CHAPTER 1

INTRODUCTION

1.1 BACKGROUND OF THE PROBLEM

Investors pour their money in stock market to get return which is based on innumerable and unknown forces. The absolute number of these factors is not tagged so far. There is a large literature about the determinants of stock returns in the empirical capital market research history. The literature indicates that several factors are potentially important in interpreting the abnormality in stock returns beyond a single market factor. Two notable theories are very common in predicting the relationship between stock return and economic factors, one is known as Capital Asset Pricing Model (CAPM) and the other is called as Arbitrage Pricing Theory (APT). Besides the customary equilibrium based Capital Asset Pricing Model, a number of multi-factor asset pricing models have been constructed e.g., arbitrage-based model under Arbitrage Pricing Theory. According to Opfer and Bessler (2004) these models have been developed on the basis that the stock returns are caused by a specific number of economic variables.

A multifactor model can be either from an arbitrage pricing theory (APT) or from a multi-beta CAPM perspective. These models attempt to answer the questions whether the market return is the only factor that explains stock return variations and the question then is: what extra-market factors should be considered as promising candidates when investigating stock returns volatility? The APT assumes that various market and industry related factors contribute towards returns on stocks. Theses multi-factor models have been developed with the assumption that stock returns are based upon several economic factors which include market return as well as other factors, and can be grouped into industry wide and macroeconomic forces. The company related variables can vary with the nature of industry and economic conditions. The exact number of company related variables is not identified so far. The frequently used macroeconomic and industry variables in existing literature are interest rate, exchange rate, money supply, consumer price index, risk free rate, industrial production, balance of trade, dividend announcements, and unexpected events in national and international markets.
A phenomenal growth of emerging markets not only resulted in significant implications for corporate and individual investors, but it has also proved that these markets cannot be treated in the same way as developed markets. The growth and investment opportunities of emerging markets could not go unnoticed by the international Investors community. Attracted by the phenomenal returns, international investors have poured huge amounts of capital into the emerging markets, and, to a large extent, contributed to their growth and in most cases the resulting bubbles. Although capital markets of emerging economies have become an important asset class for international investors, associated with high returns, high volatility and diversification benefits, they are, of course, far more important to these economies themselves. Although capital markets of emerging economies have become an important asset class for international investors, associated with high returns, high volatility and diversification benefits, they are, of course, far more important to these economies themselves. The reason is that emerging economies became more dependent on their stock markets as a new and increasingly important source of foreign capital. However, this trend had been little shaky for India since, it has decline to 68.8 per cent in 2012 from 94.6 percent in 2010. These facts support the view that understanding the stock market behaviour in emerging economies is becoming more important for wider financial communities.

Thus, the main question, both for the investors and researchers, is to explain how emerging equity markets behave and what accounts for their (sometimes unprecedented) behaviour. There is a general consensus that emerging markets behave differently from developed markets and there are an extensive number of factors, which account for these underlying differences. The importance of this research lies in understanding the general characteristics of emerging equity markets and the main determinants of their behaviour.

1.2 WHY DO CAPITAL MARKETS MATTERS

Capital markets, including markets in equity, debt, and derivative products on these underlying assets, play an important role in promoting economic activity. In primary markets, businesses and sovereigns issue financial instruments representing claims against their future cash flows and use these to tap large regional and global pools of savings in order to finance themselves. Secondary markets, on the other hand, provide an exit for investors and facilitate price discovery – the accurate
valuation of instruments that ensures issuers are paying an appropriate price for their access to finance and investors are adequately compensated for the risk they take in providing it. Liquidity providers are crucial to this latter function, as they take advantage of their superior expertise and information in order to arbitrage away inconsistencies in valuations as well as differences in risk appetites between investors. In performing these functions, the growth and deepening of capital markets can have a significant positive effect on national growth and development. Market depth is not the same as growth: deep markets benefit not only from increased liquidity but also from the presence of developed secondary markets in which securities can be traded, providing an exit for investors and an opportunity for price discovery.

At the global level, Bekaert et al. (2005) find that equity market liberalisations led to over one percentage point of additional economic growth in those countries that implemented them in the late 20th century. As long as domestic government debt remains at moderate levels (less than 35% of bank deposits), the growth of bond markets contributes positively to economic growth (Ali Abbas and Christensen 2007) and provides a basis for the development of other capital markets (Chami et al. 2009).

While the assumption is often made that developing countries have the most to gain from such reforms, their effect depends on how much additional investment markets can unlock and how productive this investment can be. Therefore, in practice, it is those countries with the highest-quality institutions that benefit the most in terms of growth. In emerging markets, this means that the benefits accruing to national economies as capital markets grow depend on a host of other institutional reforms in order to deliver benefits.

One final benefit from the development of capital markets in developing countries is their ability to diversify firms’ sources of finance. Such diversification can help create not only faster but also more stable economic growth by ensuring that shocks to the supply of bank credit do not have disproportionate effects on that growth (Hawkings 2002).

In light of these findings, as well as the established fact that affluent countries have more developed capital markets (Beck and Demirguc-Kunt 2009), the development of such markets has long been considered a prerequisite for economic growth. Accordingly, both externally introduced and home-grown development strategies all over the developing world emphasize the development of capital markets (Stiglitz 2004).
Regardless of their actual link to economic growth, strong capital markets have been shown to drive trade and economic ties between emerging economies. Increasing financial development has not only served to increase trade by and with emerging markets, but has also contributed more to growth in trade and economic interdependence between emerging and developed markets. This is documented by Demir and Dahi (2011) for the banking sector but also by Beine and Candelon (2011) for stock markets. In one sense, deepening capital markets are contributing significantly to the emergence of influential regional economic blocs in the developing world.

1.3 CAPITAL MARKETS IN EMERGING ECONOMIES

Capital markets play an important role in promoting economic activity worldwide by facilitating and diversifying firms’ access to finance. At the macro level, deepening capital markets, which have ample liquidity and developed secondary markets, are also reshaping the developing world, driving wealth creation and the emergence of powerful regional trading blocs.

In emerging and frontier economies, the benefits that accrue to national economies as capital markets growth and deepen are potentially greater, but they are also particularly sensitive to a host of institutional variables, including competition, protection of minority investors and overall business productivity. Because of this, supporting the development of capital markets usually involves a broad and ambitious programme of reform. Even then, successful market-builders need to be alert to signs that markets might be outgrowing the social and regulatory capital on which they rely. The need for vigilance is especially great because, as the crisis of 2008–9 demonstrated, markets can continue to grow and attract liquidity even as institutions are being eroded away from underneath them.

Even before the financial crisis of 2008–09 and the economic downturn that followed it, the developing world was growing much faster than developed economies. Since the third quarter of 2009, more than half of the world’s economic growth has come from transitional and emerging economies (UN 2011). This trend is epitomized by the rise of the BRIC countries (Brazil, Russia, India, and China), all of which are currently ranked among the top ten economies in the world, and forecast to rank among the top six by 2020 (CEBR 2011). Since the financial crisis, this substantial imbalance in future growth prospects has fuelled a swift recovery of both
direct and portfolio investment, often to above pre-crisis levels, as more foreign investors have sought to profit from growth in these markets or simply to diversify their portfolios away from advanced economies.

While the crisis of 2008–9 dented confidence in disclosures within developed countries, emerging markets have seen perceptions slowly recover and, perhaps as importantly, converge. Frontier markets, on the other hand, are not keeping up, meaning that some of the most promising economies in the world may soon not have the capital markets to match their dynamism. As things stand, the momentum in favour of larger and deeper capital markets in the developing world is substantial but not irreversible. While market capitalization has grown impressively and kept pace with levels of growth seen in the developed world, market liquidity has not. Although emerging economies are better off without the excess liquidity that the most developed capital markets saw leading up to 2007, it remains the case that markets need to deepen further if they are to help finance the rapid growth expected in these economies.

1.4 INDIAN Stock MARKET: SOME RELEVANT DETAILS

Since this thesis is concerned with studying impact in the Indian stock market prices, it is necessary as well as meaningful to present some relevant details about the Indian stock market and its important stock indices. To this end, the study state some recent facts on the performance of the Indian economy so that India’s current status as one of the most important emerging market economies with huge growth potential becomes quite obvious. Since the researcher is concerned with the behavior of stock market, the study cited a few major structural and regulatory reforms which were carried out in the Indian stock market during the last one and-a-half decades since its reform process started in the early nineties of the last century. Thereafter, some relevant details including the sources of the data sets on Indian stock indices and other variables which have been used in this study are presented.

India as an emerging market economy

India is likely to be the third largest economy with a GDP size of USD 15 trillion by 2030, says Standard Chartered's Super-Cycle Report. China with a GDP of USD 53.8 trillion is projected as the biggest economy, followed by the US at USD
38.5 trillion. Economies with growth rates of over four per cent - primarily emerging economies - now account for 37 per cent of the world GDP, up from 20 per cent in 1980. Their share is set to reach 56 per cent by 2030, Standard Chartered said, adding that Asia (excluding Japan) is likely to account for two-fifths of global GDP by 2030. But for all the public attention surrounding India’s growth rate in recent years, misconceptions remain about what propels it. In the west, many perceive Indian economy's dynamism as driven by the information technology (IT) sector, when in fact that industry accounted for only 7.5 percent of India's GDP and employs a meager 3 million people. While Indian IT was the first industry to take off after the liberalization of the economy in the early 1990's some 20 years later, the singular emphasis on IT has become outdated.

The excitement India's economy has generated lately in large part is due to changing internal and external dynamics. By some estimates, India’s economy will grow from its $1.8 trillion GDP to be the world's third largest in 2030, with a GDP close to $30 trillion. Correspondingly, North America and Western Europe's share of global GDP is expected to shrink from 41 percent to 18 percent, while "developing Asia" will grow from 27 percent to 49 per cent. India's exports of goods and services have risen from 8 percent of GDP to 25 percent in the last two decades alone. In addition, its exports are more diversified - both geographically and in terms of the products it sells-than its competitors and neighbors. There is a broad agreement that the global centre of economic activity and growth is moving to Asia, and investors are increasingly looking to India for economic and trade opportunities. Internally, India's prospect remain bright as the middle class continues to expand and the benefits of their participation in the economy spread throughout the country - a more highly educated middle class has encouraged growth in dynamic sectors of the economy and boosted entrepreneurship and consumption.

India officially liberalized its stock market on November 11, 1992, when it first allowed foreign investors to invest in its stock market (see Bekaert and Harvey (2000) & Kim and Singal (2000)). Since the opening up of the Indian equity markets to foreigners, foreign institutional investment (FII) flows have grown substantially. Its share in total portfolio flows to India has grown to over Rs.1406.2 billion in 2012-13. During 2012-13, foreign direct investment has increased to US$ 26953 million. In the same period, annual turnover of National Stock Exchange(NSE) and Bombay Stock Exchange (BSE) was increased to Rs.27082.79 and Rs.5487.74 billion respectively.
and the market capitalization raised to Rs.62390.35 and Rs.63823.11 billion ignored that India is increasingly becoming an attractive destination to the global investors. This brief presentation of statistical data on India’s economic performance thus establishes that India is now one of the fastest growing economies in the world with huge growth potential.

With over 20 million shareholders and over 10,000 listed companies in all the stock exchanges, India has the third largest investor base in the world after United States of America and Japan. The Indian stock markets are serviced by 9400 stock brokers approximately. Foreign brokers account for 29 of these. Any market that has experienced this sort of growth has an equally substantial demand for highly efficient settlement procedures. In India 99.9% of the trades, according to the National Securities Depository, are settled in dematerialized form in a T+1 rolling settlement the capital market is one environment.

Indian stock markets, in the recent years, have sharply risen on the back of improving macroeconomic fundamentals and large inflow of foreign money. Large foreign investments have brought greater transparency and liquidity into the Indian market. India entered the International Financial Markets to mobilize resource towards the end of the 1970s around the time of the launch of Fourth Five Year Plan. The Indian Stock Markets are in a way the engines which drive the vehicle of our democracy by pumping in the much needed capital. Their behavior and trends have intrigued many; a scholar, an analyst and many investors. As time evolved, scholars and intellectuals propounded various theories and came up with different propositions with respect to the Stock Markets.

While the US remains the largest of the financial markets; the Euro zone has emerged as a financial powerhouse indeed. The euro zone, U.K. and U.S. account for some 80% of all cross border capital flows. In contrast, Japan is strikingly isolated; its capital flows are smaller than China. Although, China’s stock of financial assets is only one-quarter of the size of Japan. The underlying force for integration is that people want freedom to make economic decisions and to access different forms of finance, risk management techniques and investment and portfolio diversification opportunities. In a country like India where the stock market is undergoing significant transformation with the liberalization measures, there are also concerns regarding its exposure to risk in case of global/ regional crises i.e. need to know how far contagion can affect the Indian stock market in a more and more globally integrated
environment. The degree of financial openness is an empirical question which needs to be resolved and if policy makers need to know the structure of the economies and implement policies that will be effective in achieving their aims. The Indian capital market has been experiencing a process of structural transformation in that the operations in the Indian capital market are being conducted on the standard equivalent to those in the international developed markets.

Theoretically, the Indian Capital Markets are mainly affected by two E’s –

1. Earnings/Price Ratio – It is an important factor affecting the stock price of a company. It gives us a fair idea of company’s share price when it is compared to its earnings. The stock becomes undervalued if the price of the share is much lower than the earnings of a company. But if this is the case, then it has the potential to rise in the near future. The stock becomes overvalued if the price is much higher than the actual earning of the company.

2. Emotions / Sentiments - They are a huge part of investing. Was it the case that only earnings drove the Indian Sensex to a high of 21,000 points in January 2008 and a low of 8700 points in October 2008? Not really. Emotions played a big part in both the rise and fall of the Sensex. When we get positive news about a company, it increases the buying interest in the market. On the other hand, when there is a negative press release, it ruins the prospect of a stock to increase in value.

It has been noted that investors show sensitivity to reference points. When a certain stock price falls because of some disappointing news, many investors are averse to selling it at a loss. Here the reference point is the original cost of purchase. Investors have a tendency to hold on to their losses. But some investors wait in anticipation that the stock price would return to their purchase price before they decide to sell it without rationally evaluating the situation. It can be said in other words that the investors generally “hate to lose”.

1.5 ROLE OF INDIAN STOCK MARKET IN MANAGING RISK

The capital market in India is a market for securities, where companies and governments can raise long term funds. It is a market designed for the selling and buying of stocks and bonds. Stocks and bonds are the two major ways to generate capital and long term funds. Thus, the bond markets and stock markets are considered as capital markets. The capital markets consist of the primary market, where new
issues are distributed to investors, and the secondary market, where existing securities are traded. In addition, the Indian Equity Markets and the Indian Debt markets do form part of the Indian Capital market.

The Indian Equity Market depends mainly on monsoons, global funds flowing into equities and the performance of various companies. The Indian Equity Market is almost wholly dominated by two major stock exchanges - National Stock Exchange of India Ltd. (NSE) and The Bombay Stock Exchange (BSE). The benchmark indices of the two exchanges - Nifty of NSE and SENSEX of BSE are closely monitored by the investors. The two exchanges also have an F and O (Futures and options) segment for trading in equity derivatives including the indices. The major players in the Indian Equity Market are Mutual Funds, Financial Institutions and FIIs representing mainly Venture Capital Funds and Private Equity Funds. The Indian Equity Market at present is a lucrative field for investors. The Indian stocks are profitable not only for long and medium-term investors, but also for the position traders, short-term swing traders and also very short term intra-day traders and speculators. In India as on November 28, 2014, market capitalization (BSE 500) was reached Rs. 100.01 lakh crore, matching well with other emerging economies and selected matured markets. In a developing economy like India, the debt markets are very important sources of raising capital funds. The debt markets in India are amongst the largest in Asia. Their dealings included government securities, public sector undertakings, other government bodies, financial institutions, banks and companies.

The debt markets play a role of increasing funds for implementation of government development plans. This means that government can raise funds at lower costs by issuing government securities. They are very conducive for the proper implementation of government’s monetary policy. They provided a less risky investment environment compared to the equity markets, encouraging low-risk investments. This leads to foreign inflow of funds into the economy. They provide high liquidity and proper control over credit. They provided opportunity for investors to diversify their investment portfolio in a way to minimize risk. They promoted very stringent disclosure norms and auditing requirements, hence there was improved transparency and better implementation of corporate governance principles. The rules that have been introduced during the last few years to contain market risks seem to have operated reasonably well. Strict enforcement of these rules is as important as the rules themselves to effectively manage risk. In this regard, SEBI
should more closely inspect intermediaries and the Stock Exchanges and, if necessary, strengthen punitive measures. SEBI introduced a Risk Management System which has taken several measures to improve the integrity of the secondary market. Legislative and regulatory changes have facilitated the corporatization of stockbrokers. Capital adequacy norms have been prescribed and are being enforced. A mark-to-market margin and intra-day trading limit have also been imposed.

Further, the stock exchanges have put in place circuit breakers, which are applied in times of excessive volatility. The disclosure of short sales and long purchases is now required at the end of the day to reduce price volatility and further enhance the integrity of the secondary market. The research revealed that risk by nature has two components; uncertainty and exposure. Both these components are always present and need to be carefully managed. Risks are usually defined by the adverse impact they may bring about on the profitability of several distinct sources of uncertainty.

**Volatility in the market**

Stock prices are changed everyday depending upon the market. Buyers and sellers cause the prices to change as they decide how valuable each stock is. Financial markets exhibit dramatic movements, and stock prices may appear too volatile to be justified by changes in fundamentals. Such observable facts been under scrutiny over the years and are still being studied vigorously (LeRoy and Porter, 1981; Shiller, 1981).

Basically, share prices change because of supply and demand. If more individuals want to buy a stock, than sell it, the price moves up. Conversely, if more people want to sell a stock, there would be more supply (sellers) than demand (buyers); the price would start to go down. Volatility in the stock returns is an integral part of stock market with the alternating bull and bear phases. In the bullish market, the share prices soar high and in the bearish market share prices fall down and these ups and downs determine the return and volatility of the stock market. Volatility is a symptom of a highly liquid stock market.

An increase in stock market volatility brings a large stock price change of advances or declines. Investors interpret a raise in stock market volatility as an increase in risk of equity investment and consequently they shift their funds to less risky assets. Changes in local or global economic or political environment
influence the share price movements and show the state of stock market to the general public. Pandian and Jeyanthi (2009) in their article emphasized the fact that the earthquake in Gujarat in 2001, rising interest rates and inflation, the proposal to increase the tax on distribution of dividends by companies and by MFs from 10 per cent to 20 per cent did not speak well of the corporate sector. Moreover, scams have over and again proved the vulnerability of the regulatory network and the system of the finance and capital markets over the years.

One can see below some of the important sentiment proxies, and previous work done on few of them, such as:-

**Investor Mood.** Some papers have creatively tried to connect stock prices to exogenous changes in human emotions. Kamstra, Kramer, and Levi (2003) find that market returns are on average lower through the fall and winter, which they attribute to the onset of seasonal affective disorder, a depressive disorder associated with declining hours of daylight. They report patterns from different latitudes and both hemispheres which also appear consistent with this interpretation.

**Retail Investor Trades.** The inexperienced retail or individual investor is more likely than the professional to be subject to sentiment. Greenwood and Nagel (2006) find that younger investors were more likely than older investors to buy stocks at the peak of the Internet bubble. More generally, Barber, Odean, and Zhu (2006) find in micro-level trading data that retail investors buy and sell stocks in concert retail investors buy and sell stocks in concert, which is consistent with systematic sentiment. Kumar and Lee suggest constructing sentiment measures for retail investors based on whether such investors are buying or selling.

**Trading Volume.** Trading volume, or more generally liquidity, can be viewed as an investor sentiment index. For instance, Baker and Stein (2004) note that if short-selling is costlier than opening and closing long positions (as it is, in practice), irrational investors are more likely to trade, and thus add liquidity, when they are optimistic and betting on rising stocks rather than when they are pessimistic and betting on falling stocks. Market turnover, the ratio of trading volume to the number of shares listed, is a simple proxy for this concept.

**Option Implied Volatility.** Options prices rise when the value of the underlying asset has greater expected volatility and options pricing models such as the Black–Scholes formula can be inverted to yield implied volatility as a function of options prices. The
Market Volatility Index ("VIX"), which measures the implied volatility of options on the Standard and Poor’s 100 stock index, is often called the “investor fear gauge” by practitioners.

Insider Trading. Corporate executives have better information about the true value of their firms than outside investors. Thus, legalities aside, executives’ personal portfolio decisions may also reveal their views about the mispricing of their firm. If sentiment leads to correlated mispricing across firms, insider trading patterns may contain a systematic sentiment component.

IPO Volume: The underlying demand for initial public offerings is often said to be extremely sensitive to investor sentiment. Investment bankers speak of “windows of opportunity” for an initial public offering that capriciously open and close. Such caprice could explain why IPO volume displays wild fluctuations, with a rate of over 100 issues per month in some periods and zero issues per month in others.

Trading volume: High market liquidity, or trading volume, has been argued to be a symptom for over-valuation (Baker, Stein 2004). In a market with short-sale constraints, retail investors are more likely to participate if they are optimistic. This increases trading volume, so that liquidity should increase when traders are optimistic and betting on rising stocks rather than when they are pessimistic and betting on falling stocks.

Dividend premium: In general, dividend-paying stocks have a predictable income stream which investors perceive as a salient characteristic for safety (Baker, Wurgler 2006). When dividends are at a premium, firms are more likely to pay them, and less so when they are at a discount (Fama, French 2001). Thus, on the margin, firms appear to cater to prevailing sentiment for or against "safety" when deciding whether to pay dividends.

The performance of India’s economy over the last decade has been quite impressive. The Government of India initiated bold reform measures and consequently the economy started experiencing a rapid economic growth rate and inflow of increasing foreign investment. Around the world, interest in India’s economy has been growing, and rightly so: India is likely to become the third largest economy by 2030 behind China and the USA, a Standard Chartered report said while projecting that the world is in the midst of an economic "super-cycle". A super-cycle is a period of historically
high global growth, lasting a generation or more, driven by opening up of new markets, increasing trade, high rates of investment, urbanization and technological innovation.

**1.6 REFORMS IN THE FINANCIAL SECTOR**

Since India embarked on a series of structural and regulatory reforms in its economy since the early 1990s to free itself from an extremely fragile financial condition arising out of political instability, sluggish growth and foreign exchange crisis, major policy changes and reform programmes were initiated in most of the sectors of the economy including the financial sector. Consequently, some fundamental changes have taken place in the Indian economy as a whole, and in particular, in the financial sector. In the context of Indian capital market which is the focus in this study, a major decision was to form the Security and Exchange Board of India (SEBI) as the regulatory authority of the Indian capital market in the year 1988. Other reform measures initiated in the stock market included the “birth” of a new stock exchange, called the National Stock Exchange (NSE), in 1993 as a competitor to the oldest stock exchange of India viz., the Bombay Stock Exchange (BSE), introduction of computerized screen based trading at both these exchanges and dematerialization of shares. Another major development concerning the secondary segment of the Indian capital market was the introduction of derivative trading in June 2000. SEBI approved derivatives trading based on future contracts at both the BSE and the NSE in accordance with the rules/byelaws and regulations of the stock exchanges.

India has 23 stock exchanges across the country, of which the major ones are the Bombay Stock Exchange at Mumbai (earlier known as Bombay) and the National Stock Exchange at Delhi. The Securities and Exchange Board of India regulates all the stock exchanges of the country. The Bombay Stock Exchange (BSE) which was established in 1875, is the premier stock exchange of India. Although the newest stock exchange of India, the National Stock Exchange commenced its operations in the wholesale debt market (WDM) segment in June 1994. The Capital Market (Equities) segment started its operations from November 1994 and those in derivatives segment from June 2000. Both the BSE and the NSE provide fully automated, screen-based trading systems.
The extent and pace of reforms in a segment of financial markets in India appear to be shaped by two factors: a clearly defined regulatory framework and the extent of public sector presence. The debt markets in India illustrate this. The debt market has had a strong public sector presence. The dominant traded instruments are Government of India securities, and the dominant trading participants are banks, with a large fraction being the public sector banks. When the Securities and Exchange Board of India (SEBI) was created to regulate "securities markets," the markets for bonds did not fall within its mandate due to confusion in the financial architecture prevalent in the country. Despite the fact that the legal definition of the word securities included "bonds," due to a variety of reasons, including the fact that RBI was the investment banker to the Government of India and the regulator of the banking sector (which is the dominant player in the bond market), SEBI did not become the sole regulator for the bond market. Even now there is legal confusion over who regulates the government securities market, with the RBI exercising a lot of regulatory powers. Thus the bond market did not benefit from an independent regulator, as the equity markets did. The approach of reforms in equity markets was through an independent regulator, the SEBI. However, the development of bond markets took place in the context of this conflict of jurisdiction. There were considerable lags in institutional development in the Indian debt markets as compared to equity and commodities markets.

Similarly, as regards the impact of public sector presence on the pace and direction of reforms, one finds that in India, the pace of reforms has been the slowest where the government had a dominant presence. For example, the government dominated the insurance and banking sector, where the pace of the reforms has been the slowest. The government had a lower involvement in commodity markets, and the least in the case of equity, where reforms have made huge strides in institutional development and change.

Some of the other reasons for the varying pace of development in different sectors of the financial markets are bans or restrictions on products and participants. A policy environment that bans products and markets clearly hinders the development of liquid and efficient markets. As an example, exchange-traded currency futures were banned until August 2008, impeding the development of liquidity and efficiency in the markets. Equally problematic, a missing market can hamper the efficiency of other markets as well. For example, an efficient and deep corporate bond market is still
lacking in India, inter alia, because the related markets for corporate repos, interest rate derivatives, and credit derivatives are either altogether missing or have only been allowed with multiple restrictions, which lead to stunted development. In many cases, while an outright product ban is not in place, there are restrictions on participation. These include regulatory restrictions on some kinds of activities (for example, banks are prohibited from adopting long positions on interest rate futures) or quantitative restrictions (for example, all FIIs combined are required to keep their aggregate ownership of corporate bonds below US$15 billion).

The equity market—the only element of Indian finance that has achieved immediacy, depth, and resilience—has few restrictions on participation in both spot and derivatives markets. As a consequence, the equity market, especially for large stocks, has developed a distribution capability that reaches millions of market participants, including many around the world. All kinds of economic agents come together into a unified market to make the price. Competitive conditions hold for the most part as no player is large enough to distort the price. The diverse views and needs of a range of participants impart resilience, depth, and market efficiency. Competition between the NSE and BSE has helped improve technology and reduce costs. The most important feature of the equity market has been free entry and exit for financial firms that become members of the NSE and BSE, and the free entry and exit for the economic agents who trade on these markets through exchange members. Such an open environment is critically important for achieving liquidity and efficiency in all the other elements of Indian financial markets.

**Structural breaks in Indian Economy**

The period studied contains several dramatic changes associated with economic and political factors which may have had some effect on the Indian stock market. Some of the important domestic events which could have caused a structural break in the Indian stock market are as follows:

1. India's decision to detonate nuclear devices (Pokharan-II) in May 1998 resulted in comprehensive economic and technology-related sanctions by a number of countries. Most of the sanctions were lifted within five years of Pokharan-II, but the instantaneous impact of these sanctions was a big shock to the Indian economy.

2. Between May 1999 and July 1999, an armed conflict took place between India and Pakistan in the Kargil District of Kashmir. As this conflict intensified, it attracted
much international concern because of the nuclear capabilities of both countries. In the aftermath of the war, the Indian stock market rose by over 1500 points.

3. On 1 March 2001, BSE SENSEX fell by 176 points, shocking Indian investors. This sudden crash (Keten Parekh scandal) caused a panic among investors. As a consequence of the crash eight people committed suicide and hundreds of investors were driven to the brink of bankruptcy, making it one of the biggest stock market scams in Indian history.

4. As a follow-up to the Ketan Parekh (KP) -induced stock market scam and crash in March 2001, the Securities & Exchange Board of India (SEBI) passed a directive to replace the badla system with a system which introduced daily settlements, single stock options and real-time electronic payment in the Indian stock market.

5. On 27 February 2002, there were communal riots in the Indian state of Gujarat. Officially 793 Muslims and 253 Hindus died as a result of the violence and the Indian economy was adversely affected.

6. On 17 May 2004, just after the declaration of the 2004 general election results, the stock markets crashed (activating automatic circuit breakers in both NSE and BSE) in anticipation that the new coalition (Congress and Left parties) coming into power would not continue with the policy of economic liberalization pursued by previous governments.

7. In July 2005, Mumbai experienced a storm with record rainfall for 24 hours bringing the whole city and all business activity, transport and trading to a complete halt. Roughly 1,000 people were killed in the ensuing floods and landslides.

8. On 11 July 2006, a series of bombs exploded in Mumbai’s local trains during rush hour, killing around 180 people and disrupting life and business activity in the city. Islamic militants were later found to be responsible for the bombings.

9. A major terrorist attack occurred in Mumbai in November 2008, when a series of gunmen led a coordinated attack on the main tourist and business areas of Mumbai, killing at least 200 people and resulting in loss of investor confidence.

10. Manmohan Singh’s led Congress government was re-elected in May 2009 with an almost absolute majority. Manmohan Singh is considered to be the architect of India's
liberalisation policies that started in 1991. His re-election in 2009 was seen as an endorsement for the continuation of financial reforms and liberalisation.

11. During the period 2011 - 2012, India witnessed a surge in high profile corruption cases, such as mismanagement associated with the organization of the Commonwealth Games, bribes associated with allocation of the 2G spectrum and corruption related to allocation of coal-mining licenses (colloquially referred to as ‘Coalgate’ in the popular press). This resulted in protests demanding tougher laws against government corruption, led by social activist Anna Hazare and his India against corruption team.

Apart from these important domestic events, the period under consideration was also characterized by many global economic and political events that had an impact on global financial markets, including those in India. Some of the important global events were the Asian financial crisis in 1997, the IT bubble burst and crash of technology stocks in 2001, the September 11, 2001 terrorist attacks and the ensuing Afghanistan War in 2001-02, the Iraq war which begin in 2003 and the Global financial crisis in 2007 and 2008.

More generally, the identified breaks likely reflect a combination of domestic and international shocks to the economy. The breaks in 1998-1999 are associated with the aftermath of the Asian financial crisis and conflict in Kashmir. The breaks in 2001 coincide with the IT bubble burst and 9/11 terrorist attacks as well as the KP (Ketan Parekh) scam and the subsequent institutional reforms to the Indian stock exchanges. The breaks in 2003 coincide with the start of the Iraq war and heightening of the US global war on terror. The breaks in 2006 and 2008-2009 occur at the same time as terrorist attacks in Mumbai. The 2008-2009 breaks are also likely to be related to the re-election of Mr. Manmohan Singh and the Global financial crisis.

1.7 RECENT TRENDS

After a breathless 72 per cent run in the last 19 months, the Sensex has run into a wall of worry in the last couple of months, correcting by 7-8 per cent from its highs. And recent market developments have given investors plenty of reasons to worry too.

For starters, corporate India has just closed FY15 with disappointing numbers once again, calling into question whether the Indian market is too richly valued at its price to earnings multiple of 20 times. Foreign institutional investors (FIIs) who poured in
$13.7 billion into India in FY14 and $18.1 billion in FY15, seems to be showing signs of fatigue. FII flows have wavered since March and India has lagged behind most global markets so far in 2015. Recent FII pull-outs have also been accompanied by mutterings about the Modi government not pushing through reforms at the expected pace. The dreaded cues have come back to haunt Indian markets too, with crude oil prices unexpectedly spiking by 40 per cent since April and triggering a global bond volatility. There are now fresh worries about whether a US rate hike could trigger an FII exodus from India. Some mid- and small-cap stocks have corrected 20-30 percent in the last couple of months, responding to these fears.

**Corporate earnings - shifting goalposts**

Between August 2013 and now, India's macros have made a dramatic recovery. Revised GDP numbers show India's growth picking up from 5.1 per cent in FY13 to 6.9 per cent in FY14 and further to 7.3 per cent in FY 15. The current account deficit is down from over 6 per cent of GDP to a manageable 1.5 per cent. With the government keeping a hawk's eye on subsidies, the fiscal deficit is under control at 4.1 per cent. Falling crude oil and commodity prices have pruned domestic inflation and supported the rupee, which has strengthen from its low of 68 to a dollar in July 2013 to about 63 now.

But the micro (or corporate fortunes) offers less cause for celebration. As we know, the Sensex rally between August 2013 and March 2015 was powered more by an expansion in the price-to-earnings multiples of Indian stocks (the Sensex P/E rose from 16 to 20 times) rather than actual profit growth. This re-rating was driven by the hope that corporate profits, which was sluggish between FY 12 and FY 14, would soon get back to double-digit rates thereafter.

But that double digit has so far provided elusive. Corporate earnings, instead of picking up in the second half of FY 15, have actually wilted. Several unexpected factors have cropped up to undermine corporate profits. A sharp fall in global commodity prices (metals and oil firms make up a third of the Sensex universe) has led to big profit drops for commodity giants. Weakening rural consumption plays such as two wheelers and FMCGs. A slow pace of rate cuts (RBI's cut have not been passed on by banks) have kept highly leveraged companies from getting out of their debt coop. And finally, the private capex cycle has refused to start up despite procedural sops.
Thanks to the above factors, the Sensex companies are now expected to close FY 15 with a sobering 4-5 per cent profit growth, far below the ambitious targets of 16-17 per cent modelled by analysts when this rally began. This has prompted market participants to roll forward their 'double-digit growth' expectations by yet another year - to FY 17.

Today, the BSE 500 companies are sitting at their highest debt-equity ratios in over a decade. Corporate balance sheets don't have the space to grow and neither do banks which lend to them. As the number for the BSE 500 companies, which show that while their total assets have shot up from Rs 9 lakh crore to Rs 55 lakh crore in the last nine years, neither their sales nor their profits have kept pace. With profit margins dropping sharply, their return on equity has slumped from a healthy 20 per cent in 2005 to just 11.5 per cent by 2014. Industrialist believes that after the re-rating driven rally of the last two years, stock prices may now begin to track earnings. Crude oil prices and prices of many industrial inputs crashed in the last few quarters and companies are suffering inventory losses on that impact. In a quarter or two, this effect will wane.

On the Corporate earnings, the expectation now is that FY 16 growth will be driven by expanding profits margins (due to falling input cost) rather than high sales growth. And with commodities, capital goods and banks facing headwinds, a few sectors like private banks, CVs and oil are expected to do the heavy lifting with earnings.

**Over heated mid and small caps**

While most fund managers do see buying opportunities in the better-known companies that do not suffer from high leverage, one segment of the market that many are quite cautious about is mid caps and small caps tocks.

Previous bull markets in India have always run into trouble whenever mid-and small-cap index P/Es have closed their gap with the Sensex and Nifty and that is what has happened in the last year. Just before the March correction, the P/E of the CNX Midcap Index (22 times) was within a sniffing distance of the Nifty's (23 times). The CNX Small cap (due to poor earnings) was trading at a P/E of 83. The valuations have since fallen a bit but do remain too high to be comfortable.

While profit disappointments have not been that widespread for quality companies, it has been another story for second-rung companies. The excessive expectations that were built up in the middle of 2014 without many anchors have been belied. Many
second-rung businesses which are heavily dependent on economic growth have underperformed in the last one year.

**Sluggish Reforms**

If corporate India has not been delivering as per street expectations, FIIs seems to have turned lukewarm too (data shows that FII net investment in Indian equities for the first two months of FY 16 (as of end May 2015) were at a mere Rs. 5953 crore, a insignificant amount as compared to the Rs. 1.11 lakh crore last fiscal). The explanation offered for this are many. Some market players believe that FIIs given India's relatively high valuation, are keen to trim their overweight positions in the country in favour of cheaper markets such as China and Brazil. Others suggest that FIIs are losing patience with the progress on reforms and recurring run-ins with the taxman. Of these, the last explanation does not hold much water. For one, whatever the Government's political opponents may say, there has been material progress on reforms that can have long-term payoffs for the economy. These include transparent electronic auctions of coal blocks and spectrum; progress on curbing wasteful subsidies; a strong push to financial inclusion; and the passage of the black money, insurance and mining bills. Key pieces of legislation such as the Land Acquisition Bill, Real Estate Regulatory Bill and the GST Bill are awaiting a go-ahead from parliamentary committees. On FII taxation, not only has the Centre specifically exempted FIIs from April this year, it has also deferred the much-feared GAAR.

In fact, reforms are one area where leading fund managers believe that the government is delivering. "The Indian fisic was in a mess. The decrease in oil prices has been smartly used by the government (through excise duty hikes) to improve the fiscal situation. The fall in oil prices has been very well handled by the government. In the long term, this may see India earning rating upgrades". Added further, they believe that the re-rating of markets has happened based on many factors - political stability, reforms, good macros and also earnings. Of these, only the last has disappointed - corporate earnings. On the macro front, we are in a far better shape than we were when this rally started. Inflation is down, growth is better, the current account deficit is far better and the fiscal deficit is under control. The centre's proactive moves to curb inflation through lower MSP (minimum support price)
increase have worked. Positive real returns are now driving Indian savers to re-
allocate money into equities.

The government is right to focus on fiscal consolidation and step up central
spending on areas such as roads, railways and defence, while corporate India figures
its way out of its own leverage-induced problems. Given the excess capacity across
many sectors, a new private capex cycle can restart only after corporate profits
improve and cash flows get used to pay down debt.

**Faltering FII flows**

With recent FII outflows, Indian markets have delivered poor performance
relative to most global markets so far in 2015. On a year-to-date basis, the BSE
Sensex has remained flat. However, China's Shanghai Composite has zoomed 43 per
cent; Brazil's Bovespa, 8 percent; Russia's RTS, 25 per cent; and Korea's Kospi, 10
per cent. But the above argument suggest that this may be more a function of routine re-
balancing by foreign investors than their becoming disillusioned with the Modi
government. The recent rebound in crude oil prices and the sudden spike in global
bond yields may also have triggered some panic pullouts.

But if it is stable growth and predictability that global investors are looking for, the
Indian economy certainly continues to offer these in a shaky global milieu. Recent
revisions in Indian GDP numbers showed that growth picked up to 7.3 per cent in FY
15. Recent IMF projections expect India to become the fastest growing economy in the
world, with expected GDP growth of 7.5 per cent in 2015 and 2016, while China
would slow to 6.8 per cent. India's improving fiscal position, its low external debt,
low reliance on commodity exports for growth and its demographics also place it in a
uniquely favorable position from a global investor's perspective.

Other points out that even after the recent spike, crude oil prices really haven't
moved much beyond RBI's comfort zone of $60 or so. Thanks to the global
commodity trouble, inflation rates continue to fall and so does India's import bill. In
fact, Indian stocks, bonds and currencies have weathered the recent global bond
volatility much better than most emerging markets. The rupee has been one of the
best-performing currencies even in the recent bout of global volatility. For the same
reasons, most experts feel that worries about impending US rate hikes may be
overdone. Even if the US were to hike its rates to 0.25 per cent or 0.50 per cent to
start with Indian interest rates at 7-8 per cent, the differentials will be large enough to attract FIIs into India.

Overall, it is the above factors that suggest that Indian investors should not let recent events deter them from equity investing with a long-term perspective. After all, it is only during periods of uncertainty that stocks offer attractive entry points.

1.8 MONTHLY STOCK RETURNS WITH MACRO AND MICRO VARIABLES

In financial economics one important empirical regularity is that asset returns can be predicted by a set of macroeconomic and financial variables. As changes in these variables contain important information, for investors it is hypothesized that the stock market participants take these factors into account for estimating appropriate discount rate and the expected flow of dividends from stocks. The speed and accuracy with which this information is reflected into stock returns is crucial for the understanding of efficient functioning of the stock market.

There are a majority of economic factors which can influence stock markets. One way of linking macroeconomic variables and stock market returns is through arbitrage pricing theory (APT) (Ross, 1976), where multiple risk factors can explain asset returns. While early empirical papers on APT focused on individual security returns, it may also be used in an aggregate stock market framework, where a change in a given macroeconomic variable could be seen as reflecting a change in an underlying systematic risk factor influencing future returns. Most of the empirical studies based on APT theory, linking the state of the macro economy to stock market returns, are characterized by modeling a short run relationship between macroeconomic variables and the stock price in terms of first differences, assuming trend stationarity. Another approach is the discounted cash flow or Present Value Model (PVM). This approach relates the stock price to future expected cash flows thus, the PVM can be used to focus on the long run relationship between the stock market and macroeconomic variables. Moreover, this can explain some economic variables effects on stock market based on portfolio theory where assets are substitute for each other and whenever changes in one asset price has direct or indirect impact on other assets.
Several recent studies have shown strong influence of several macroeconomic variables as well as some financial variables (ratios) on the established stock markets, mostly in the U.S. and, to a lesser extent, in Europe and Japan. Some of the important studies on this topic are due to Fifield et al. (2000), Lovatt and Parikh (2000), Nasseh and Strauss (2000), Hondroyiannis and Papapetrou (2001), and Lu et al. (2001). Earlier, the arbitrage pricing theory developed by Ross (1976), and Chen et al. (1986) also showed, in the context of industrialized countries, that economic variables have a systematic effect on stock market returns in the sense that economic forces affect discount rates, firm’s ability to cash flows and future dividend payouts. Further, there are some studies which have examined the relationship between stock returns and various macroeconomic variables across countries (see, for instance, Solnick (1984), Asprem (1989), Wasserfallen (1989), Ferson and Harvey (1993) Conover et al. (1999), and Durham (2001)). In contrast, very few such studies have been carried out on stock markets of the emerging market economies, and these references are: Mookerjee and Yu (1997), Ibrahim (1999), Chong et al. (2001) and Wongbangpo and Sharma (2002).

Although most of the studies cited above have found the evidence that stock returns are predictable using macroeconomic and financial variables, the empirical evidence are not uniform in providing support to stock return predictability using these variables. For instance, while some studies have found that certain macroeconomic variables have significant effects in explaining returns of some stock indices, others have found no such evidence i.e., no significant effects of the same variables have been observed for some other stock returns (see, for instance, Balvers et al. (1990) and Flannery and Protopapadakis (2002) for details of such findings). Further, it has been observed that predictive ability of some macro variables with respect to equity returns is quite uneven overtime; Durham (2001), for example, has found this for some variables concerning monetary policy. The issue of data mining is also relevant in this context since numerous studies have examined the predictive ability of several macroeconomic variables in the literature, and hence, this makes it difficult to determine the particular macro variables which are appropriate for explaining stock returns.

It is also noteworthy that apart from macro variables, financial variables (ratios) like price-earnings ratio, price book value ratio and dividend yield have also been found to be the predictors of stock returns (Campbell and Shiller (1988a, b,
1998), Fama and French (1988), Ang and Bekaert (2001)). It is because of these facts that the researcher first make an attempt to find the impact of the set of relevant macroeconomic and financial variables for returns based on NIFTY. Thus, in this chapter, I examined the extent of effect of macroeconomic variables and financial variables on market share price with the aim to provide an adequate econometric model.

For the purpose of this study, a set of five relevant macroeconomic variables comprising the following have been taken for investigation

Gross Domestic Product (GDP),
Wholesale price Index (WPI),
Real effective exchange rate (REER),
Prime Lending Rate (PLR),
Money Supply (M3) and
Five Micro variables viz.,
Economic Value Added (EVA),
Earnings per share (EPS),
Dividend Per share (DPS),
Debt Equity ratio (D/E) and
Dividend payout.

These ten variables have been chosen on the basis of evidence of their significant effects in stock returns of other stock markets, as mentioned earlier. Some of the variables such as Gross Domestic Product, Money supply and Wholesale price Index etc. have been included as basic variables. Since data for all the time series on macro variables of India are available at monthly level, not at any other higher frequency, these macro and financial variables along with the return series have been taken at monthly level value covering the period April 1995 to March 2014 but data for financial variables could have been calculated on annual level, hence, the study averaged the monthly data to annual level of macro variables. The first month i.e., April 1995 has been chosen considering the availability of the data sets and the observed first break in the series, after the liberalization of the Indian economy in 1992.
While choosing these variables, it is also important to understand the economic meanings of the underlying relationships since financial theory asserts that movement in stock prices is related to macroeconomic and financial variables.

**Gross Domestic Product**

A measure of real output or real economic activity often used is Gross domestic Product (GDP) (Birajdar et al., 2007). As GDP numbers present a measure of overall economic activity in the economy and affect stock prices through its influence on upcoming future cash flows there existed a positive relationship between stock prices and GDP. To start with, an increase in current real activity increases demand on existing capital stock, which ultimately induces increased capital investment in the future, and the stock market is very likely to anticipate this (see Gallinger (1994)).

**Money supply**

Money supply is another fundamental macroeconomic variable which widely used in the literature to determine the stock prices. Besides the extensive empirical investigation, the relationship between money supply and stock price is still ambiguous. According to the portfolio theory, an increase in the money supply may results in a portfolio change from noninterest bearing money assets to financial assets like stock. Money supply has a direct effect on stock prices by changing liquidity. Further, as noted by Musilek (1997), money supply has an indirect effect on stock prices through corporate dividends by increasing or decreasing interest rates. The Money supply variable used in this study is M3 which will capture the percentage rate of changes in Indian money.

**Interest rate**

Stock prices are also influenced by changes in interest rates. Since interest rate is an opportunity cost of holding stock, an increase in interest rate is likely to lead to a substitution effect between stocks and other interest bearing assets. It is, therefore, expected that as interest rate declines stock price would rise (cf. Musilek (1997)). The interest rate variable employed in this thesis is the short-term interest rate rather than long-term interest on due to the modeling criterion conducted.
**Inflation**

Inflation is an increase in the general level of prices, or, alternatively, it is a decrease in the value of money. Inflation is one of those macroeconomic variables that affect every Indian citizen, irrespective of an investor, borrower or lender, almost every day. Inflation is seen as negative news by the stock markets, because it tends to curb consumer spending and therefore corporate profits. It also affects the value of the domestic currency adversely in the foreign exchange markets. The two frequently used measures of inflation in India are based on the WPI and the Consumer Price Index (CPI). Unfortunately, in India we do not have an aggregate CPI appropriate for use as an indicator of aggregate prices and demand pressures. Thus in this study WPI is used as a proxy to Indian domestic inflation. The WPI is available for all commodities, and for major groups, sub-groups and individual commodities. The basic advantage of this measure of inflation is its availability at high frequency, i.e., on weekly basis with a gap of about two weeks, thereby enabling continuous monitoring of the price situation for framing policies. Inflation rate which is defined as the first difference in whole sale price index as a percentage of previous period’s value also affects the stock market through the output link, as advocated by Fama (1981).

**Exchange rate**

The other important macroeconomic variable used in this study has been the exchange rate, which represents the bilateral nominal rate of exchange of the Indian Rupee (Rs.) against one unit of a foreign currency namely US Dollar ($) has been taken to be the foreign currency against which the Indian Rupee exchange rate is considered. This is because the US Dollar has remained to be the most dominating foreign currency used for trading and investment throughout the period of this study. On an average, export-oriented companies are adversely affected by a stronger domestic currency while import-oriented firms benefit from it.

There is also a strong evidence on the causal influence of exchange rate on stock prices (see, for instance, Abdalla and Murinde (1997) and Granger et al. (2000)). The main implication is that changes in exchange rate affect firm’s exports and also the cost of imported goods and production inputs and thus ultimately affect stock prices.

**Dividend Policy**
Dividend announcements are one of the most important events and the studies on stock market reaction to earnings information are included in the semi-strong form of efficient market hypothesis (EMH). The semi-strong form of efficient market hypothesis states that stock prices reflect all the publicly available information instantaneously and accurately. In this study an attempt is on the stock market reaction to dividend announcements in India in the light of various previous studies conducted in various developed countries of the world such as the USA, the UK, Australia, etc. Theoretically, stock dividends have no impact on financial position of the announcing company as net worth and total assets remain the same, through empirical evidence across the globe shows that markets react to stock dividends announcements. Dividends may convey information about the company, so it suggests the possibility of its influence on the stock market. Paying large dividends reduces risk and thus influence stock price (Gordon, 1963) and is a proxy for the future earnings (Baskin, 1989).

**Economic Value Added**

Proponents of EVA claim that EVA is highly correlated with stock returns. EVA derives stock prices (Stewart, 1995; Medeiros, 2005) better than other accounting based performance indicators. Lefkowitz (1999) analyzed the US companies and a result of the study supported Stern-Stewart hypothesis, i.e., EVA is better correlated with stock returns as compared to traditional performance measures. They found that EVA is reasonably reliable guide to understand the firm’s value. Machuga et al. (2002) in their study highlighted that EVA can be used to enhance future earnings predictions. Lehn & Makhija (1997) investigated the degree of correlation between different performance measures and stock market returns. The results indicate that EVA is the most highly correlated measure with stock returns. Several other studies do not support the claim that EVA provides better stock returns. (Biddle et al., 1997 and 1999) analyzed a sample of firms over the period 1984-93 by comparing the stock market adjusted returns against EVA, Residual Income and Operating Cash Flow. The results do not support that EVA dominates traditional performance measures in its association with the stock market returns. Ismail (2006) conducted a study on EVA and its association with stock returns viz- a- viz accounting earnings and stock returns and found that net operating profit after taxes and net income outperform EVA in explaining stock returns.
**Earnings**

Earnings per share is the amount of profit after tax divided by the total number of shares outstanding. This is very important parameter. Broadly look into its last 5 to 10 years earnings whether the company has posted profits or losses. The bottom line is investors want to know how much money the company is making and how much it is going to make it in the future. From the perspective of an investor, higher the EPS the better it is, as it indicates the future prospects of the company's business, potential growth opportunities and higher returns for the investors. Therefore price of stock is presumed to have positive relationship with EPS. The impact of an announcement of Earnings per share on stock prices had often been the centre of interest to researchers, shareholders and investors. This is because; EPS is one of the investment tools to evaluate a company's performance either in the short or long run. The estimated earnings can be used to measure the financial health and prospect of a company. Therefore, in this study an investigation and evaluation has been performed to indicate the impact of EPS on the stock prices. In a way, EPS can be used as a performance indicator of the financial standing of the company.

As regards the effects of financial variables such as dividend yield, its variability can be attributed to the variation of expected cash flow growth (Ang and Bekaert (2001)). In general, financial ratios can predict firm’s ability to future cash flows and thus overall stock return of the economy.

### 1.9 RATIONALE OF THE STUDY

Determining these factors affecting common stock prices in a stock exchange is a very important issue to many parties such as investors, stockholders, and management. Unfortunately, researchers are not certain yet about all of these determinants, but some of them have been determined. Determining the most important factors affecting common stock prices is important to decision makers, whether these users are internal users (managers) or external users such as stockholders, investors, creditors, etc. Many stockholders lost large amounts of money during the recent few years. Moreover, mostly who lose money in stock exchanges are normally among small investors and stockholders. The problem of the current study appears as a result of the large amounts of money this group of investors lose. This problem can be solved, and the amounts of these losses may be reduced if investors have enough information and have the ability to predict the expected future
stock market prices. In brief, the problem of this study can be well presented through the following two questions: What are the most important external and internal financial factors affecting the common stock market prices? How can the process of trading common stocks be improved, so stockholders and investors in these stock exchanges can avoid, or at least, reduce their loss?

This study contributes to the existing literature by analyzing the impact of economic variables on stock returns in an emerging Asian market which has a different structure and institutional characteristics from developed stock markets. It also determines the entire effect of chosen macro and micro financial variables as a whole on a common stock market price. Therefore it is critical to find out whether stock returns in India respond differently to these variables or not.

The current study may be beneficial to many parties such as, investors, stockholders, and managers, because this study provides the opportunity to each of these parties to avoid some of unexpected negative results. Moreover, because stock exchanges are necessary for the economic growth in our modern economies, this study can be considered important, because it investigates one important economic aspect. This study comes to investigate the role that the most external and internal financial factors play in determining the common stock market price so it determines the effect of Money supply, GDP at factor cost, Inflation, Short term interest rate, Exchange rate, Dividend policy, Earnings, Economic value added and Financial leverage on common stock market prices in India's securities market. The importance of this study increases when the need for a clearer relationship between the external and internal financial factors and the common stock market prices becomes more apparent to those who trade stocks in the available stock exchanges. The current study is considered a part of the efforts devoted in this direction.

This study differs from the previous related studies as it is been done keeping both the External (Macro) and Internal (Micro) factor into consideration, on which there is not been enough work done in India. This study involves some of the most important factors like Economic value added and Real effective exchange rate determinants of common stock price with an application of modern econometric techniques like GMM etc. Many previous studies examined the relationship between financial variables and stock market prices in emerging economies but very few of them absorbed the effect of taking both macro and financial variables simultaneously on the market equity price.
1.10 STATEMENT OF PROBLEM

The years in the recent past are characterized by significant growth in the Indian stock market. This growth in stock market can be easily demonstrated in terms of different indicators designed by the economists to capture the size, activity and efficiency of the financial sector as a whole and for specific financial markets such as the stock market. While stock prices of all the important sectors in the Indian stock market such as automobile, consumers’ durables, FMCG, capital goods, PSU, healthcare, metal, oil and gas and new economy sector are riding high since late 2004, the stock price boom of 1999–2000 was confined only to the new economy sector. This situation produces a set of questions that are dealt within this project. The first question that might arise is what could possibly explain such movements in stock prices? Are all these stock price changes essentially of same character? Does the presence of such changes points towards inherent instability in the Indian stock market? The present project tries to explore these. The last few years of the twentieth century were characterized by E-revolution that subsequently gave rise to the ‘new economy paradigm’. The paradigm asserted the new technology and globalization to have ushered in a new era of stable, faster and inflation-free growth and hence stronger profit. This improved productivity would translate into improved and high valuation of new economy stocks in the stock market. This was, as claimed the paradigm, the initiation of a paradigm shift. A look at the Indian stock market reveals significant stock value increment over these years that could be attributed to the high growth rate of the new economy sector. The question remains: Is it true that with E-revolution and consequent productivity gain, the country’s long-term growth rate has shifted upwards leading to disappearing of the old pattern of boom and bust? Or, did India experience a serious asset price bubble?

In more recent years, the Indian stock market is once again experiencing a continuous increase in stock prices. The recent movement is, however, different from that the Indian stock market faced in the late 1990s. The 1999–2000 boom was driven mostly by new economy sector, where as in recent years, all the important sectors are experiencing stock price increase. This stock price change hence is being explained as a reflection of better performance of real economy. The economy could have moved to a high growth path where all the sectors are taking part in the growth process. This high valuation in the stock market could be an indication of a paradigm shift.
study explains the working of the Indian capital market in recent years and aims to look for functional inconsistency, if any, ingrained in the stock market. Specifically, it burrow to ascertain whether there been any significant adjustment in recent years in the Indian stock exchange and the behavior and features of such correction, if there is any. Existence of volatility is often advertised as a ‘barometer’ of stock market vulnerability. It assumes particular significance if the price changes are not based on economic fundamentals. Along with the presence of volatility, the absence of explanatory power of fundamental variables in determining stock prices could indeed point towards susceptibility of the Indian stock exchange in recent years. Stock prices explained extreme volatility lack its practicality as a ‘symptom’ about the real intrinsic value of a firm, thereby curtailing the informational symmetry of the market. Presence of irrational buoyancy, herd practice with evidence of strong global and even mild regional contagion and speculation in a market with extreme volatility might make the situation worse by curtailing efficiency further.

Further, these dynamics in stock market put a question mark on the functional efficiency of the Indian stock exchange. Of late, among practically all sections of market participants, there has been a heightened interest in the activities of the stock market; by shedding light on some of the issues involved and adding to the body of knowledge in this domain that attracts centre stage of attention, the project certainly makes its contribution in the service of the society. It analyzes the apparent mess of the mass of information emanating from the markets, presents the trends and indicators in clear profile and hopefully helps both participants and policymakers in making decisions out of choices thus available and formulating policies appropriate to the market conditions that may evolve in any later period and in conformity with the needs of the society.

According to Brado (2002) these financial instabilities raise questions about the extent to which stock markets performance reflect fundamental economic factors. Brado also observed that similar questions can be raised about the steady rise in markets performance during the decade of the 90s that caused many analysts to doubt whether markets reflect economic fundamentals. The movement of economic fundamental and stock market performance needs to be investigated like, what is the role of individual economic factor in explaining the variation in stock returns. If the growth in stock markets has little relationship with economic variables, then the growth can be said to reflect only speculative bubbles and casino characteristics
which governments cannot control, as opposed to deliberate fiscal and monetary policies to influence macroeconomic factors.

Furthermore, economic planners in Asia would want to know how dependable the inflow of foreign capital is, given recent international financial crises. If stock markets achieve high growth, policy makers would want to know how effective they are from the point of view of their impact on economic growth, instead of serving merely as cash vaults for international speculators. While some researchers, (Demirque-Kunt & Levine, 1996; Levine 1996; & Yarty, 2008) have concluded that stock markets play a significant role in economic growth, other researchers (e.g. Arestis et al., 2001; Orlik, 2009; & Zang and Young, 2007) have found no significant relationship between Stock Market development and economic growth. Those researchers that express a contrary view on the effectiveness of stock markets in developing countries point to inadequate institutional factors as a key impediment to stock market productivity. Some believe the market has always been over-valued and is undergoing self-correction indicating that the reduction in share prices will be permanent; others see the correction as temporary. This difference in perception also arises because of differences in understanding of what really is driving the fall in market value of shares. While it is believed in some quarters that share prices rose faster than both market and other economic fundamentals, some see the Indian stock market as not having even grown up to its fundamentals and so still having opportunities for further growth, indicating that the correction is very temporary.

Furthermore, recent events seem to indicate that the Indian capital market is in no way exempted from the proven imperfections in financial markets throughout the world. The financial turmoil originating in the developed world in August 2007 has since spread to developing countries, and Asian market has not been immune to the secondary effects of the global financial crisis. When markets are volatile the nature of informational flow from one market to the other across the globe is unprecedented, and the potential investors are wary to take risk as at this time, then there is a need to assess the long run relationship of these markets with some crucial macroeconomic variables as to ascertain their true status and provide the prospective investors with a consistent regulatory frame work.

In addition, probability of future recurrences is higher if the underlying causes of the problems are not unearthed. This research work sets out to systematically study the market with a view to understanding the different roles of economy fundamentals and
companies financial in the determination of stock pricing and market movements. The critical measure of market activity used in the study is NIFTY 50 share price index.

**1.11 SCOPE OF STUDY**

This study covers the trading activities of Indian secondary market (derivatives and commodity market do not constitute the study). The aim is to investigate and discover how far the Indian stock market is dependent on the performance of its own economy and how it is affected by the companies own fundamentals. The study will unfold the dominating factors affecting the unknown and irregular, nonstationary, chaotic pattern of the Indian capital market of the last 19 years database. This was a period that saw the rapid development of stock markets and market capitalization in many developing countries in general and in India particularly. This is the period when India rediscovered the market approach to business and investment. This duration also captures the effect of two major economic crises (Asian crisis 1997 and the recent global financial crisis, furthermore, foreign portfolio investment was reinvigorated and capital flight was slowed down due to a movement toward macroeconomic stability and the internet revolution in the 1990s that helped to increase stock prices in many developing countries (Arestis et al., 2001)).

The study gives the opportunity to recognize financial and macro factors deciding the erratic behavior of the CNX Nifty index. Variables such as political environment, cultural and socio factors were kept beyond the scope of this study which could potentially have an effect on many economic and company's specific factors. Portfolios managers and investors may find results in this research useful for determining the future behavior and performance of stock prices, for identifying investment approaches, pursuing available investment opportunities, and reducing the probability of high value losses in the market.

**Assumptions**

The choice of Macro and Micro economic variables was critical to the outcome of this study. Therefore, at the onset of this study, the researcher assumed that the levels of
the studied variables would reflect the strength of the economies in the region (i.e. India), thus they were chosen for the regression analyses.

This study assumed an adequate degree of banking development as reflected on the amount of private credit extended by banks to investors. According to Yartey (2008), private credit as a percent of GDP is the most reliable indicator of the activity of commercial banks. It shows the level of external resources that are moved through the banking sector to private firms. The level of private credit also shows how banks perform their main function of channeling savings to investors.

1.12 SIGNIFICANCE OF THE STUDY

The existence of well-functioning capital markets is essential to the mobilization of resources both internally and externally. Some analysts (e.g. Zang, H. & Kim, Y. C., 2007) equate stock markets in developing countries with casinos. According to this view, high stock market liquidity may retard economic growth because investors are in the market for short-term gains only. However, recent evidence (e.g. Humpe, A. & McMillan, P. C., 2009) suggests that stock markets can help to accelerate economic growth. Therefore, governments in many developing countries, including those in India have been making efforts to create a stable macroeconomic environment for private investors in order to take advantage of the boom in international stock prices. One way they have tried to achieve this is to formulate and implement sound macroeconomic policies that would improve the operations of their stock markets which they hope would act as mobilization centers for capital. Evidently, such policies will require foreknowledge about the impact of changes in economic factors on the returns of listed companies.

Therefore, the issue of whether stock markets reflect economic fundamentals or speculative bubbles is an important one because of the potential role these markets may have on the allocation of capital and on the policy issue of whether governments in developing countries should encourage their development. According to Levine (1996), changes in macroeconomic factors such as exchange rates, interest rates, liquidity, and inflation, are critical to the viability of stock markets. Therefore, investigating their unanticipated changes (risks) and their effect on asset pricing (returns) becomes necessary because of the impact they could have on policy formulation during the mobilization long-term capital for investment. Economic
factors are important to policy makers because of their perceived importance in influencing stock prices and the direction of the economy. Furthermore, if policy makers would decide to establish stock markets, they may not be able to sustain their viability if the institutions and companies are not adequate or compatible with the functioning of modern capital markets. Therefore, this study factored into the regression equations company's specific fundamentals as well. Hence, current study also investigate whether the particular company's fundamental (leverage, earnings, value addition, low liquidity, dividend policy etc.) will affect the trading strategies of the investors or not. The results obtained in this study could serve as a guiding tool for stock brokers, financial analysts, and portfolio and fund managers in advising and managing their clients’ resources in Indian sub continent and elsewhere.

This study could thus offer an opportunity for Indian policy makers to formulate and implement regulatory reforms in order to successfully develop and improve stock markets keeping in mind an approximate mix of significant macroeconomic and institutional variables. With the appropriate economic and country-specific reforms, the appropriate authorities might be able to exploit the full potential of stock market which may further help to attract the potential investors. This research focuses on CNX NIFTY from the point of view of the viability and historical performance of the stock exchange because fewer academic studies have been devoted to the mix of macro and micro variables as explanatory factors to show the behavior of the stock market.

1.13 LIMITATION AND DELIMITATION OF THE STUDY

One limitation of this study may be brought about by the problem of initial years omitted variables which may marginally influence the results of the research. Cultural and social factors could potentially have an effect on many economic variables and company's fundamentals. Few researchers (e.g., Berglof & von Thadden, 1999; Garretsen et al, 2000; & Hofstede, 1980) have done work on the effects of cultural and social factors on financial institutions. More research remains to be done in this area because intuition and experience would tell us that in developing countries, cultural and social factors are important in economic growth and development. The more researchers learn about the effect of these endogenous factors, the more successful will investment decisions may become and the more
effective will policy makers perform in formulating economic and financial policies that will affect investors and the general public.

Furthermore, the study has the following limitations:

- Although innumerable numbers of factors are involved in the frequent dynamism of the market, the study involves only the limited yet major macro and micro variables.
- Market mood, sentiments, Panic situation, forecasting etc are immeasurable but some of the significant factors contribute to the volatility, thus the study does not contribute to such variables.
- Assignment of scales and values (numbers) to financial variables such as, Economic value added may be significantly arbitrary on the part of researcher. EVA also possesses some qualitative aspects such as the behavior of the top management and board of governors. Hence, their knowledge about the EVA and the attitude of investors to this concept were not taken into concern due to difficulty in measurability.
- The influence of the advancement in the developed markets mainly US equity market on the domestic equity markets was kept beyond the scope of the current study.
- Tendency of financial asset returns to display systematic patterns at certain times of the day, week, month and year. This observed phenomenon explaining deviation from random walk model is what is popularly known as calendar anomalies/“seasonal” effects is kept out of the researcher’s investigation.
- The cross – sectional volatility of individual stocks could have an impact on the result.
- All the secondary source of data becomes inaccessible, this adds to the limited reach.

1.14 FOCUS AND FORMAT OF THE THESIS

The researcher now discuss about the focus of this thesis along with the broad aspects of its coverage. The thesis primarily aims at carrying out a systematic and comprehensive study on the impact made by a set of macro and micro financial variables in the Indian stock market. It may be noted that although there are several
important characteristics of Emerging market economies (EMEs), two most important are related to reforms in capital market as well as in exchange rate system, which induce increase in both local and foreign investments leading eventually to increase in gross domestic product. Since EMEs are in transition and hence not stable, emerging markets offer an opportunity for investors who are ready to take more risk to their portfolios. Thus, studying the effect of variables on stock markets of emerging markets is important in empirical finance, and more so for major EMEs like India.

This thesis on Indian stock market is essentially an empirical study covering all relevant aspects. In order to make the empirical findings, a study on the contribution of variables in the Indian stock market based on NIFTY 50 of National stock exchange had been made. Further, the study has been done with data on annual level frequencies. Now a brief discussion over the broad aspects of this study.

Model fit

The fit of the model to the data is an important consideration for estimation. However, it is important to avoid ‘tweaking’ the models solely to improve the fit to the available data since this may result in models that provide a good fit to the dataset. Though, the methodology used in thesis is explained in detail in Chapter III, titled Methodological approach, a brief outline of modelling is stated below.

A number of decisions have been taken in order to arrive at the preferred econometric estimator:

- Whether to use a pooled estimator, or effects-based models which are designed to take into account cross-sectional variation/heterogeneity;
- Whether the preferred model is dynamic (i.e., whether it includes lagged adjustments);
- If the preferred model is dynamic, what the preferred estimator is;
- Whether the estimates can be used in the forecasting framework;
- Whether the data is capable of estimating such a model.

Figure 1 - Illustrate the decision process used to arrive at the preferred estimator

<table>
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<th>Approach Selection</th>
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<tbody>
<tr>
<td>Fixed or Random Effects</td>
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<tr>
<td>Static or Dynamic model</td>
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<tr>
<td>Dynamic Panel data or Error correction</td>
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</tbody>
</table>
Following the identification of the possible econometric models/estimators, the preliminary modeling undertaken to arrive at a preferred econometric model and estimator is described in this section. The use of effects-based models is important to allow for the heterogeneity in the dataset. The choice between fixed and random effects was based on extensive statistical analysis, which suggested that fixed effects were preferable.

The preliminary analysis revealed that static models result in unreasonably large parameter estimates and very high t-statistics, and hence a dynamic specification is preferred. Further, there are two possible alternatives for dynamic models: an ECM or an ARDL model. The difference lies in whether the long-run relationships are modeled explicitly (in an ECM) or implicitly (in an ARDL model). The preliminary modeling also suggests that the data cleaning process has not had an undue large effect on the estimated elasticities.

Following advice from academic advisers and earlier literature, an ARDL model was chosen for use in this study due to the relatively small number of time-series observations available in the dataset, which is likely to make identification of explicit long-run elasticities challenging. This leads to the final decision required in order to arrive at the preferred econometric estimator: which of the two common dynamic panel data estimators is preferred? On the basis of its theoretical advantages, the Arellano Bond estimator has been chosen in favour of the Blundell–Bond estimator.

**Brief outline on the data sets**

A brief overview of the dataset is presented over here (detailed in Chapter III). Any stock market index should capture the behavior of overall equity market, and also reflect the changing expectations of the stock market about future dividends of the country's corporate sector. Measurements of such an index should also represent the returns obtained by "typical" portfolios in the country concerned. Keeping in mind the scope and objectives of the study the sample is taken from the companies listed in NSE due to the reason that it has remained in the forefront of modernization of India's capital and financial markets. The prime index of NSE known as S & P CNX NIFTY or NIFTY, in short is taken for the purpose of examination. In order to understand the entire layout of the thesis a brief introduction is given below.
The study was analyzed using annual - level data. The daily closing price has been quoted as the value of the index at daily level which was further averaged annually. All these daily- level data have been taken from CMIE data base and downloaded from the official websites of the National Stock Exchange (www.nseindia.com).

**Other data sets:** Now a brief statement on the other variables used in the study along with their data sources. Insofar as the study with data at the level of monthly frequency (which was further averaged annually) is concerned, the following set of macroeconomic and financial variables have been used.

Gross Domestic Product at factor cost (at constant price with base year: 2004-2005)
Broad Money Supply (based on M3)
Wholesale price Index (with base year: 1993-94)
Real effective exchange rate (36 currency Bilateral weight with base year: 1993-94, rupees per $US)
Prime lending rate (short term)
Economic Value added (calculated as per CAPM)
Earnings per share
Dividend per share
Financial leverage
Dividend payout

The data on macro economic variables was collected from relevant issues of RBI Handbook of statistics on Indian economy, annual publication of the Reserve Bank of India. NSE composite has been taken from website of NSE. The time series on the five financial variables (ratios) viz. EPS, DPS,D/E ratio, Dividend payout has been obtained from CMIE database Prowess, website of NSE and moneycontrol. EVA has been author's own calculation (detail of computation is presented in chapter IV). The lengths of the time series for all the macro variables and financial ratios may not be the same as of the study period as it depends on the availability from various secondary sources.

THE STRUCTURE OF THE THESIS
REFERENCES


