CHAPTER I

THE ISSUES, METHODOLOGY AND OBJECTIVES OF THE STUDY

1.1 INTRODUCTION

Investment means parking of savings in some avenue that would yield considerable returns in the future. Savings could be kept idle; but, doing so would yield nothing. Instead, the savings can be invested in various avenues of investment such as bank deposits, postal deposits, life insurance, shares, debentures, bonds, etc. Risk associated with each of these investments varies and hence, varies the return also. Of the various forms of investment, the investment in equity shares has gained wide spread popularity.

One can invest in equity shares via a stock market, a place where shares can be bought and sold. Stock markets serve the dual purpose of being a source of finance and a source of income. For firms, stock markets and the investments made therein, act as a source of finance, whereas, for investors, they act as a source of income. Of the various stock markets, one of the emerging markets that has gained wide spread popularity is the Indian stock market.

The Indian stock market has seen tremendous developments over the past few decades. It has undergone various reforms such as screen based nation-wide trading, dematerialization and electronic transfer of securities, rolling settlement and establishment of regulatory authorities, among others. Because of the efficient trading and settlement system and the regulatory frameworks, there is significant
improvement in efficiency, transparency, liquidity and safety. These various reforms and developments have led to a phenomenal growth of equity investments in India. It has become easier even for the naive investors to invest their savings in equity shares.

Equity shares carry considerable amount of risk, but the return that they yield is also higher. To reap good returns, it becomes essential for investors to understand the various dynamics involved in share prices, as it would help them to make wise investment decisions. At the same time, it is equally important for firms to understand the various issues relating to share prices, since share price is one of the avenues through which information regarding the current and future performance of a firm is conveyed to the outside world.

Various issues relating to share prices have been investigated by the extant studies. It is one of the widely studied areas in finance and the quest to understand the various issues relating to share prices still goes on. In this thesis, three such crucial issues relating to share prices are being empirically examined. The issues are: (i) whether share prices and dividends of Indian firms affect each other in the long-run; (ii) what are the firm specific fundamental factors that influence the share prices of Indian firms; and (iii) whether price pressure hypothesis with respect to stock index revisions hold good in the Indian market.

The following sections contain a discussion of shares and related concepts such as stock markets, stock exchanges and stock indices. This is followed by a brief note of
the various issues being addressed in the thesis. The objectives, methodology, limitations and organisation of the thesis then follow.

1.2 SHARE: CONCEPT AND TYPES

SHARE

The capital required by a firm is divided into small units of fixed amount. Each of these units is called a ‘share’ and the person holding the share is called the shareholder. By way of issuing shares, firms get the fund they need.

Nowadays shares are held in electronic form in a demat account. Earlier, shares were held in physical form. Physical shares used to be in paper form and had distinctive number. Through the process of dematerialization, the physical shares are converted into demat shares, which are held in electronic form by the depository. Two depositories exist in India, viz., National Securities Depository Limited (NSDL) and Central Depository Services (I) Limited (CDSL).

A demat account allows the investor to buy, sell and transact shares in an easy and a safer way. In transactions done via a demat account, unnecessary paperwork and delays are avoided. The various other benefits offered by a demat account include reduced brokerage charges, immediate transfer of securities, no stamp duty on transfer of securities, elimination of risks associated with physical certificates such as bad delivery, fake securities, etc.
SHARE PRICE

The price of a single share is called the share price. It is the price of a unit of ownership in a company (a share). Share price of a firm reflects the market evaluation of the firm’s performance. It is an indicator of how the investors evaluate the current and future performance of the firm.

Share prices keep moving either upward or downward based on the supply and demand of the share. Market forces make the share price change every moment. If a share has more buyers than sellers, its price will move up. If, on the other hand, sellers of the share are more than its buyers, then its price will fall down.

TYPES OF SHARES

Shares are of two types, viz.:

1. Equity shares
2. Preference Shares

**Equity shares**, also known as ordinary shares, entitle the holder of the share to be one of the owners of the firm. They have residual claim to the income of the firm and residual claim over the assets of the firm in the event of liquidation. They rank after preference shares, for payment of dividend and repayment of capital when the company winds up. The equity shareholders enjoy the right of voting at the general meeting of the company and are the true owners of the firm.

There are two forms of returns that an equity share yields: one is dividend and the other is capital gain. Dividend is a portion of the firm’s profit that is distributed to
the shareholders. Capital gain is the profit that one makes when he/she sells the share for more than what he/she paid for it. However, if the sale price is lower than the buy price, then the holder of the share will end up in capital loss.

**Preference shares** are those that enjoy priority over equity shares in terms of dividend payment and repayment of capital when the company winds up. However, creditors and debenture holders of the firm enjoy preferential right over the preference shareholders. Preference shareholders are entitled to a fixed rate of dividend. Unlike ordinary shares, preference shares generally carry no voting rights, except few special circumstances.

Based on differing rights, the preference shares are of various types, viz.:

(a) Cumulative preference shares
(b) Non-Cumulative preference shares
(c) Participating preference shares
(d) Non-Participating preference shares
(e) Convertible preference shares
(f) Non-Convertible preference shares
(g) Redeemable preference shares
(h) Irredeemable preference shares

(a) **Cumulative Preference Shares**

If a firm fails to pay dividend in a particular year, the holders of cumulative preference shares are entitled to receive the missed dividend payment, the next time when a dividend is declared. In other words, the dividends that are unpaid to
preference shareholders get accumulated until they are paid. They must be paid in the subsequent years as arrears before any dividend is paid to equity shareholders.

(b) Non-Cumulative Preference Shares

In this category of preference shares, the unpaid dividends do not get accumulated. If the dividend is not paid by a firm in a particular year, the unpaid dividend lapses and it will not be paid in the coming years.

(c) Participating Preference Shares

In a participating preference share, two kinds of dividends are paid: one is the fixed dividend and the other is the varying dividend that varies with the level of firm’s earnings. In addition to the fixed dividend, participating preference shareholders enjoy the right to participate, with the equity shareholders, in the surplus profits of the firm that is left over after the equity dividend is paid. These shareholders sometimes enjoy the voting rights also. When the firm winds up, these shareholders have the right to participate in the surplus assets of the firm that remains after the preference and equity capital is paid.

(d) Non-Participating Preference Shares

Only the fixed rate of dividend is paid on this type of shares. The entire surplus profits or surplus assets belong to the equity shareholders; the non-participating preference shareholders do not have the right to participate in the surplus profits or surplus assets.
(e) **Convertible Preference Shares**

Convertible preference shares are those that can be converted into equity shares at a set price after a certain date.

(f) **Non-Convertible Preference Shares**

This category of preference shares cannot be converted into equity shares; once issued, they continue to be preference shares throughout the life time of the firm.

(g) ** Redeemable Preference Shares**

The capital that is raised from redeemable preference shares can be returned back by the firm to the holder, after a specified period or at any time after giving notice as per the terms of the issue. The redemption can be made either out of profits or proceeds of a fresh issue of shares.

(h) **Irredeemable Preference Shares**

Irredeemable preference shares are those that cannot be redeemed during the lifetime of the firm; they can be redeemed only when the firm winds up.

### 1.3 PRIMARY MARKET AND SECONDARY MARKET

Shares can be purchased either from primary market or secondary market. A discussion of these markets is given below.
1.3.1 PRIMARY MARKET

Primary market is the market in which firms issue shares to the public for the first time and raise funds to meet their capital requirements. It is an avenue for the firms to sell new shares to the public; hence, it is also called the new issue market (NIM). Primary market establishes a link between firms’ raising finance and the investing public.

The price at which shares are offered in the primary market is called the issue price. Firms may issue shares in the primary market either at the face value or at a discount/premium. Face value of a share is the nominal value of the share which is assigned by the issuer. It is also known as par value. For equity shares, the face value is generally a small amount such as ₹1, ₹2, ₹5, ₹10, etc.

A share is said to be issued at premium when it is offered at a price that is higher than the face value of the share. The amount charged over the face value is called the premium. A firm can issue its shares at a higher price, when it is performing well and has good fundamentals. On the other hand, shares may also be offered at a price that is less than the face value. In this case, the share is said to be issued at discount. The difference between the face value and the offer price is called the discount.

The maximum amount that a firm is authorized to raise in the primary market is known as authorized capital. The part of authorized capital which the firm offers to the public for subscription is called the issued capital. The part of issued capital which is subscribed by the public is called the subscribed capital. The part of subscribed capital which is called up by the firm for payment is the called up capital.
However, the whole of called up capital might not be paid by the shareholders; some of the shareholders might default in paying the called up money and such defaulted amount is know as arrears. The part of called up capital which is actually paid by the shareholders is called paid up capital.

Types of issues in primary market

Firms can issue shares in the primary market by the following methods:

(a) Initial Public Offer
(b) Follow on Public Offer
(c) Rights Issue
(d) Preferential Issue (Private Placement)

(a) Initial Public Offer (IPO)

In this type of issue, an unlisted firm either makes a fresh issue of shares to the public or offers its existing shares for sale to the public or both for the first time. In public issue, there is no limitation on any entity to invest i.e. it is open to all. There are two methods of pricing the shares in an initial public offer, viz., fixed price method and book building method.

Under the fixed price issue method, the shares are offered to the public at a fixed price. This price is decided by the issuing firm and the lead merchant banker. The investors, thus, know in advance the price at which the shares will be allotted. However, the demand is known only at the close of the issue.
In the book building method, the issuing firm and the lead manager fix up a floor price and cap price for the issue. The minimum price at which an investor can bid for the share is the floor price, whereas cap price is the maximum price at which a bid can be made. The range between the floor price and cap price is called the price band and investors can bid for the shares at any price in this range, during the period for which the IPO is open. After the closure of the issue, the final issue price, which can be any price in the price band, is decided by the issuer and the lead manager based on the book and the investors’ appetite for the stock. Hence, under the book building method, investors do not know in advance the price at which the shares will be allotted; the price will be known only at the close of the issue. But, the demand can be known at the end of each day.

(b) **Follow On Public Offer (FPO)**

In this type of issue, an already listed company either makes a fresh issue of shares to the public or offers its existing shares for sale to the public.

(c) **Rights Issue**

When a firm issues new shares to its existing shareholders as on a record date, it is known as rights issue i.e. the firm raises the required capital from its existing shareholders. In this type of issue, the shares are offered in a particular ratio to the number of shares held by the existing shareholders prior to the issue and the shareholders can buy the specified number of new shares at a specified price within a specified time. By opting for this type of issue, firms can raise the needed capital without diluting the stake of its existing shareholders. The subscription price i.e. the price per share is decided by the firm.
(d) **Preferential Issue (Private Placement)**

In a preferential issue, shares are issued by the listed firms only to a select group of people. Unlike public issue which is open to all, private placement issues shares only to a limited number of subscribers, such as banks, financial institutions, mutual funds and high net worth individuals. The subscriptions in a private placement are usually restricted to a limited number. As per Companies Act, 1956, an offer of securities is termed as public issue when it is made to more than 50 persons, otherwise it is a private placement.

### 1.3.2 SECONDARY MARKET

Secondary market is the trading avenue, wherein, the already issued shares are traded among the investors. In other words, it is the market where the shares are traded after being initially offered to the public in the primary market and listed on the stock exchange. It is the place where shares can be purchased from the seller as against the issuer of the share. Secondary market allows investors to adjust their holdings in response to changes in their assessment of risk and return. Another advantage of secondary market is that it provides liquidity to the investors. By way of selling the shares in the secondary market, investors can meet their cash requirements.

The buyer price is called the ‘bid’, whereas the seller price is called the ‘ask’. The former is the price at which there is a ready buyer for the stock, while the latter is the price at which there is a seller ready to sell the stock. As an indicator of liquidity of stock, bid-ask spread is used, which is the difference between the prices of best bid and best ask. A stock is said to be liquid, when the bid-ask spread is narrow.
Currently, the trades are being settled on T+2 rolling settlement. In rolling settlement, any trade that takes place on trading day ‘T’ is settled ‘X’ days later. This is known as ‘T+X’ rolling settlement. Presently, the rolling settlement in India is T+2, which means that any trade taking place on trading day ‘T’ is settled 2 days after the trade date.

1.4 STOCK EXCHANGE

Stock exchanges provide a trading platform wherein buyers and sellers can transact in securities. They provide various benefits to investors and firms. Firms, whose shares are listed and traded on an exchange, enjoy better credit standing, since investors know that management of such firms will be controlled, to some extent, by the stock exchange.

Some of the functions of stock exchanges are: it provides increased liquidity and ready market for the securities; helps investors to know the current market price of securities by recording the prices at which trades takes place and providing market quotations; directs the savings into the most productive channels; ensures fair dealings and safeguards the investors’ interests; serves as a barometer of business conditions in the country.

Of the various stock exchanges in India, the most significant ones are the Bombay Stock Exchange (BSE) Limited and the National Stock Exchange of India Limited (NSE). Majority of the equity trading in India takes place on these two exchanges.
BSE was established as "The Native Share & Stock Brokers' Association" in 1875. It is the oldest stock exchange in Asia and has the largest number of listed companies in the world. The BSE group companies are Small and Medium Enterprises Exchange (SME), Central Depository Services (India) Limited (CDSL), Marketplace Technologies, BSE Training Institute Ltd. (BTI) and Indian Clearing Corporation Limited (ICCL). Equity market, derivatives market and debt market are the various segments of BSE. BSE provides an automated screen-based online trading platform called Bombay Online Trading System (BOLT).

NSE, the largest stock exchange in India, was incorporated in November 1992. It is owned by a group of leading financial institutions, banks, insurance companies and other financial intermediaries in India. The NSE group comprises of India Index Services & Products Ltd. (IISL), National Securities Clearing Corporation Ltd. (NSCCL), NSE.IT Ltd., National Securities Depository Ltd. (NSDL) and DotEx International Limited. The three segments of NSE are capital market, debt market and derivatives market. NSE provides a nation-wide fully automated screen based trading system known as the National Exchange for Automated Trading (NEAT) system.

1.5 STOCK INDEX

Stock index is a portfolio of stocks that are representative of the entire market or a particular sector or segment of the market. It captures the overall behaviour of the equity market and indicates the market trends by showing how a specified portfolio of share prices is moving. A good stock index is one that is well diversified, highly liquid and represents the market.
The index movement is indicated by the average price movement of the set of stocks that constitute the index. Out of the basket of stocks that form part of the index, some may have good news, while the others may have bad news associated with them. When the returns of the group of stocks comprising the index are averaged, the individual stock news gets cancelled. What is left over is the news that is common to all the stocks and the index captures this news. This way, a stock index reflects the movement of the stock market as a whole.

Stock market indices offer various benefits. They serve as:

1. A lead indicator of the performance of the overall economy
2. A barometer for the overall market behaviour
3. A benchmark for portfolio performance
4. An underlying for derivative instruments like index futures and options
5. Underpins products like exchange-traded funds, index funds etc.

BSE offers various stock indices, viz., Sensex, BSE-100, BSE-200, BSE-500, BSE Mid-Cap, BSE Small-Cap, BSE IPO, BSE Shariah 50, BSE Teck and BSE PSU Index. Of these, Sensex is the oldest index of India and is the most widely used indicator of the Indian stock market. It was launched in 1986 and comprises of 30 stocks listed on BSE. Stocks that form part of Sensex represent large, well established and financially sound firms and they cover various key sectors. The base period of Sensex is 1978-79 and the base value is 100. To compute Sensex, free-float market capitalization methodology is being used.
In a free-float market capitalization method, the weightages of stocks that constitute the index are decided by considering only the equity holdings that are available for trading. The promoters’ holding are not available for trading and hence, they are not given weightages for deciding the levels of indices. The free-float market capitalization is computed by multiplying the equity’s price by the number of shares that are readily available for trading in the market. Unlike full market capitalisation method that considers all of the outstanding shares, the free-float market capitalization method excludes promoter, government and strategic holdings and other locked-in shares.

NSE also offers various stock indices, viz., S&P CNX Nifty, CNX Nifty Junior, CNX 100, CNX 500, CNX Midcap, Nifty Midcap 50, CNX Defty and India VIX. It offers various sector-based indices such as CNX Auto, CNX Bank, CNX Energy, CNX Finance, CNX FMCG, CNX IT, CNX Media, CNX Metal, CNX MNC, CNX Pharma, CNX PSU Bank, CNX Realty and S&P CNX Industry Indices. Of these various indices, the most popular and widely used index is S&P CNX Nifty.

Nifty, launched in 1995, is a well diversified index that is composed of 50 stocks and accounts for 24 sectors of the economy. Nifty tracks the behaviour of a portfolio of blue chip firms. The stocks that form part of Nifty are the largest and most liquid Indian stocks that are listed on NSE. The base period of Nifty is November, 1995, the base value is 1000 and the base capital is Rs.2.06 trillion. Nifty is owned and managed by India Index Services and Products Ltd. (IISL), a joint venture between NSE and CRISIL. Free-float market capitalization methodology is being used to compute Nifty.
1.6 STOCK INDEX REVISIONS

Composition of a stock index cannot remain the same forever. In order to ensure that stock indices reflect the true state of the equity market, they need to be regularly monitored and revised. Stocks may have to be added and deleted from the index due to various reasons. For instance, a stock index may be revised, when a stock that is currently in the index undergoes corporate actions or a stock that is part of the index no longer meets the eligibility criteria required for inclusion in the index.

Stock index revisions have now become a common phenomenon in almost all the markets worldwide. The major stock indices of the Indian stock market, viz., Sensex and Nifty have also witnessed several changes in their composition, since inception. Both BSE and NSE have separate committees for index maintenance that regularly monitors the indices and effects any changes to them, if needed.

All the BSE indices are periodically reviewed by the BSE index committee. The committee comprises of capital market experts, fund managers, market participants and members of the BSE Governing Board. The committee frames the policy guidelines for the maintenance of the BSE indices and meets every quarter to discuss the index related issues. The announcement of any revision to be made to the indices is made six weeks prior to the actual implementation of the revision. Also, there are certain criteria, which stocks need to fulfil in order to get included in an index. For instance, some of the criteria that a stock needs to fulfil for inclusion in Sensex, the most widely used index of BSE, are: the stock should have at least three months of listing history at BSE; on each and every day in the last three months, the stock should have been traded at BSE; the firm should have reported revenue from its core
activity in the latest four quarters and the firm should have an acceptable track record.

All the NSE indices are managed by two committees constituted by India Index Services & Products Ltd. (IISL). One is the Index Policy Committee and the other is the Index Maintenance Sub-committee. Index Policy Committee frames the policy and guidelines for managing the NSE indices, while taking decisions about inclusion or exclusion of a stock from the index is the job of Index Maintenance Sub-committee. Nifty, the most popular index of NSE, is reviewed every six months and a six weeks’ notice is given to the market before any changes are made to the index composition. For inclusion in Nifty, a stock has to fulfil certain criteria, viz., liquidity, floating stock and market capitalisation. In case a firm that comes out with an IPO wants to be a part of Nifty, it has to satisfy all the criteria set by the committee for a three month period instead of six month.

1.7 INDEX FUNDS

There are two types of fund management, viz., active fund management and passive fund management. Under the active fund management, all the investment decisions of the fund are taken by the fund manager. It is the fund manager who decides the firm, instrument or class of assets into which the investment is to be made. However, in an actively managed fund, the decisions taken by the fund manager need not be right all the time; sometimes, it may go wrong, which could result in loss to the investors. This paved way for passively managed funds such as index funds.
In passive fund management, the fund manager does not take any investment decisions; fund manager do not carry out any analysis as to which stocks to invest in. Instead, they select a target market index and try to replicate the performance of the target index. They invest in all the stocks that comprise the target index, in proportions, that is equal to the weightage of the stocks in the index. This way, they try to provide returns equal to the return given by the target index. The difference between the fund’s return and the return of the index being tracked is called the tracking error. The performance of index funds is evaluated on the basis of tracking error; lower the tracking error, closer is the fund’s return to the return of the target index.

1.8 QUESTIONS OF INTEREST

This section briefly outlines the three issues that are being investigated in this thesis.

The first issue, share price-dividend causal nexus, examines whether share prices and dividends of Indian firms affect each other in the long-run. The long-run relations between share prices and dividends have been studied by the extant studies based on two predominant theoretical frameworks, viz., present value model of stock price and the Lintner’s (1956) dividend model. As per the present value model of stock price, stock price is a linear function of the present discounted value of expected future dividends. Campbell & Shiller (1987) state that, if the present value model of stock price is true, stock prices and dividends should be cointegrated.

Later, based on present value model and Lintner’s (1956) dividend model, Sung & Urrutia (1995) derived models of causality from stock prices to dividends and from
dividends to stock prices. They state that current and past stock prices affect current dividends, and that current and past dividends affect current stock prices. Following these studies, cointegration and causal relations between share prices and dividends have been investigated by various studies for different markets; however, the examination of the causal relations between share prices and dividends, for the Indian market, has been left untouched.

The second issue, *share price determinants*, is about the identification of the firm specific fundamental factors that influence the share prices of Indian firms. Investment in equity shares serve dual purpose of yielding considerable returns to investors and act as a source of finance for the capital requirements of firms. However, the returns from such investments are subject to vary, since share price movements depend on various factors, which could be either firm specific internal factors, such as earnings, dividend, etc. or external factors such as interest rate, foreign exchange rate, etc.

Possessing knowledge of such factors and their likely impact on share prices is imperative for investors and firms. It would aid investors in making wise investment decisions and enable firms to enhance their market value. A large body of literature is available that has examined the issue of share price determinants; however, the way the extant studies have examined this issue, using panel data, involves certain issues which needs to be addressed.

The third issue, *price pressure hypothesis*, examines whether price pressure hypothesis with respect to stock index revisions hold good in the Indian market.
Price pressure hypothesis states that index revisions will cause a temporary change in the price and volume of stocks that are included to or excluded from the index and that the prices will gradually revert to their fundamental values after the revision. Such price movement is attributed to the heavy trading activity of index fund managers in response to index revisions.

The price pressure hypothesis has been extensively investigated for different markets. However, very few studies have investigated this issue for the Indian market; moreover, these studies have either examined only the price effects or if both price and volume effects have been examined, the conclusions drawn by the study regarding the validity of price pressure hypothesis are not emphatic.

1.9 OBJECTIVES OF THE STUDY

In order to examine the above discussed three issues, the following objectives are set:

(i) The first objective is to examine whether share prices and dividends of Indian firms affect each other in the long-run

(ii) The second objective is to identify the firm specific fundamental factors that influence the share prices of Indian firms

(iii) The third objective is to test whether price pressure hypothesis with respect to stock index revisions hold good in the Indian market

1.10 METHODOLOGY

This section briefly discusses the econometric methodology that is employed to empirically examine each of the above said objectives.
1.10.1 SHARE PRICE-DIVIDEND CAUSAL NEXUS

To examine whether share prices and dividends in the Indian market affect each other in the long-run, panel data consisting of annual time series data over the period 1999-2008 and cross section data pertaining to four sectors, viz., capital goods, healthcare, metal and PSU is used. As a measure of dividend, dividend per share computed as annual dividend amount paid to equity shareholders upon number of equity shares outstanding is used.

The empirical examination is carried out by employing panel unit root tests, panel cointegration test, fully modified ordinary least squares method and panel error correction model. The panel unit root tests, viz., Fisher-ADF and Fisher-PP tests are employed to examine the unit root properties of the data. These tests assume individual unit root process i.e. the autoregressive coefficient \( \rho_i \) is allowed to vary across the cross sections. Next, if the variables are integrated of order one, panel cointegration test of Pedroni (1999) is employed to test for cointegration between the variables. This test allows for considerable heterogeneity among individual members of the panel. It allows for individual member specific fixed effects, deterministic trends and slope coefficients.

If cointegration is established among the variables, the fully modified ordinary least squares (FMOLS) method proposed by Pedroni (2000) is employed to obtain the estimates of the cointegrating parameter. If the conventional ordinary least squares method is used, it will yield biased estimates due to serial correlation and endogeneity problems. FMOLS, on the other hand, takes care of serial correlation and endogeneity problems by using a serial correlation correction term and
transformed endogenous variable in the conventional ordinary least squares estimator and produces unbiased estimates. It allows for considerable heterogeneity across individual members of the panel.

Finally, the panel error correction model as proposed by Canning & Pedroni (2008) is estimated to infer the direction of long-run causality between share prices and dividends. This model makes use of two tests, viz., group mean based test and lambda-Pearson test.

1.10.2 SHARE PRICE DETERMINANTS

To identify the firm specific fundamental factors that influence the share prices of Indian firms, panel data comprising of annual time series data over the period 2000-2009 and cross section data pertaining to three sectors, viz., auto, healthcare and PSU is used. As possible determinants of share prices, four firm-specific fundamental variables, viz., dividend, profitability, price-earning ratio and leverage, are considered.

The dependent variable, share price, is measured as the average of yearly high and low prices of the share. As a measure of dividend, dividend per share computed as annual dividend amount paid to equity shareholders upon number of equity shares outstanding is used, and it is expected to positively influence share prices. Return on assets i.e. the ratio of profit after tax to total assets is used as a surrogate for profitability. Share price is expected to be positively influenced by profitability.
Price-earning ratio is computed as market price per equity share upon earnings per share of the firm and is expected to bear a positive relation with share price. To examine the influence of leverage on share prices, debt-equity ratio is used and it is expected to negatively influence share prices.

The empirical examination of share price determinants involves testing for unit root and cointegration, followed by the application of FMOLS method to identify the factors that influence share prices. As a first step, the panel unit root tests, viz., Fisher-ADF and Fisher-PP tests are employed to examine the unit root properties of the data. This is followed by the test of cointegration between the variables share price, dividend, profitability, price-earning ratio and leverage. For this, the panel cointegration test of Pedroni (1999) is used. Finally, in order to identify which of the chosen explanatory variables are significant determinants of share prices, the FMOLS method of Pedroni (2000) is employed.

1.10.3 PRICE PRESSURE HYPOTHESIS

To test whether price pressure hypothesis with respect to stock index revisions hold good in the Indian market, the stocks that are included to and excluded from S&P CNX Nifty index during the period September, 1996 to September, 2010 are considered. The final data sample comprises of 24 inclusions and 31 exclusions. The empirical investigation is carried out by employing event study methodology. This method enables to estimate and draw inferences about the impact of a particular event on the behaviour of stocks under consideration. The event period consists of the event day, and 10 days prior to and 10 days after the event day. The estimation
period starts from 170 days prior to and ends at 51 days prior to the announcement
day of the event.

In order to measure the price effects of index revisions, abnormal returns are
computed. Abnormal return of a stock is the difference between the stock’s observed
return and its expected return. Three methods are employed to compute the abnormal
returns, viz., mean adjusted model, market adjusted model and market model. After
calculating the abnormal returns, mean abnormal return is computed as the average
of the abnormal returns of sample stocks, so as to draw an overall inference about the
impact of the event on stock prices. In order to draw inference about the impact of
the event over multi-period interval, cumulative abnormal returns are computed as
the sum of mean abnormal returns on each day during that period.

Next, the volume effects of index revisions are measured by computing abnormal
volumes. Number of shares traded is taken as a measure of trading volume and is log
transformed. Abnormal volume of a stock, which is the difference between the
stock’s observed volume and its expected volume, is computed using three methods,
viz., mean adjusted model, modified Harris/Gurel model and market model. Mean
abnormal volumes are then computed to draw an overall inference about the impact
of the event on trading volume of stocks. It is computed as the average of the
abnormal volumes of sample stocks.
1.11 LIMITATIONS OF THE STUDY

The empirical investigation carried out in this thesis suffers from the following limitations:

1. Limited sectors have been covered under the examination of the first and second issues i.e. the share price-dividend causal nexus and share price determinants, due to non-availability of data; out of the initial sample, many sectors had to be dropped from the final sample due to non-availability of continuous data over the sample period.

2. For the examination of share price-dividend causal nexus and share price determinants, limited time period is covered, because share price data for the sample firms is not available for a longer time period.

3. Due to non-availability of high frequency data on dividend, the analysis has been carried out using annual data, which limited the number of observations available for econometric estimations.

4. The empirical investigation of the three issues is carried out using secondary data and hence, any inaccuracy associated with secondary data holds.

5. The sample size for the investigation of price and volume effects of Nifty revisions is limited, since the announcement date and other required data was not available for some of the revisions.

1.12 ORGANISATION OF THE THESIS

The rest of the thesis is divided into four chapters. The second chapter titled as “Share Price-Dividend Causal Nexus: Evidence from India” investigates the first objective i.e. whether share prices and dividends of Indian firms affect each other in
the long-run. The chapter is organised as follows: The theoretical background and the extant empirical studies on the long-run relations between share price and dividend are discussed in section 2.1. The methodology employed to examine the issue, viz., panel unit root tests, panel cointegration test, fully modified ordinary least squares method and the panel error correction model, are explained in section 2.2. Section 2.3 reports the sample data used and discusses the empirical results. The concluding remarks are presented in section 2.4.

The third chapter examines the second objective, which is identification of the firm specific fundamental factors that influence the share prices of Indian firms. The chapter is titled as “Determinants of Share Prices: Evidence from India” and is organised into four sections. The first section, section 3.1, discusses the concept and the prior studies that have focused on share price determinants. Section 3.2 deals with the econometric methodology that is used to identify the factors influencing share prices. It discusses the panel unit root tests, panel cointegration test and the fully modified ordinary least squares method. The sample data, results of empirical investigation and a discussion of the same are presented in section 3.3. Section 3.4 concludes the chapter.

The focus of the fourth chapter titled “Price and Volume Effects of Nifty Index Revisions: A Test of Price Pressure Hypothesis” is to test whether price pressure hypothesis with respect to stock index revisions hold good in the Indian market. There are four sections in this chapter. The theoretical explanation provided by price pressure hypothesis for the price and volume effects of stock index revisions is presented in section 4.1, followed by a review of the literature on price pressure
hypothesis. Event study methodology which is used to test price pressure hypothesis is explained in section 4.2. Section 4.3 furnishes the details of the sample data used and discusses the empirical results. Finally, the concluding remarks are presented in section 4.4.

The fifth and last chapter is titled as “Findings of the Study and Directions for Future Research”. It summarizes the whole thesis in three sections. Section 5.1 provides a brief discussion of the three issues taken up in this thesis, along with the econometric methodology and the sample data that is used to empirically examine the three issues. The major findings of the thesis, for each of the three objectives, are summarized in section 5.2. Section 5.3 outlines the directions along which the present work can be extended in the future.