

Chapter-1

Introduction

1.1 Background of the Study:

Industrial development is one of the most significant aspect and process of economic development of the country. Industrial development depends on capital formation. A vibrant and competitive financial market plays a vital role in mobilization of saving and investment process. Stock market is an important part of financial market. Stock market acts as an engine of industrial development. Stock exchange reflects the changing conditions of economic health of a country, as the shares prices are highly sensitive to changing economic, social and political conditions. During the periods of economic prosperity, the share prices in the stock market tend to rise. Conversely, share prices tend to fall when there is an economic stagnation and the business activities slow down as a result of depressions. The intensity of trading at stock exchanges and the corresponding rise or fall in the share prices of securities reflects the investors' assessment of the economic and business conditions in a country, and acts as the barometer which indicates the general conditions of the atmosphere of business. As a result of stock market transactions, funds flow from the less profitable to more profitable enterprises and they avail of the greater potential for growth. Financial resources of the economy are thus better allocated. Stock prices are highly volatile; it is changed in every moment in the stock market due to change in market demand and supply for the share of the companies. If more people want to buy a particular share then price moves up. Conversely, if more people want to sell their shares, then price would start to fall. Volatility in the stock market price is an integral part of stock market with the alternating

bull and bear phases. In the bullish market, the share prices rise high and in the bearish market share prices fall down and these ups and downs determine the return and volatility of the stock market.

A common problem plaguing the emerging economies is the shallowness of their financial sector. Financial sector play an important role in the process of economic growth and development by facilitating savings and channeling funds from savers to investors. While there have been numerous attempts to develop the financial sector, developing economies are facing the problem of high volatility in numerous fronts including volatility of financial sector. Volatility, which has a dominant influence, impairs the smooth functioning of the financial system and adversely affects economic performance. Similarly, stock market volatility also has a number of negative implications. One of the ways in which it affects the economy is through its effect on consumer spending (Campbell et al. 1994 and Poterba et al. 1986). The impact of stock market volatility on consumer spending is related via the wealth effect. Increased wealth will drive up consumer spending. However, a fall in stock market will weaken consumer confidence and thus drive down consumer spending. Stock market volatility may also affect business investment and economic growth directly.

A rise in stock market volatility can be interpreted as a rise in risk of equity investment and thus a shift of funds to less risky assets. This move could lead to a rise in cost of funds to firms and thus new firms might bear this effect as investors will turn to purchase of blue-chip or growth stocks. While there is a general consensus on what constitutes stock market volatility and, to a lesser extent, on how to measure it, there is far less agreement on the causes of stock market volatility. Some economists investigate

the causes of volatility in the arrival of new, unanticipated information that alters expected returns on a stock (Engle and Ng, 1993). Thus, changes in market volatility would merely reflect changes in the local or global economic environment. Others claim that volatility is caused mainly by changes in trading volume, practices or patterns, which in turn are driven by factors such as modifications in macroeconomic policies, shifts in investor tolerance of risk and increased uncertainty. The degree of stock market volatility can help forecasters predict the path of an economy's growth and the structure of volatility can imply that "investors now need to hold more stocks in their portfolio to achieve diversification" (Krainer 2002).

Indian stock market has faced many microstructure changes such as global capital flow in the form of FII, private equity during last one decade or so. This has helped the market to grow and attract substantial foreign investment. In the last decade, there has seen a few market debacles when an illegal trade practices manipulated the market to earn abnormal return. However, few settlement problems have occurred. The market has crashed few times, specifically on May 17, 2004, but settlement has passed off without any hindrance. This has been possible due to sound and alert risk management practices (systemic and non-systemic) followed by the leading exchanges in the country. Wide price fluctuations are a daily occurrence on the world's stock markets as investors react to economic, business, and political events. Of late, the markets have been showing extremely erratic movements, which are in no way in tandem with the information that is fed to the markets. Thus, chaos prevails in the markets with investor optimism at unexpected levels. Irrational exuberance has substituted financial prudence.

Volatility analysis is important to investigate the behaviour of stock market because issues of volatility and risk have become increasingly important in recent times to financial practitioners, market participants, regulators and researchers.

As a concept, volatility is simple and intuitive. It measures variability or dispersion about a central tendency. To be more meaningful, it is a measure of how far the current price of an asset deviates from its average past prices. Greater this deviation, greater is the volatility. At a more fundamental level, volatility can indicate the strength or conviction behind a price move. Despite the clear mental image of it, and the quasi-standardized status it holds in the field of finance, there are some subtleties that make volatility challenging to analyze. Since volatility is a standard measure of financial vulnerability, it plays a key role in assessing the risk / return trade-off and forms an important input in asset allocation decisions. In segmented capital markets, a country's volatility is a critical input in the cost of capital. Peters (1994) has noted that stock prices and returns are cyclical, imperfectly predictable in the short run, and unpredictable in the long run and that they exhibit nonlinear, and possibly chaotic, behavior related to time-varying positive feedback.

Stock return volatility hinders economic performance through consumer spending (Garner, 1988). They believe that the fall in stock prices would reduce consumer spending. The sizeable fall in consumer wealth as a result of fall in stock prices is expected to directly lower consumer spending. In addition, a weakening in consumer confidence could contribute to a further spending reduction.

Stock return volatility may also affect business investment spending (Gertler and Hubbard, 1989). Investors may perceive a rise in stock market volatility as an increase in

the risk in equity investments. If so, investors may shift their funds to less risky assets. This reaction would tend to raise the cost of funds to firms issuing stock. Moreover, small firms and new firms might gravitate towards the purchase of stock in larger well-known firms.

Further, extreme stock return volatility could disrupt the smooth functioning of the financial system and lead to structural or regulatory changes. Systems that work well with normal return volatility may be unable to cope with the extreme price changes. Changes in the market rules of regulations may be necessary to increase the resiliency of the market in the face of greater volatility.

1.2 Statement of the Problems & Relevance of the Study:

Financial sector reforms constitute the core of the New Economic Policy initiated in India in early 1990s. As a result of this, Indian stock market has witnessed metamorphic changes and transition from a dull to an emerging stock market in international arena. Improved market surveillance, trading mechanism and introduction of new financial instruments have made it a centre of attraction for the international investors. Entry of Foreign Institutional Investors (FIIs) and at the domestic level spectacular growth of the corporate sector and mutual fund industry have further added to the depth and width of the Indian stock market. Introduction of screen based trading depository system; derivative instruments, rolling settlements etc. have changed the very complexion of the stock market. The market has witnessed substantial increase in the number of listed companies, greater reliance on market for resource mobilization, remarkable increase in number of brokers and investors are some of the developments that have taken place in Indian stock markets. In such an emerging market, investment

analysts, institutional investors, fund managers and other market players continuously search for investment strategies that can outperform the market.

Standard classical and neo-classical theories emphasize the role of investment in enhancing economic growth. Monetary and financial sectors play a key role in mobilizing resources. Financial stability is crucial for promoting investment. In a situation of financial stability, financial institutions and markets are able to efficiently mobilize savings, provide liquidity and allocate investment. The growing role of the financial sector in the efficient allocation of resources at appropriate prices could significantly enhance the efficiency with which our economy functions. If financial markets work well, they will direct resources to their most productive uses. Risks will be more accurately priced and will be borne by those who have appetite for absorbing risks. Real economic activity with higher investments, in both quantity as well as quality, would result in growth with macroeconomic stability and fewer financial uncertainties. A stable financial system facilitates efficient transmission of monetary policy initiatives.

Indian stock market is highly volatile. Volatility represents risk and is a matter of concern for anyone who is dealing with money or investing in the stock market or any other financial instruments. Hence, the issue of volatility has become increasingly significant in recent times for the financial practitioners, market participants, retail investors, regulators and researchers. This study is also important in respect of how much risk an investor can bear for its healthy return. The study is relevant to get an idea about the direction and pattern of the investment whether investment is beneficial or not in respect of its expected returns. Investors interpret a raise in stock market volatility as an increase in the risk of equity investment and consequently they shift their funds to less

risky assets. It has an impact on business investment spending and economic growth through a number of channels. Changes in local or global economic and political environment influence the share price movements. The issues of return and volatility have become increasingly important in recent times to the Indian investors, regulators, brokers, policy makers, dealers and researchers with the increase in the FIIs investment. Hence in this proposed study an attempt has been made to analyse return and volatility. From an investor's point of view, the outcome of the study may be immensely useful in respect of taking decision for investment in the stock market and especially for the better selection of stock derivatives for which the investment would be more profitable.

The present study attempts to examine the relationship between stock market volatility and expected returns in the context of Indian stock market.

1.3 Objectives of the Study:

The study is based on the following objectives:

- To measure the stock market volatility and check its pattern in Indian stock market with special reference to National Stock Exchange (NSE).
- To examine the relationship between the expected returns and the volatility in Indian stock market with special reference to National Stock Exchange.
- To examine the relationship between the expected returns and the size of firms of the selected Indian industries.
- To identify the responsible factors for stock market volatility.
- To examine the relationship between volatility and profitability of the selected Indian industries.

1.4 Hypotheses of the Study:

On the basis of above mentioned objectives the following hypotheses can be framed:

- There is a high volatility in the share prices and the volatility clustering in Indian stock market is not persistent.
- Expected return depends on the share market volatility.
- There is no association between expected return and firm's size.
- There is a significant relationship between stock market volatility and industrial profitability.

1.5 Data and Data Sources:

There are two prominent stock exchanges in India viz; National Stock Exchange (NSE) and Bombay Stock Exchange (BSE). The National Stock Exchange captures 83 per cent transactions of the cash segment and 79 per cent of the derivatives segment. Therefore, National Stock Exchange is selected for the study. The present study is based on secondary data. The present study is a sectoral and firm level study. In this present study NSE listed sectoral indices are considered. There are eleven sectoral indices in National Stock Exchange in India viz; CNX AUTO, CNX BANK, CNX ENERGY, CNX FINANCE, CNX FMCG, CNX IT, CNX MEDIA, CNX PHARMA, CNX PSU BANKS, CNX REALTY, CNX METAL. From these 11 sectoral indices, six sectoral indices are selected based on percentage of traded value and percentage of market representation. These are CNX AUTO, CNX BANK, CNX ENERGY, CNX FINANCE, CNX FMCG and CNX IT. From each sectoral index top 15 stocks (companies or firms) are selected based on market capitalization. The study is based on daily closing index value and daily

closing prices of selected sectoral indices and firms. The period of the study is from April 1, 2005 to April 1, 2014. These sectoral indices and firm level data are collected from the NSE website www.nseindia.com. The study also considers several macroeconomic and firm specific variables. These are Wholesale Price Index (WPI), Exchange Rate (ER), Index of Industrial Production (IIP), Net Foreign Institutional Investment (Net FII), Trade Balance (TB) and Call Money Rate (CMR). The monthly data of these macroeconomic variable's are collected from Handbook of Indian Statistics, website www.rbi.org.in. The firm specific factors such as Price Earnings Ratio (P/E), Price to Book Value (P/B) and Dividend Yields (DY) data are collected from NSE website www.nseindia.com. The quarterly data of profit, net sales and market capitalization are collected from the website www.equimaster.com. The data of all the concerned variables are collected for a period of April 1, 2005 to April 1, 2014. Basis of sector selection and company selection is explained in detail in the following.

Basis for Sector Selection:

There are 11 sectoral indices in the National Stock Exchange of India. For selection of the sectors a composite index has been constructed by considering three crucial variables percentage of traded value, percentage of market representation and percentage of sectoral representation with assigning equal weights. Finally, a ranking has been done on the basis of composite value of the sectoral indices. Based on percentage of traded value 60 per cent of the total sectoral indices are selected. The selected sectors are Banking sector, IT sector, Financial sector, Automobile sector, FMCG sector and Energy sector which are in top six ranks as per the composite index value. The sectoral rankings based on composite index value are mentioned in Table 1.1A (in Appendix).

Sector-wise Selected Companies:

There are more than 1600 companies listed in National Stock Exchange in India. In each sector there are a large number of firms. Based on market capitalization top 15 companies or firms are selected from each sector. Finally from the above six sectors 90 companies are selected. The lists of selected companies are mentioned in Table 1.2A (in Appendix). However, data of some selected companies for some periods of the total study period are not available and finally these companies are dropped.

1.6 Outline of the Chapters:

This introductory chapter is followed by following chapters.

Chapter 2 deals with review of literature related to the objective of the study.

Chapter 3 consists of theoretical and conceptual framework and detailed methodology of the study.

Chapter 4 measures the stock market volatility in the context of Indian stock market and shows its pattern.

Chapter 5 describes the impact of stock market volatility and firm's size on its return from the investment in Indian stock market.

Chapter 5 explains the relationship between stock market volatility and industrial profitability.

Chapter 7 describes the summary, conclusion, policy suggestions and limitations of the study and further scope for research.