Chapter Three

RESEARCH METHODOLOGY

In this chapter, the focus is on the way this project has been carried out. The research methodology starts by presenting the objectives of this study. The study has been undertaken to fulfill the following objectives:

(1). To study and evaluate the functions (the provision of a safe investment environment and the development of the Securities Market) of the Securities and Exchange Board of India (SEBI) in the Indian Capital Market.

(2) To study the degree of riskiness present in the Indian Capital Market.

(3) To study the performance of selected companies listed on the Indian Capital Market between the period 1992 and 2006

(4) To study the implementation of the Corporate Governance principles by the selected companies as required by SEBI.

(5) To study brokers and investors’ perception about SEBI and its performance in the Indian Capital Market.

The above objectives indicate that the study was mainly related to the Ludhiana Stock Exchange. It has therefore been considered that this chapter should describe the profile of the Ludhiana Stock Exchange. The main features, activities and achievements of the Ludhiana Stock Exchange have therefore been described in section 3.2

3.1 Hypothesis

The hypothesis of this study will help investors to decide whether the stock market is a secured place for their investment or not. The hypothesis when tested will reveal to investors whether the watchdog organization SEBI is offering them the protection they need or not. The hypothesis of this study therefore can be stated as follows:
The Securities Market of India is not a secured investment environment for investors. The investors require a secured investment environment which provides confidence. All investment needs growth and security. Where the Securities Market environment is not conducive to the investor, because of risk, the investor would rather invest somewhere else, than bear the risk and lose the lifetime savings used as capital.

3.2 Profile of the Research Area

The Ludhiana Stock Exchange (LSE) was established in 1983, by Sh. S. P. Oswal of Vardhman Group and Sh. B. M. Munjal of Hero Group, leading industrialists to fulfill a vital need of having a Stock Exchange in this region. Since its inception, the Stock Exchange has grown tremendously well. The Ludhiana Stock Exchange Securities Limited is a subsidiary of LSE. It was incorporated in January, 2000 with a view to review the Capital Market in the region and for taking full advantage of the emerging opportunities being provided by expansion of bigger Stock Exchange like BSE & NSE. Ludhiana Stock Exchange is one of the leading Regional Stock Exchanges and has been in the forefront of other Stock Exchanges in every sphere, whether it be formation of subsidiary for providing the platform of trading to investors, for brokers etc. in the era of Screen based trading, introduced by National Stock Exchange and Bombay Stock Exchange, entering into the field of Commodities trading or imparting education to the Public at large by way of starting Certification Programmes on the Capital Market.

The Stock Exchange has played an important role in channeling savings into capital for the various industrial and commercial units of the State of Punjab and other parts of the country. The Exchange has facilitated the mobilization of funds by entrepreneurs from the public and thereby contributing to the overall, economic, industrial and social development of the State of Punjab. This has made Ludhiana one of the richest Cities of India. It is very rich in agriculture and other industrial activities. It is situated in the North West of India; about six hours drive from Delhi, the political capital of India.

(a) Governing Council, Committees and Administration

The council of Management of the Exchange consists of eleven members, out of whom two are Government Nominees; six are Public Representatives and one Managing Director who is
an Ex-officio member of the Board. At every Annual General Meeting, one third of the elected Directors retire by rotation. The administration is presently headed by a Senior General Manager cum Company Secretary and team of persons having in depth knowledge of secretarial, legal training, assistants, technicians and sub-staff. The Exchange has four Statutory Committees namely Disciplinary Committee, Arbitration Committee, Defaults Committee and the investor Services Committee. In addition, it has advisory and standing committees to assist the administration, (See fig.3.1).

**Fig. 3.1**

![Organisation Chart of LSE Association Limited](image)

*Source: Ludhiana Stock Association Limited (2007)*
(b) Corporate Governance

Although the Ludhiana Stock Exchange is not a listed Company, yet it has followed a model of Corporate Governance, this is evident from the composition of the Statutory Committees, the investor Services Committee and Audit Committee. The investor Services Committee comprises of four Public Representatives and one broker member. The Ludhiana Stock Exchange has a strong governance and administration, which encompasses a right balance of Industry Experts with highest level educational background, practicing professionals and independent experts in various fields of the Financial Sector. The governing Board of the Exchange comprises of eleven members, out of which two are Public Interest Directors, who are eminent persons in the fields of Finance and Accounts, Education, Law, Capital Markets and other related fields, Six are Shareholder Directors, and Three are Broker Member Director and the Exchange has four Statutory Committees namely Disciplinary Committee, Arbitration Committee, Defaults Committee and Investor Services Committee. In addition, it has advisory and standing committees to assist the administration

(c) Operations of Ludhiana Stock Exchange

(i) Turnover

Ludhiana Stock Exchange is one of the leading Stock Exchanges among the Regional Stock Exchanges of the country and has been providing a trading platform for the investors situated in Punjab, Jammu and Kashmir, Himachal Pradesh and Chandigarh. At present, it has 344 listed companies and among them, 220 are listed as regional companies. It had been generating significant amount of the business in the secondary market. It recorded a peak turnover of Rs. 33,966,368 during the year 2008-2009. The structural changes that took place in the recent past in the Capital Market of the country had a negative impact on the trading volume of the Regional Stock Exchange. There has been a significant reduction of turnover during the financial year 2008-2009, but the reduction in turnover of the Exchange has been more than adequately compensated by a substantial rise in the turnover of LSE Securities Limited, a subsidiary of Ludhiana Stock Exchange.
(ii) Listing

Listing is one of the major functions of a Stock Exchange wherein the securities of the companies are enlisted for trading purpose. Any Company incorporated under the companies Act, 1956, coming out with an IPO, has to mandatorily list its shares on a Stock Exchange. By August, 2009 the Ludhiana Stock Exchange had 295 members out of which 162 are registered with National Stock Exchange as Sub-brokers and 121 with Bombay Stock Exchange as sub-brokers through our subsidiary.

The listing Department of Ludhiana Stock Exchange deals with listing of securities, further listing of issues like bonus and rights issues, post-listing compliance of the companies, which are already listed with Ludhiana Stock Exchange. The companies desirous of listing its securities on the Exchange have to sign a Listing Agreement with the Stock Exchange. After getting the listing approval, the Company has to ensure and report compliance of the post listing requirements. The listing section of the LSE monitors the post-listing compliance of all the listed companies and follows up with the companies, which are found deficient in compliance.

(iii) Settlement Guarantee Fund (SGF)

The Stock Exchange established a Settlement Guarantee Fund (SGF) on April 6, 1998. It provides guarantee of all the genuine trades made through the Screen Based Trading System of the Stock Exchange.

(iv) End of Era

The management of the Stock Exchange saw that the smaller regional Stock Exchanges would not be able to meet the challenges imposed by expansion of bigger Stock Exchanges like NSE and BSE and might end up losing their entire business of VSAT dealings to the bigger Stock Exchanges. In order to prepare for such an eventually, the Stock Exchange set up a broking arm in the name of LSE Securities Limited (a Subsidiary Company of the Stock Exchange) in January 2000 and built infrastructure and IT based sophisticated systems to enable its members and investors to trade on NSE and BSE through the subsidiary route. The Stock Exchange was thus able to convert the “threat” it faced from
the expansion of NSE and BSE into an opportunity for its members and investors. As expected, there was a marked shift in the trading volumes from the Stock Exchange to the NSE and BSE through the Subsidiary Company. This shift became more prominent when SEBI introduced compulsory Rolling Settlement and banned the deferral products like Badla, MCFS and ALBM with effect from July 2, 2001 causing thereby an end to arbitrage opportunities between the Stock Exchange and NSE/BSE. Ultimately, there was complete shift of trading from the Stock Exchange to the LSE Securities Limited in January 2002.

(v) Trading on Bigger Stock Exchanges via Subsidiary Route

LSE Securities Ltd has also provided adequate facilities to its sub-brokers for trading in NSE and BSE through VSAT Counters, which are located outside the Stock Exchange Building. By 2005-06 27 sub-brokers of the company were already trading through the VSAT system on NSE and 13 on BSE. The Exchange acquired the membership of NSE & BSE through its subsidiary, the LSE Securities Limited, with the objective of providing an enabling mechanism to its member brokers to trade on NSE and BSE as sub-brokers of LSE Securities Limited. Trading at BSE and NSE commenced through the subsidiary route from September 2000 and December 2000, respectively and the trading in Futures and Options segment of NSE commenced in February 2002.

(vi) Trading in Commodities

The Exchange also facilitated the formation of LSE Commodities Trading Services Company for providing a platform for trading in commodities like bullion, cereals, crude etc. The company has grown in size and scale and is attaining newer heights daily. The daily turnover of the company has already crossed Rs. 100 crores and the company is providing trading in commodities through both MXC and NCDEX two leading National Commodities Exchanges in India.
(i) The strengths of the Ludhiana Stock Exchange

(1) “LSE” brand is popular among masses. The brand image of LSE can be capitalized.

(2) It has requisite infrastructure for the Capital Market activities which includes a multi-storeyed, centrally air conditioned building situated in the financial hub of the city i.e. Feroze Gandhi Market.

(3) It has a well experienced staff handling operations of the Stock Exchange

(4) It has competent Board and professional management

(5) It has a much needed networking of sub brokers in the entire region, who are having rich experience in Stock Market operations for the last 25 years.

(6) It has more than 40,000 clients spread across Punjab, Himachal Pardesh, Jammu and Kashmir and adjoining areas of Haryana and Rajasthan.

(7) The turnover of their subsidiary is the highest amongst all subsidiaries of Regional Stock Exchanges in India.

(viii) Investor Related Services

(a) Investor Grievances

The Exchange has made special arrangements to handle investor’s complaints and grievances. It has established an investor Grievance Cell which receives complaints from investors and follows up the complaints with companies and member-brokers to ensure their satisfactory redressal. Recording of complaints and monitoring of their redressal has been fully computerized. The Committee meets periodically to conciliate the grievances between investors and broker members.

(b) Investor Protection Fund

The Exchange has set-up an investor Protection Fund in the month of January, 1990 for providing compensation to individual investors in case of default by a member of the Exchange. In case any member-broker defaults to meet his obligation towards investors in respect of deals that took place through the trading system of the Stock Exchange, then the concerned investors are compensated from this fund.
(c) **Investor Service Centre**

The Exchange has set-up an Investor Service Centre in its premises for proving information relating to Capital Market to the general public. The Centre has a well-equipped library, which subscribes to leading economic, financial dailies and periodicals. It also stores the Annual Reports of the companies listed at the Stock Exchange. The Investor Service Centre is also equipped with a Terminal for providing “live” rates of trading at NSE and BSE. A large number of the investors visit the centre to utilize the services being provided by the Exchange.

(d) **Website of the Exchange:** www.lse.co.in

The Exchange has got developed its website www.lse.co.in and it is now up and running. The Website provides valuable information about the latest market commentary, research reports about companies, daily status of international markets, a separate module for internet trading, information about listed companies and brokers and sub-brokers of the Exchange and its subsidiary.

(e) **Certification Programme in Capital Market**

The Exchange in association with the Centre for Industry Institute Programme, Punjab University, Chandigarh launched a one and a half month long certification programme on the Capital Market in February, 2006. The Exchange has conducted seven batches of this programme successfully.

The Exchange will also be launching short duration programmes in modules like Technical Analysis, Fundamental Analysis and Derivatives etc. for the benefit of the investing public. The Exchange received massive response from the public for the certification programme and it is conducting such programmes every year. The successful participants of this programme have proved to be well-informed investors.

(f) **Investor Awareness Workshops**

The Exchange has been organizing investor awareness workshops in the parts of Punjab, Himachal Pradesh, Chandigarh and adjoining areas of Rajasthan and Haryana since March, 2003. The Exchange has so far conducted more than 300 workshops in all the above
mentioned places to spread awareness about the Securities Market as a part of Securities Market Awareness Campaign launched by SEBI. The Exchange is also continuing the campaign of educating the investors by giving advertisements on “Do’s and Don’ts for Investor series” in Regional Newspapers like Indian Express, Hindustan Times etc. The Exchange has also facilitated the formation of an investor association in Ludhiana with the name and style of “Ludhiana Retail Investors Association” which will further strengthen the Securities Market Awareness Campaign and provide a platform to the investors of the region for redressal of their complaints and latest happenings in the Capital Market.

3.3 Research Design

This research has been carefully designed to answer the following questions: Is SEBI achieving its task of regulating the Securities Market? Are the investors more protected now than in the past? How efficient is SEBI in carrying out its regulatory functions? What is the risk level in the Capital Market with SEBI’s intervention?

The research is basically descriptive in nature, since it carefully describes as well as quantifies the information presented in this study. It provides a detailed study and critical review of the functioning of the Securities and Exchange Board of India in its role as Regulator of the Securities Markets in India. The entire regulatory and empirical framework of the Securities and Exchange Board of India has been studied thoroughly. The basic methodology is presented in a framework that provides a structure for the nature of the analysis for a careful assessment of the implications of the Securities and Exchange Board of India’s regulatory policies towards the Capital Market.

3.4 Data Collection

The data for this study were collected from both primary and secondary sources. The data from both these sources were as detailed in the following paragraphs:

3.4.1 Secondary Data

The data for this study was collected from both the primary and secondary sources. The secondary sources of data are the websites, books, journals, newspapers, magazines, Stock
Exchanges progress reports, selected companies’ reports, Securities and Exchange Board of India’s reports and other reference material, etc. The following companies were selected for this research on the basis of completeness of required data:

(1) Wipro Corporation (Wipro) Ltd.,
(2) Tata Steel Ltd.,
(3) Tata Motors Ltd.,
(4) Reliance Industries Ltd.,
(5) Reliance Energy Ltd.,
(6) Maruti-udyog Ltd.,
(7) Larsen and Toubro Ltd.,
(8) Indian Tobacco Company Ltd. (ITC),
(9) Hindalco Industries Ltd.,
(10) Hindustan Lever Ltd,
(11) Hero Honda Ltd.,
(12) Housing Development Finance Corporation (HDFC Bank) Ltd.,
(13) Grasim Industries Ltd.,
(14) Dr Reddy's Labs. Ltd.,
(15) Chemical, Industrial & Pharmaceutical Laboratories Ltd. (Cipla),
(16) Bajaj Auto Ltd.,
(17) Bharat Heavy Electricals Limited (BHEL),
(18) Ambuja Cement Ltd.

3.4.2 Primary Data

The survey method was used to collect the primary data. The primary data was collected in order to find out the opinions of the different interest groups, that is, mainly brokers, sub-brokers and investors. For this purpose a purposive sampling design was used.

3.5 Sampling Design

A purposive sample procedure was used for this study. The process was to sample the opinion of the brokers, sub brokers and investors on the services of SEBI in the Indian
Capital Market. The sampling population constitutes all the brokers and sub-broker in the Indian Capital Market. The sample unit was the Ludhiana Stock Exchange. The primary data sample size was 102 for Capital Market intermediaries and 70 for individual investors. The brokers, sub-brokers and investors are distributed as follows:

- Brokers and sub-brokers 102
- Individual investors 70

There are 295 Brokers and Sub-brokers in the Ludhiana Stock Exchange, out of which 120 are actively trading in the Indian Capital Market. Their views have been carefully analysed and presented in chapter eight, where data analysis and interpretation are presented.

3.6 The Research Vehicle

The two questionnaires (see Appendix I) used for the collection of primary data were carefully administered at the Ludhiana Stock Exchange personally with the help of a research assistant. The questionnaire for brokers was delivered on an office to office basis. It took six visits to collect the delivered questionnaire. The investors were located at the Stock Exchange investors’ room where the investors always gather to discuss their investments and also monitor market movements through the visual display unit placed in the investors’ room. All capital market information is relayed to this room from the Bombay Stock Exchange and the National Stock Exchange, showing what was happening to investments via the movements in the Sensex and Nifty indices.

3.7 Data Analysis and Presentation

E-views and Excel are used in analysing the secondary data into information. Presentation is provided in the form of tables, appropriate diagrams and graphs. The data was collected from annual reports of companies listed on the Indian Stock Exchanges. The companies had complete annual reports dating from 1992 to 2006, the period of this research. The data was first prepared into percentage returns by using ratio analysis. Profit after taxation was converted into a percentage figures by dividing it by net capital employed and multiplying it by 100. The final figures obtained from these processes are returns. The returns were used for the calculation of the risk level prevailing in the companies, hence, in the Securities Market.
In attempting to judge whether the selected were performing well or not the research carefully prepared a comparative analysis between the companies’ returns and market returns. The market returns were obtained by averaging all the selected companies’ returns. Simple linear regression technique was applied to study the performance of the companies’ returns against the market returns. Risk was quantified using the standard deviation formula (see

The primary data was carefully analysed using tables, appropriate diagrams and graphs. Percentages are used for analysis as well as scaling measurements. Interpretations were derived and presented as follows:

(i) For primary data, two questionnaires were used for the collection of data which was processed and presented in the form of tables, figures - pie charts, frequency distribution and bar charts.

(ii) For secondary data, it was collected from company annual reports and processed with the help of the following tools: - mean returns, standard deviation, correlation coefficient, the capital asset pricing model, for required and expected returns, and the coefficient of determination. A simple regression technique was applied to the data and the resulting information was carefully interpreted and the finding outlined.

3.8 The Research Instruments and Tools Used for the Analysis of data

(i) Research Instruments

(a) For primary data, two questionnaires were used for the collection of data which was processed and presented in the form of tables, figures - pie charts, frequency distribution and also bar charts.

(b) For the secondary data collected, it was processed with the help of the simple regression analysis (correlation co-efficient) and the following tools: - averaging (mean returns), standard deviation model, the capital asset pricing model for required and expected returns, and the coefficient of determination.
(ii) The Tools used for Analysis

(i) Average and percentage

Market Returns = \( \frac{\text{ER}_m}{n} \) = Market Returns………… equation 3.1

Company Returns = \( \frac{\text{ER}_c}{n} \) = Company Returns ……..equation 3.2

(ii) Standard Deviation of Returns

\[ \text{SD} = \sqrt{\frac{\sum (R_m - \bar{R}_m)^2}{n}} \] = Total Market Risk …… equation 3.3

\[ \text{SD} = \sqrt{\frac{\sum (R_c - \bar{R}_c)^2}{n}} \] = Total Company Risk ……. equation 3.4

(iii) Correlation co-efficient

\[ r = \frac{n \sum R_m R_c - \sum R_m \sum R_c}{\sqrt{(n \sum R_m^2 - (\sum R_m)^2)(n \sum R_c^2 - (\sum R_c)^2)}} \] = Measures of total risks….equation 3.5

(iv) Co-efficient of determination = \( r^2 \) Used for the separation of total risk into Systematic and Unsystematic components…………….equation 3.6

(v) \( b = \frac{n \sum R_m R_c - \sum R_m \sum R_c}{(n \sum R_m^2 - (\sum R_m)^2)} \) = Measures total risks (volatility)……equation 3.7

(vi) \( a = \frac{\sum R_c}{n} - \frac{b \sum R_m}{n} \) = Measure of the constant (R\text{f}) = risk free returns…equation 3.8

(vii) \( \text{RRC} = R\text{f} + b (R_m - R\text{f}) \) = Required Returns of the Company……equation 3.9

Where:

\( R_m \) = Returns of the Market

\( R_c \) = Returns of the Company
\( \bar{R}_m \) = Average returns of the Market

\( \bar{R}_c \) = Average returns of the Company

n = Number of observations

SD = Standard Deviation (Total risk element)

r = Correlation Co-efficient (a risk element)

\( r^2 \) = Coefficient of determination (a risk element)

b = Beta co-efficient (a risk element)

a = alpha (fixed returns = risk free returns)

\( R_f \) = Risk free returns

### 3.9 Hypothesis Testing

The hypothesis outlined in this study (The Securities Market of India is not providing a secured investment environment for investors) was tested by using the help of the Variance (Standard Deviation) of returns, Beta coefficient and \( R \) squared coefficient.

H0: Null Hypothesis stated that The Securities Market of India is not providing a secured investment environment for investors.

H1: The Alternative Hypothesis stated that The Securities Market of India is providing a secured investment environment for investors.

The Variance of returns is a measure of risk. The trend must show an increasing situation to satisfy investors that the risks in the Capital Market are being properly managed. The trend when decreasing is a bad sign. It indicates the presence of risk that is not being properly managed. The Beta coefficient was calculated for each company over the period and the trend was used to determine whether the risk in the Capital Market was increasing or decreasing. A decreasing trend shows that with the help of SEBI risk was being properly managed. It is an indication that the Market Regulator’s efforts to make the Capital Market a
safe place for investors are being successful. An increasing trend indicates the presence of risk and a warning to investors, that it should be accompanied by high returns.

The R squared coefficient has been used to separate the total risk in to systematic risk and unsystematic risk. Systematic risk is external risk which may not be managed in a market environment. Unsystematic risk is internal risk which can be carefully managed through good corporate governance and skillful decision making. R squared indicates the component of systematic risk, while the component of unsystematic risk is measured by one minus R squared \((1-r^2)\). It is the trend of unsystematic risk \((1-r^2)\) that was used to test the level of risk present in the company. Where the trend is increasing, it is an indication of the presence of risk which was not being properly managed. A decreasing trend is an indication that the risk is being properly managed and provides a safe investment environment for investors.

3.10 Limitations of the Study

The following are limitations of the Study:

1. The study attempts to generalize the work done by SEBI as seen from its perspective to the whole of the Capital Market in India.
2. The study is based only on those companies with complete data for the period 1992 to 2006.
3. Time and resources were the major constraints on this study; hence the study is confined to the Ludhiana Stock Exchange and the findings are then generalized nationally.
4. The primary data for market intermediaries and investors is collected from one investment zone.
5. The sample size may be small, but it is representative.

This chapter has provided a vivid and clear background to the Ludhiana Stock Exchange. It has also provided the methodology used for this research work. It has explained clearly the research instruments and the various tools used for all the analyses.