent level of significance. The efforts should be made to sound these ratios in spite of the fact negatively growth rates were found non-significant statistically.

For BHEL: PE ratio of the company has been negative growth rate and significant at 5 percent level of significance. It is suggested that the company should made the efforts to improve this ratio so that the company may survive in the BSE-SENSEX. Four ratios (ROCE, EPS, DPS and PB) of BHEL have been negative annual average growth rates and non-significant at 95 percent confidence level. The efforts should be made to bring the positive growth rates of these ratios in spite of the fact negatively growth rates were found non-significant statistically.

For Reliance Industries Ltd.: Three ratios (ROCE, RONW and NP) of the company have been negative growth rates and significant at 5 percent level of significance. It is suggested that the company should make the efforts to sound and positive growth rates of these ratios/variables so that the company may survive in the BSE-SENSEX. Four ratios (GP, EPS, DPS and PB) of
Reliance Industries Ltd. have been negative annual average growth rates and non-significant at 95 percent confidence level. The efforts should be made to bring the positive growth rates of these ratios in spite of the fact negatively growth rates were found non-significant statistically.

- **For Hindalco Industries Ltd.:** Four ratios (ROCE, RONW, GP and NP) of the company have been negative growth rates and significant at 5 percent level of significance. It is suggested that the company should make the efforts to improve these ratios/variables so that the company may survive in the BSE-SENSEX. Three ratios (EPS, DPS and PB) of Hindalco Industries Ltd. have been negative annual average growth rates and non-significant at 95 percent confidence level. The efforts should be made to bring the positive growth rates of these ratios in spite of the fact negatively growth rates were found non-significant statistically.

- **For ONGC Ltd.:** Four ratios (ROCE, EPS, DPS and PB) of the company have been negative growth rates and significant at 5 percent level of significance. It is suggested that the company should make the efforts to improve these ratios/variables so that the company may survive in the BSE-SENSEX. Three ratios (RONW, GP and PE) of ONGC Ltd. have been negative annual average growth rates and non-significant at 95 percent confidence level. The efforts should be made to bring the positive growth rates of these ratios in spite of the fact negatively growth rates were found non-significant statistically.

- **For HDFC Bank:** Three ratios (RONW, PE and PB) of HDFC Bank have been negative annual average growth rates and non-significant at 5 percent level of significance. The efforts should be made to bring the positive growth rates of these ratios in spite of the fact negatively growth rates were found non-significant statistically.

- **For ICICI Bank:** Two ratios (EPS and DPS) of the company have been positive annual average growth rates and significant at 95 percent confidence level. It is suggested that the company should make the efforts to sound these ratio so that the company may stand in the BSE-30. Three ratios (RONW, PE
and PB) of ICICI Bank have been negative annual average growth rates and non-significant at 5 percent level of significance. The efforts should be made to bring the positive growth rates of these ratios in spite of the fact negatively growth rates were found non-significant statistically.

- **For Wipro Ltd.:** Two ratios (ROCE and RONW) of the company have been negative growth rates and significant at 5 percent level of significance. It is suggested that the company should make the efforts to improve these ratios/variables so that the company may survive in the BSE-SENSEX. Four ratios (GP, NP, PE and PB) of Wipro Ltd. have been negative annual average growth rates and non-significant at 95 percent confidence level. The efforts should be made to bring the positive growth rates of these ratios in spite of the fact negatively growth rates were found non-significant statistically.

- The investors should park their money in the companies like ITC Ltd., HUL, HDFC Ltd., HDFC Bank, and ICICI Bank Ltd.