CHAPTER 2

REVIEW OF LITERATURE

2.1. Introduction

Over the years, the capital structure decisions have been considered as the most important decision that a firm has to take. As discussed in the first chapter, the different sources of finance (debt, equity and retained earnings) have different risk-return characteristics, so the main objective of capital structure decisions is the judicious mix of these funds. The firms should choose their sources of finance in such a way that the overall cost of capital is minimized thereby, maximizing the value of the firm (Kapil, 2013). An optimal capital structure not only enhances the competency of the firm but also imparts higher returns to its shareholders as compared to the return provided by an all equity firm. Therefore, it is very important for a firm to know how to obtain financing.

A lot of heterogeneity has been seen in the observed capital structures of the firms. The researchers in this area, through theoretical and empirical means, are trying to find answers to the questions like whether the firms should go for debt or for equity? How much debt and equity the firms should take? Does timing the markets while raising capital plays any role or not? and many more. Further, it is seen that over the past few decades, a great deal of literature revolves around the various theories of capital structure that try to explain what matters in determining the capital structure of the firms.
The research done in the area of capital structure has been structured as follows:

![Research done in the area of Capital Structure]

- **Theories of capital structure**
  - Trade-Off Theory
  - Pecking Order Theory
  - Market Timing Theory

- **Determinants of capital structure**
  - Firm Specific
    - Profitability
    - Asset Tangibility
    - Size
    - Market-To-Book ratio
  - Macroeconomic
    - Economic Growth
    - Inflation
    - Stock Market Index
    - Financial Crises

- **Capital structure decisions and value of firm**
  - Industrial Classification
  - Firm Profitability

Source: Authors’ compilation.

**Figure 2.1**: Research done in the area of Capital Structure

This chapter presents a synoptic view of the development in the area of the capital structure. It highlights the success and failure of the capital structure models in developed as well as developing nations (the work done for Indian firms will be discussed in chapter three). In addition to this, it also shows the directional associations between leverage and firm characteristics; leverage and macroeconomic variables and finally, it discusses the impact of capital structure decisions on the value of the firms.

The organization of this chapter is as follows: the second section reviews the literature on the three important theories of capital structure; section three discusses the determinants of capital structure—both firm-specific as well as macroeconomic. Further, the fourth section analyzes the impact of the sectoral classification on the capital structure decisions of the firms. Section five brings out the dynamics of capital structure on the value of the firm.
2.2. Three Important Theories of Capital Structure

This section discusses in detail the evidence on the ability of the three theories of capital structure (i.e. trade-off, pecking order and market timing theory) to explain the financing decisions of the firms.

After the proposition of Modigliani & Miller in 1958, Donaldson introduced the pecking order model in 1961, which was later popularized in 1984 by Myers & Majluf. According to this theory, a firm would issue debt only when its internal funds are not sufficient enough to finance its investments. However, it was seen that in reality many times a firm would opt for debt finance irrespective of the availability of internal funds. It was observed that the profitable firms issued debt in order to take the advantages of the interest tax shield. So, then in 1963 Modigliani & Miller came up with their second “tax-corrected” proposition. They proposed that the firms’ value increases with leverage. Thus, proposing a 100% debt level for firms’ optimization; but, in reality, this was not possible. So in 1973, Kraus & Litzenberger came with the trade-off theory which hypothesizes that debt is taken up to the level at which the tax benefits of debt are balanced against the bankruptcy costs.

However, in late 70’s and early 80’s, there were studies which gave evidence of a new theory—the market timing theory. There were the works done by Taggart (1977) and Marsh (1982) which showed that the firms attempt to time the markets. Taggart (1977) shows that when in need of capital, the firms issue bonds or stocks depending upon their debt capacity (determined by their debt-equity ratio); and Marsh (1982) demonstrated that the firms’ decision to issue debt or equity is heavily influenced by the market conditions and the past history of security prices. But, they were not able to give the empirical evidence of the market timing theory.

Then, in 1984 Jalilvand & Harris gave evidence of the trade-off theory by showing that the US firms over the period 1981-1990, adjust towards the debt targets; which is the key implication of the trade-off theory (Myers, 1984). Finally, Kane et al., 1984 and Brennan & Schwartz, 1984 introduced the model on the trade-off theory. They stated that, since the firms react to adverse
shocks immediately by rebalancing costlessly, so they maintain high levels of debt in order to take advantages of the tax savings. Later, Fischer et al., 1989 introduced transaction costs into the analysis of dynamic capital structures. Their simulations suggested that even small transaction costs can lead to a delay in rebalancing.

However, none of the studies discussed above empirically tested the implication of these three theories in the real world. So, now let’s have a look at the various studies which test these theories empirically. Since the trade-off and pecking order theories are the oldest in comparison to the market timing theory so, let’s start with them first.

Shyam-Sunder & Myers (1999) were the first one to empirically test the trade-off and pecking order theories. They found that for all the US firms that are traded continuously during the period 1971-1989 (sample size of 157 firms) pecking order is an excellent descriptor of corporate finance. This they could say because the firms did not follow the target-adjustment specification (and if they followed the target-adjustment behavior then it means that the firms followed the trade-off theory).

Later, in the year 2000, Chirinko & Singha criticized the Shyam-Sunder & Myers’s model. They illustrated, via several examples, that empirical evidence of Shyam-Sunder & Myers evaluated neither the pecking order nor trade-off model. The first one being that the model will not be useful when the proportion of equity finance is large for whatever reason. They showed that on doubling the proportion of equity finance, the pecking order model is valid; however the testing strategy proposed by Shyam-Sunder & Myers suggests rejection. The second situation is one in which equity is issued in the middle of the financial hierarchy, i.e., before issuing debt. This financing pattern is strongly at variance with the pecking order model, though the Shyam-Sunder & Myers model supports the pecking order model. Lastly, they considered the third case in which debt and equity are always issued in fixed proportions. Again the model of Shyam-Sunder & Myers on this series infers that the financing pattern is consistent with the pecking order model. Thus, Chirinko & Singha indicated that alternative tests are needed.
Then in the year 2002, Zender & Lemmon provided evidence in favor of the pecking order theory. They modified the Shyam-Sunder & Myers (1999) model—by controlling for cross-sectional differences in debt capacity and by also taking into consideration the differences in the costs associated with asymmetric information across groups of firms. They tested the model for US firms, for the period 1971-1991.

Further, questioning the conclusions drawn by Shyam-Sunder & Myers (1999) on several fronts is the work of Frank & Goyal (2003). The first one being that the Shyam-Sunder & Myers’s model has a poor predictability for the broader population of firms (i.e., Frank & Goyal tested for 768 US firms over the period 1971-1998). The second one is that the results of Shyam-Sunder & Myers do not hold over a longer time horizon (in particular including the 1990's). In addition to this, Frank & Goyal (2003) also found that the coefficient estimates and the R-squares are uniformly lower for the broader population of firms. They also challenged the assumption regarding the slope coefficient of the financing deficit and stated that it “is neither a necessary nor a sufficient condition for the pecking order theory to be valid”.

Then, there are the surveys done by Brounen et al., 2006 (for firms in the UK, Netherlands, Germany and France) and Beattie et al., 2006 (for the firms of UK, listed on Datastream in March 2000); and the study of Bharath et al., 2009 (for US firms, during the period 1973-2002) using the model of Shyam-Sunder & Myers (1999), which claim that their results are in line with the predictions of the pecking order theory.

However, the strongest evidence in favor of the pecking order theory is that it plausibly explains the negative correlation or an indirect relation between profitability and leverage (Fama & French, 2002). According to the pecking order theory, the profitable firms often borrow very little; not because they have a low target debt ratio but because the retained profits are used for growth instead of external funds (Arnold, 2008). Since these firms use less of debt or equity, so they end up with low levels of gearing. There are the works done by Rajan & Zingales, 1995 (for the firms in G7 countries, during the period 1987-1991); Booth et al., 2001 (for the firms in 10 developing nations including India, during the period 1980-1991); Antoniou et al., 2002 (for the firms in UK, France and Germany, starting from the years 1969, 1983 and 1987 respectively and
ending in 2000); Chen, 2004 (for the firms in China, during the period 1994-2000); Frank & Goyal, 2009 (for the firms in US, during the period 1950-2003); Psillaki & Daskalakis, 2009 (for the firms in France, Greece, Italy and Portugal, during the period 1997-2002); Vergas et al., 2015 (for the firms in Portugal, during the period 2005-2012) etc. which show that the firms follow the pecking order because of an indirect relation of profit with leverage.

The next sets of work done by various authors are the ones which support the existence of the trade-off theory. The works done by Nuri, 2000 (for the firms in UK, during the period 1985-1997); Hovakimian, 2006 (for the firms in US, during the period 1983-2002) and Cai & Gosh, 2003 (on the financial data of the US Fortune 500 manufacturing companies, during the period 1982-2001) suggest that firms tend to adjust their financing mix towards target debt ratios. Besides these works, Adedeji (2002) finds a significant positive relationship between new debt issues and internal fund flow deficits in a cross-sectional sample of the UK firms listed on the London Stock Exchange, for the period 1994-2000. All this could not be explained by pecking order hypothesis but could be explained by the trade-off theory better. It was argued by Fama & French (2005) that financing decisions of the US firms, from the period 1973 to 2002 seems to violate the predictions of the pecking order model about how often and under what circumstances firms issue equity. Further, providing strong empirical support for the trade-off theory are the works of Zhao & Susmel, 2008 (on quarterly data of the US firms, during the period 1985:I-2005:IV); Danis & Rettl, 2011 (for the firms in US, during the period 1990-2009); Dang et al., 2012 (for the firms in UK, during the period 1996-2003); Elsas & Florysiak, 2015 (for the firms in US with complete data for two or more consecutive years during the period 1965 to 2009) etc.

However, the evidence of the trade-off theory could also be given by the association of higher profitability with increased debt levels (Bowen, Daley, & Huber, 1982). According to the trade-off theory, the firms high in profitability have less risk of financial distress and bankruptcy, so for them, the cost of debt is lower. Also, higher profitability means that firms can achieve higher utilization of the interest tax shield by increasing the amount of leverage. In addition to these two factors, it is also seen that increased debt serves as a disciplinary factor for the managers when free cash flow increases with increased profitability (Jensen, 1986). However, this positive relationship is rarely supported by empirical studies, but still there are the works done by Taub,
Now, coming to the third theory of capital structure—the market timing theory, which shows how firms decide to finance their investments with debt or with equity. According to this theory, the firms attempt to issue equity or debt when their market values in general are over- or under-valued relative to the book and past market values respectively (Baker & Wurgler, 2002). Works done by Korajczyk, Lucas & McDonald (1992); Rajan & Zingales (1995) and Pagano, Panetta, & Zingales (1998) etc. give evidence of the firms’ attempt to time the markets.

The theoretical underpinning of the market timing theory is given by the work of Baker & Wurgler in the year 2002. They analyzed the capital structure choice of the US firms for the IPO years 1968-1999. They used the firms’ IPO dates as the first date for data collection and clubbed them into the subsamples after holding their number of years since the IPO constant, i.e., they clubbed all firms’ IPO+1 together, then IPO+2 and so on till IPO+10. Then on running the ordinary square regression, they found that market-to-book ratio (a proxy of market timing) has an inverse relation with the leverage of the firms and a direct relation to equity. It means that the firms issue equity when their market-to-book ratio is high. Further, they also found that the firms do not participate in capital structure rebalancing subsequent to issuing equity. Thus, according to them, market timing has a very large and persistent effect on the capital structure of firms.

Following the similar methodology as of Baker & Wurgler (2002), there are the other studies done on the equity market timing theory. After going through these studies and depending upon their results, they could be classified into three sets of works. The first set includes those studies which support the existence of the equity market timing and say that it has a persistent impact on the capital structure of firms. It includes the studies done by Welch, 2004 (for the firms in US, during the period 1962-2000) using stock returns and stock return-adjusted historical capital structure; Huang & Ritter, 2009 (for the firms in US, during the period 1963-2001) using the logit regression model and Bougatef & Chichti, 2010 (for the firms in Tunisia and France listed during the period 2000-2008) etc. The second one includes those studies which support the existence of market timing but do not support the persistent impact. It includes the work done by, Alti, 2006.
(for the firms in US with their IPOs between 1971 and 1999) after classifying the firms as market timers and non-timers – depending upon whether the firms go public in hot or cold markets (which is characterized by high/low IPO volume in terms of the number of issuers); Kayhan & Titman, 2007 (for the US firms listed at any point between 1960 and 2003); Islam & Heaney, 2009 (for the firms in Australia, during the period 1997-2005); Nguyen & Boubaker, 2009 (for 25 Tunisian listed firms between 1998-2006); Guney & Hussain, 2010 (for the firms in UK, during the period 1979-2008) and Russel & Hung, 2013 (for the firms in China, during the period 1992-2007).

The last set includes those studies which do not validate the existence of the equity market timing theory at all. There are the studies done by Bie & Haan, 2004 (for 156 Dutch non-financial firms listed on the Amsterdam Stock Exchange, during the period 1983-1997); Mendes et al., 2005 (for the firms in Brazil, during the period 1997-2002) and Çelik & Akarim, 2013 (for the firms in Turkey that went public from the period 1999-2008) included in this set.

The above literature shows that the trade-off and pecking order theory have been tested extensively, especially for the developed nations. Further, it is also observed that in comparison to these theories, the equity market timing theory has less empirical support.

**2.3. Determinants of Capital Structure**

Financing policy plays a significant role in achieving strong economic fundamentals for the firms in the long run. The decision whether to go for debt or equity is affected by several factors—firm-specific factors such as profitability, asset tangibility, etc. (Bennett & Donnelly, 1993; Pandey, et al., 2000; Ahmed & Hanif, 2011, etc.) and external macroeconomic variables like inflation, gross domestic product, etc. (Booth et al., 2001; Bokpin, 2009; Muthama et al., 2013 etc.). These factors which affect the firms’ choice of capital are known as the determinants of capital structure.
The manner in which these determinants influence the firms’ choice of capital is explained differently by the theories of capital structure—Trade-off, Pecking order and Market timing. Therefore, for improved performances of the firms, it is important for the managers to understand the implications of these determinants on the capital structure decisions of the firms. Thus, this section discusses in detail the various firm-specific as well as macroeconomic determinants which influence the firms’ choice of finance and how they influence the choice:

2.3.1. Firm-Specific Determinants

Researchers have identified many firm-specific determinants like profitability, business risk, tangibility, growth, market-to-book ratio, size and debt tax shields etc. which have an impact on the firms’ choice of capital. This section investigates the effects of these firm-specific determinants on firms’ capital structure.

Let’s start with the work done by Modigliani & Miller in 1963 and Masulis in 1980, where they showed that tax was an important determinant of capital structure and due to tax advantage of debt, firms preferred debt. Further, Titman & Wessels (1988) on using a factor-analytic technique for studying the capital structure choice of US firms over the period 1974 through 1982, estimated that firm’s expected growth, tax shields, volatility and tangibility of assets are not significantly related to the debt ratio. However, they did find evidence that profitability of the firm was negatively associated with debt. On the other hand, Rajan & Zingales (1995) on studying the capital structure decisions for a sample of public firms in G-7 countries for the period 1987-1991, found that tangibility was positively and market-to-book ratio was negatively correlated with leverage across all countries; size was positively correlated with leverage in all countries except in Germany and finally profitability was negatively related to leverage for all the nations other than for Germany and France.

Booth et al. (2001) analyzed the capital structure decisions across 10 developing countries (including India) for the period 1980-1991 and found that the capital structure decisions in developing countries are similar to that of developed countries. They found that profitability was negatively; market-to-book ratio, tangibility and size were positively related to leverage. Further,
Abor (2009) on analyzing the determinants of capital structure for Ghanaian firms for the period 1998-2003, finds that profitability, business risk and tangibility are negatively related to leverage whereas growth and size are positively related.

Besides these studies, there are majority of other empirical studies which found a positive relationship of tangibility & size; and a negative relationship of profitability with leverage. It includes the studies of Chen & Hammes, 1997 (for the firms in Canada, Denmark, Germany, Italy, Sweden, UK and US, during the period 1990-1996); Nuri, 2000 (for the firms in UK, during the period 1985-1997); Bevan & Danbolt, 2002 (for the firms in UK, during the period 1987-1991); Gaud et al., 2005 (for the firms in Switzerland, during the period 1991-2000); Song, 2005 (for the firms in Switzerland, during the period 1992-2000); Frank & Goyal, 2009 (for the firms in US, during the period 1950-2003); Céspedes, González & Molina, 2010 (for the firms in Latin America, during the period 1996-2005); Akdal, 2011 (for the firms in UK, during the period 2002-2009) etc. done for developed countries, whereas for developing nations there are the studies of Huang & Song, 2006 (for the firms in China, during the period 1994 to 2003); Qian et al., 2007 (for the firms in China, during the period 1999-2004); Ghani & Bukhari, 2010 (for the firms in Pakistan, during the period 2004-2008) etc.

The other determinants of capital structure of firms as discussed by various authors are non-debt tax shields which are positively related for developing nations like Pakistan (Rafiq et al., 2008; during the period 1993-2004), Nigeria (Salawu & Agboola, 2008; during the period 1990-2004) etc. and negatively related for developed nations like Japan (Allen & Mizuno, 1989; during the period 1980-1983), Australia (Chiarella et al., 1992; during the period 1977-1985), Czech (Bauer, 2004; during the period 2000-2001) etc. Business risk being negatively related especially for developing nations like Malaysia (Pandey, 2001; during the period 1984-1999), Pakistan (Ullah & Nishat, 2008; during the period 1988-2005), Ghana (Abor, 2009; during the period 1998-2003) etc. and growth rate which is negatively related for developed nations like Czech (Bauer, 2004; during the period 2000-2001), Greece (Eriotis et al., 2007; during the period 1997-2001), Romania (Dragota & Semenescu, 2008; during the period 1997-2005), Australia (Qiu & La, 2009; during the period 1992-2006), etc. and positively related for developing nations like Pakistan (Rafiq et al., 2008; during the period 1993-2004), Malaysia (Pandey, 2001; during the
period 1984-1999), Pakistan (Ullah & Nishat, 2008; during the period 1988-2005), Ghana (Abor, 2009; during the period 1998-2003), Kenya (Kariuki & Kamau, 2014) etc.

From the above discussion, it is seen that the firms’ profitability, tangibility, size and market-to-book ratio are the main determinants which affect the firms’ choice of capital. Thus, this section further gives a comprehensive analysis of these determinants of the capital structure.

2.3.1.1. Profitability

The profitability of a firm shows its earnings in excess to its expenses and all the other relevant costs incurred during a certain period. So, it can be defined as the final measure of economic success achieved by a company in relation to the capital invested in it (Pimentel et al., 2005 in Vieira, 2010). Profitability is important for maintaining the firm activity in the long run because without it a firm would not be able to attract outside capital. Further, it also reflects the future prospect of the firms— as the firms with high profitability relative to their previous period’s values or to their competitor’s value is indicative that they are doing well. High profitability is also a good signal for the investors; it will increase their trust and therefore, will enable the management to increase equity capital of the firm (Hermuningsih, 2013). So, in order to ensure the continuity of the business, the firms must try to increase their profitability.

Talking about the effect of profitability on the choice of capital structure, it is seen from the literature that there are no consistent theoretical predictions. From the point of view of the trade-off theory, more profitable firms should have higher leverage because they would have more income to shield from taxes. Thus, the underlying supposition dictates a direct relationship between profitability and leverage (Taub, 1975; Salawu & Agboola, 2008 etc.). On the other hand, from the point of view of the pecking order theory, the firms preferred internal financing to the external financing. So, the firms retain their earnings when their profitability is high. This portrays an indirect relationship between profitability and leverage (Titman & Wessels, 1988; Bennett & Donnelly, 1993; Rajan & Zingales, 1995; Booth et al., 2001; Bauer, 2004; Abor & Biekpe, 2009; Afza & Hussain, 2011; Proença et al., 2014; Mohammad et al., 2015 etc.).
However, the market timing theory doesn’t say anything regarding the relationship between profitability and leverage.

The empirical findings show that the negative association of profitability with leverage (as per the pecking order theory) is one of the most systematic and thus, here also the same is expected. Profitability ratio may be indicated by a number of measures like profit margin, basic earning power etc., but for this work, it is measured as earnings before interest, taxes and depreciation / total assets (Rajan & Zingales, 1995; Baker & Wugler, 2002, etc.).

2.3.1.2. **Tangible Assets**

The assets which have a physical existence are known as the tangible assets of the firm. They include fixed assets such as plant & machinery, land & buildings, computers & electrical assets, transport & communication equipment and infrastructure, furniture, social amenities and other fixed assets. These assets are the backbone of a firm since they provide financial stability and reduce the risk of the investment.

As per the trade-off theory, the conventional prediction is that more the tangible assets a firm possesses, the more highly levered it is. Tangible assets play an important role of collateral while raising debt and this facilitates firms’ borrowings. A firm with high tangible assets will have an easy access to more secured debt because the agency costs of secured debt are lower than those of the unsecured debt (Scott, 1976). Furthermore, it is seen that due to the high liquidation value of the tangible assets (Harris & Raviv, 1991), there is a decrease in the risk of creditors and increase in the value of the of assets at the time of bankruptcy (Bauer, 2004). Therefore, a firm that has high tangible assets will have smaller costs of financial distress than a firm that relies on intangible assets (Psillaki & Daskalakis, 2008). Thus, there exists a direct relationship of tangible assets with the firms leverage (Mukherjee & Mahakud, 2010).

Further, Myers & Majluf (1984) concluded that issuing debt secured by the property, avoids the costs associated with issuing shares. So, as per the pecking order theory, the firms with more collateralized assets (fixed assets) will be able to issue more debt at an attractive rate as debt may
be more readily available. Therefore, again a direct relationship is expected of tangible assets with leverage.

Several empirical studies have reported a positive relationship between tangibility and leverage (Rajan & Zingales, 1995; Wald, 1999; Chen, 2004; Huang & Song, 2006; Zou & Xiao, 2006; Viviani, 2008; de Jong et al., 2008; Zélia Maria Silva & Márcia Cristina Rêgo, 2009; Proença et al., 2014 etc.). However, there are a few studies like that of Ferri & Jones, 1979; Pandey, 2001; Bauer, 2004; Mazur, 2007; Dragota & Semenescu, 2008; Psillaki & Daskalakis, 2008; Erdine et al., 2009; Mohammad et al., 2015 etc. which have reported a negative relationship between tangibility and leverage. A negative relationship between leverage and asset structure indicates that firms that employ lots of tangible assets seem to rely more on internal funds generated from these assets.

Both the theories—trade-off as well as pecking order state that a direct relationship exists between tangible assets and firm leverage, so accordingly we are also expecting the same. In this study tangible assets is calculated as the sum of net land and buildings, net plant & machinery, computers and electrical assets, net transport & communication equipment and infrastructure, net furniture, social amenities and other fixed assets divided by total assets (as is also taken by Rajan & Zingales, 1995; Baker & Wurgler, 2002 etc.).

2.3.1.3. Firm Size

Firm size plays an important role in capital structure decisions of the firm (Rajan & Zingales, 1995; Booth et al, 2001; Frank & Goyal, 2009; Abor & Biekpe, 2009), as it relates to the risk of the investment made in the firm. It has been seen that large enterprises face fewer risks in comparison to small businesses because they have a lower variance of earnings. Large firms have good economic growth in future and are relatively more popular since they are comparatively stable and have high fixed assets to secure their funding. As a result, large firms have lower financial difficulties and can easily raise funds from the market in comparison to small firms.
Empirical evidence supports a direct relationship between size and capital structure of firms (Bennett & Donnelly, 1993; Antoniou et al., 2002; Eriotis et al., 2007; Ghani & Bukhari, 2010; etc.). Since, the large firms are more diversified and they have proportionally lower expected bankruptcy costs (Ang et al., 1982), so they can tolerate high debt ratios.

Further, as per the trade-off theory, it is observed that large firms can generate more profits and so these firms are likely to use more of debt as compared to the small firms for tax shields. Next, as per the pecking order theory, the relationship with firm leverage may be direct or indirect. A direct relation exists because the small firms more likely depend on the retained earnings. They opt for the external sources of finance only when their internal sources are exhausted (Javed & Harry, 2007). The small firms prefer internal sources also because in most of the firms, the owners are the managers and they aim at maintaining the control of their firm. Therefore, the small firms try to meet their financing needs with a pecking order of personal and retained earnings, debt and issuance of new equity. Further, it is also seen that the small firms borrow funds because of their investment needs and not to achieve an optimal capital structure (Psillaki & Daskalakis, 2008).

On the other hand, if it is used as a proxy for the information the outside investors have, so the large firms will prefer equity relative to debt (Rajan & Zingales, 1995) and hence an indirect relation will exist. This is so because, the problem of information asymmetry is not as severe as it is in small firms and the information cost is also lower in big firms (Myers & Majluf, 1984). However, there are few studies which support an indirect relationship between short-term debt and firm size (Titman & Wessels, 1988; Mutalib, 2011; Ahmed & Hanif, 2011; Kariuki & Kamau, 2014; Mohammad et al., 2015 etc.). According to Titman & Wessels (1988), small firms use more of short-term finance than their larger counterparts because of the higher transaction costs they face while issuing long-term debt or equity.

So, a mixed effect of size on the choice of capital is seen, but most of the empirical studies support a direct relation of size with leverage. Thus, a direct relationship of size with leverage is expected. In this study natural log of Sales is taken as the proxy for firm size (as is also taken by Titman & Wessels, 1988; Rajan & Zingales, 1995; Ahmed & Hanif, 2011 etc.).
2.3.1.4. **Market-To-Book Ratio (MTB)**

The literature on capital structure decisions shows that market-to-book (MTB) ratio plays a prominent role in the decision making. Empirical findings show that the firms with higher MTB ratios have lower leverage ratios (Rajan & Zingales, 1995; Chen & Hammes, 1997; Baker & Wurgler, 2002; Bevan & Danbolt, 2002; Gaud et al., 2003; Bauer, 2004; Chen & Zhao, 2005; Huang & Song, 2006; Dragota & Semenescu, 2008; Qiu & La, 2008; Akdal, 2011 etc.). This means that the firm goes either for retained earnings or for net equity, but the empirical results show that the firms opt for net equity (according to the equity market timing theory). Moreover, there are a few studies which show that there exists a direct relationship of the MTB ratio with leverage; this indicates that the firms with high growth opportunities generally hold more debt (Homaifar et al., 1994; Song, 2005 and Céspedes, González & Molina, 2010 etc.). Thus, an indirect relationship of MTB ratio with leverage is expected.

The three theories of capital structure give different explanations for this indirect relationship. As per the trade-off theory, MTB is used as a proxy for firm’s growth opportunities (Hovakimian, Opler & Titman, 2001; Awan et al., 2011 and Botta, 2014). The theory argues that firms with higher MTB ratios issue equity because they want to retain their flexibility by downwardly adjusting the target ratios (Chen & Zhao, 2005). Next, as per the pecking order theory, MTB is regarded as a measure of investment opportunities (Gweyi & Karanja, 2014). The firms with upcoming investment opportunities may reduce leverage in order to avoid issuing equity in the future (Baker & Wugler, 2002). Here, the firms are interested in maintaining the debt capacity for future investments, thereby avoiding potential underinvestment problems and lowering expected bankruptcy costs (Leary & Roberts, 2005).

However, the equity market timing theory considers MTB as a proxy for market timing opportunities realized by managers (Jung, Kim & Stulz, 1996; Pagano, Panetta & Zingales, 1998; Hovakimian, Opler & Titman, 2001; Baker & Wurgler, 2002; Alti, 2006 etc.). It states that the main intention of the managers is to take the advantage of the overvaluation while issuing equity because a higher MTB ratio signals a lower cost of external equity financing (Chen & Zhao,
These lower costs could be due to lower adverse selection costs, or due to market misvaluation that is not part of the future growth opportunities (Baker & Wurgler, 2002).

So, now the main question here is whether MTB ratio affects capital structure of firms as per the trade-off theory, pecking order theory or as per the market timing theory. If the MTB ratio proxies the growth or the investment opportunities, then for avoiding the underinvestment costs associated with high leverage, the firms with high MTB ratio should have low debt independent of whether they raise equity internally via retained earnings or externally (Rajan & Zingales, 1995). But, if the firms preferred equity to retained earnings, i.e., the firms issued equity when their market-to-book ratio is high, then it is as per the market timing theory.

Here, for the analysis, MTB ratio is defined as (Total Assets – Book Equity + Market Equity) / Total Assets. The authors like Baker & Wugler, 2002; Frank & Goyal, 2009; Bougatef & Chichti, 2010 etc. have used MTB ratio in their study to analyze the impact of market timing on the capital structure of firms.

From the above literature, one can say that although, the market timing theory by itself does not make any predictions for many of the patterns in the data that are accounted for by the trade-off and pecking order theories (Frank & Goyal, 2009), but still it plays an important role in defining the capital structure of the firms.

2.3.2. Macroeconomic Determinants

In addition to the firm-specific factors (as discussed above), the firms’ choice of financing is also influenced by the performance of an economy. The performance of the economy is measured by various indicators like gross domestic product (GDP), inflation, stock market index etc. These factors affect the firms’ choice of capital (Choe et al., 1993; Rajan & Zingales, 1995; Booth et al., 2001; Deesomsak et al., 2004; Bokpin, 2009; Muthama et al., 2013 etc.) and how they affect is discussed in detail in this section.
It is seen that the firms’ need for capital increases when the economy is growing (measured by an increase in GDP) because the firms have promising investment opportunities; and also when the overall price level of goods and services goes up, i.e., during inflation, because the firms’ expenditure increases. Now, the main question is how the firms fulfill their capital requirements, i.e., which source of finance they use?

The literature shows that there are mixed results. There are the studies like that of Booth et al., 2001 (for the firms in 10 developing nations including India, during the period 1980-1991), Muthama et al., 2013 (for the firms in Kenya, during the period 2004-2008), Rahmawati et al., 2015 (for the firms in Indonesia, during 2007-2011) and of Tehrani & Najafzadehkhoei, 2015 (for the firms in Tehran, during the period 2007-2014) which support the direct relation of GDP growth rate and an indirect relation of the inflation rate on leverage. On the other hand, the works of Gajurel, 2006 (for the firms in Nepal, during the period 1995-2004); Mahmud et al., 2009 (for the firms in Japan, Malaysia and Pakistan, during the period 1996-2005) and Aghaei Chadegani et al., 2011 (for the firms listed on Tehran Stock, during the period 2001-2008) etc. find an indirect relation to GDP as well as of inflation with leverage. Besides these studies, there are the studies done by Bokpin, 2009 (for the firms from 34 emerging countries including India, during the period 1990-2006) and Riaz et al., 2014 (for the firms in Pakistan, during the period 2001-2008) etc. which supports the indirect relation of GDP but a direct relation to inflation with leverage.

Another important factor affecting the firms’ choice of capital is the stock market index. It represents the development in the capital market. A development in capital market enhances the ability and opportunity of the listed firms to increase and diversify their access to the financial markets. The studies were done by Booth et al., 2001; Antoniou et al., 2002; Gajurel, 2006; Mahmud et al., 2009; and Bougatief & Chichti, 2010 etc. have found an inverse relation of this variable with leverage.

Besides these indicators, it is seen that the crisis in the economy also affects the firms’ choice of capital (Baker & Martin, 2011). The firms face difficulties in raising capital during the crisis. Therefore, it is important for the managers to understand the implications of the crisis on the
capital structure decisions of the firms, how the firms leverage their strengths and uncover the hidden opportunities in an uncertain environment, so as to mitigate the impact of the fluctuations.

Thus, it is substantial for the firms to interpret these macroeconomic factors (i.e., economic growth, inflation, stock market index and of the financial crises) and how they impact the decisions of capital structure choice:

2.3.2.1. Economic Growth

A country’s economic growth influences the firms’ capital structure decisions. At the firm level, economic growth is believed to be correlated with the firm’s growth and is a proxy for the firm’s investment opportunity set and its financing needs (Smith & Watts, 1992; Demirgüç-Kunt & Maksimovic, 1999; Beck et al., 2002; Wanzenried, 2006). As the economy grows, a decline is seen in expected bankruptcy cost and an increase in the collateral values of assets, in stock prices and in free cash flow (Taddese Lemma & Negash, 2013), which affects the firm’s growth and its financing needs.

Now, the question to be answered is what source of finance the firms prefer during the economic growth? As per the trade-off theory, during expansions, the firms have the more taxable income to shield, i.e., more free cash. Therefore, in such cases, the debt would be more attractive for unconstrained firms (Jensen & Meckling, 1976; Gertler & Hubbard, 1991; Zwiebel, 1996) and hence, leverage is pro-cyclical. Whereas according to the pecking order theory, the financially unconstrained firms will have more internal funds, so as a result, they will be inclined to use those funds (Korajczyk & Levy, 2003). Thus, as per the theory, an increase in GDP portrays growth for firms and hence the firms increased their retained earnings (implying that leverage is counter-cyclical). On the other hand, the equity market timing theory states that with an improvement in the economy, an increase in the stock prices is seen. So, a direct relation of economic growth is expected with net equity (Korajczyk, Lucas & McDonald, 1992; Choe et al., 1993) and an indirect with leverage as well as with retained earnings. Therefore, the equity market timing theory says that equity is pro-cyclical.
A number of indicators may represent a country’s economic growth, but the growth in GDP is a barometer of economic activities. The authors like Booth et al., (2001); Aghaei Chadegani et al. (2011); Taddese Lemma & Negash (2013) etc. have supported the use of GDP for studying the effect of economic growth on the capital structure of firms. So, here also India’s GDP is used as a proxy for the economic growth and expects a direct relation with net equity (as per equity market timing theory).

### 2.3.2.2. Inflation

Another important economic factor which influences the management’s decisions about the firm’s financing is the inflation rate of a nation. With the rise in the price level of different commodities, the overall costs of firms’ raw materials and other facilities like fuel and energy, transportation etc. also rises and so does the capital requirement of the firms.

Next, coming to the effect on the choice of capital, according to the trade-off theory, higher expected inflation leads to higher leverage. The theory takes into consideration the interest tax shield, which increases with inflation (Taggart, 1985). Thus, the firms would prefer debt to other sources of capital. On the other hand, the pecking order theory states that inflation would have no impact on leverage. The theory implies that the firms prefer retained earnings to other sources of finance, so inflation would have no effect on their choice of capital. Further, the market timing theory also suggests a positive relationship between inflation and debt—the managers attempt to issue debt when the interest rate on the debt is low as compared to past and future expected interest rate (Barry et al., 2008). Further, it is seen that the prediction about the future interest rates depends upon the inflationary trend in the economy. So, when the firm expects that in future, the inflation rate will be higher or they realize that the current rate of inflation is low, the firms would issue debt securities (Frank & Goyal, 2009) because at that time the interest on the debt would be low as compared to future expected interest rate.

In India, Wholesale Price Index (WPI) and Consumer Prices Index (CPI) are the two primary measures of inflation. Until 2011, there was no single CPI representative of the whole country, so WPI has been the main measure of inflation. Thus, in this study WPI is used as the proxy for
inflation and as per the market timing theory, a direct relation is expected with leverage (Noguera, 2001; Bougatief & Chichti, 2010; Riaz et al., 2014).

2.3.2.3. **Stock Market Indicator**

A stock market works as an indicator of the overall health of the economy. A strong market suggests that the earnings estimates of the firms are high and therefore the overall economy is preparing to thrive. Conversely, a down market indicates that earnings are expected to decrease and the economy is headed toward a recession.

Further, it is seen that the stock market also affects the firms’ choice of financing. It provides essential information about the listed firms and helps the creditors make lending to listed firms less risky (Grossman, 1976 and Grossman & Stiglitz, 1980). An active and liquid stock market makes it easy and relatively cheaper for firms to finance their operations through equity capital. Firms may, therefore, substitute long-term debt with equity and this would certainly affect their capital structure (Doku et al., 2011).

The market timing theory predicts that when the stock market is performing well, the managers will exploit the “windows of opportunities” by issuing equity and hence would reduce the leverage. On the other hand, the pecking order theory ranks financing sources according to the degree of information asymmetry, where internal funds exhibit lowest and equity the highest. Therefore, a strict interpretation of the theory suggests, that a firm should never issue equity unless the debt financing becomes infeasible. Whereas, a less strict interpretation suggests, that the firms tend to issue equity when the stock prices are high (Lucas & McDonald 1990; Korajczyk, Lucas & McDonald 1992). The empirical studies were done by Bharath et al., 2009; Kovacs 2010; Bessler et al., 2011 etc. support that temporarily low information asymmetry increases the probability of an equity issue. In contrast, the trade-off theory predicts that a low debt ratio will encourage the managers to issue debt in order to rebalance their firms’ capital structure towards the optimum, which leads to increasing debt ratios following high stock returns (Frank & Goyal, 2009; Baker & Martin, 2011).
Now in the study, the sample consists of the firms listed on the Bombay Stock Exchange, so BSE Sensitive Index (SENSEX) is used as an indicator and as per market timing theory a direct relation is expected with net equity.

2.3.2.4. Financial Crises and Choice of Capital

The financial crisis not only affects the economy of a nation but also leaves many firms financially constrained. The crisis affects the global credit market by increasing the lending interest rates and reducing the availability of credit. It may leave many of the firms financially constrained, which may face difficulties in raising capital as they experience difficulty in accessing stock market, face higher costs of borrowing etc. Furthermore, these financially constrained firms would forego investment opportunities due to difficulties in raising capital and may also sell their assets to get cash in order to support their operations (Campello, Graham & Harvey, 2010). In order to understand the choice of the capital of firms during the recession, let’s have a look at the various studies done in this area.

The literature shows mixed effects of the crisis on the choice of capital structure during recessions. The survey conducted by Campello, Graham & Harvey in 2010 (in US, Europe and Asia), on the effect of financial constraints during financial crises, supported the usage of internal funding and dependence on bank credits. On the other hand, there are the studies that support the usage of debt and equity during the crisis. The study done by Pattani, Vera & Wackett (2011) observed that there was an increase in public debt as well as in the public equity issuance by UK firms in 2008-09 and a decline in debt in 2009-10 (post recession). At the same time there are the works of Fosberg (2012) and Kahle & Stulz (2013) for US firms and of Proença et al (2014) for Portuguese firms which report a significant increase in debt ratios over the pre-crisis period of 2006-08 followed by a gradual decline in debt levels by the end of 2010 (i.e., post-crisis period).

In addition to these studies, there are studies that say that the crisis did not have a significant impact on the financing of firms. One such study is that of Akbar, Rehman & Ormrod (2013) done for the private firms in the UK. They found that the long-term financing was not affected by the crisis; instead, it impaired the financing channels of short-term debt and trade-credit. They
also suggested that in order to hedge against the negative impact of credit contractions, the firms held more cash and issued more equity. Similarly, Brun et al., 2013 argues that the increase in equity of French firms after the crisis resulted mainly from the increase in retained earnings. These papers give no pronounced confirmation on the fact that the financial crises have triggered substantial changes in firms’ capital structure choices. However, in the works of Kayo & Kimura (2011), it has been found that firm-level characteristics and effort in timing the market are still the strongest factors that influence the determinants of the firms’ capital structure choices.

Further, as it is known that the choice of debt and equity financing is the main responsibility of the financial managers and how efficient they are in taking these decisions is reflected in the performance of the firms. So, now let’s have a look at the relationship between capital structure and firm’s performance in during a recession.

On testing the performance-distress relationship, Opler & Titman (1994) found a significant negative relation for the US firms for the period 1972-1991. Furthermore, supporting this relation was the work done by Asgharian (2003) for Swedish firms; they found that the highly leveraged firms in distressed industries face relatively lower stock returns. In contrast to this, a weak relationship between financial distress and firm performance was also observed by Claessens, Djankov & Xu, 2000 (for more than 850 publicly listed firms in Indonesia, Malaysia, the Republic of Korea, Thailand, Hong Kong and Singapore, during the period 1988-1996) following the 1997 financial crisis. They claimed that firm-specific weaknesses that existed before the crisis was an important factor in the deteriorating performance of the corporate sector. In addition to this, the works done by Sufian & Habibullah, 2010 (on Indonesian banks, during the period 1990-2005) for the Asian Financial Crisis of 1997; Dolenc et al., 2012 (for the firms in Slovenia, during the period 2003-2010, for the subprime mortgage crisis of 2007); Tan, 2012 (for 277 firms in eight East Asian economies, during the period 1993-2002, for the Asian Financial Crisis of 1997) etc. indicate that the financial crisis have a negative and significant impact on the profitability of firms.

The literature suggests that the financial crisis has a mixed impact on the firm’s choice of financing and an inverse relationship with firms’ performance for both developed as well as
developing nations. The dependency of the firms’ performance on economic environment is valuable information to policy makers. Therefore, here the plan is to investigate the effect of the firms’ choice of capital on the value of Indian firms during the financial crisis of 2008-2009.

2.4. Sectoral Classification

Another factor which cannot be ignored while making the capital structure choice is the sector to which the firm belongs to, i.e., primary, secondary and tertiary (Remmers et al., 1974; Harris & Raviv, 1991). The sectoral characteristics like the degree of concentration, barriers to the entry and exit, technological changes etc. (Miao, 2005; Das & Roy, 2007) have an influence on the debt ratio of the firms (Viviani, 2008). So, the examination of the different sectors for the choice of capital structure is important because the firms belonging to different sectors might have different strategies of capital choice to generate more profit. Thus, this section discusses the inter-sectoral variation in the firms’ choice of capital.

Now, the study which brings out the inter-sectoral difference in the firms’ choice of capital is of Ramli & Nartea (2013). They examined the capital structure of the firms in Indonesia from the period 1990 to 2010 and found that the primary sector firms preferred debt; secondary sector firms preferred both debt as well as equity. In the case of tertiary sector firms, it was found that the firms tend to finance their investment partially from internal and partially through external financing. Besides this, the authors’ could not find any other work done on the relationship between the sector (to which the firm belongs) and its capital structure.

Further, it is seen that a lot of research is done on studying the capital structure decisions of the firms when they are classified as per their industry. It is observed that the firms’ capital structure is systematically different across the industries (Bhat, 1980; Venkatesan, 1980; Harris & Raviv, 1991 etc.) due to the variation in risk, asset type and the requirement for external funds (Myers, 1984; Harris & Raviv, 1991 etc.). Moreover, it has also been observed that there is more variation in the leverage ratios across industries than there is within the industries (Bowen et al., 1982;
Bradley et al., 1984) and that the firms move towards their industry mean over time (Bowen et al., 1982).

For the developed nations, the studies done by Bowen et al., 1982 (for US firms, during the period 1951-1969); Bradley et al., 1984 (for US firms, during the period 1962-1981) and Long & Malitz, 1985 (for US firms, during the period 1978-1980) found that drugs, instruments, electronics and food industry firms have consistently low leverage whereas paper, textile mill products, steel, airlines and cement industry firms have consistently high leverage. In addition to this, it was found by Gregg, 2007 (for the firms in the US, during the period 2001-2005) that the retailers and high-tech firms have greater debt capacity as compared to the agriculture, forestry and mining firms.

Further, for the developing nations, Agyenim, 2004 (for the firms in Ghana, during the period 1965-1995) showed that industries such as textiles, building and construction, mining and exploration have more debt in their capital structure compared to an automobile, agriculture, food and transport. Further, the regression results of Joshua, 2007 (for the firms in Ghana, during the period 1998-2003) indicate that the agriculture, pharmaceutical, medical, manufacturing, construction and mining industries are more likely to use the long-term debt while information and communication, wholesale and retail trade industries use short-term debt. In addition to this, the works done by Shah & Khan, 2007 (for the firms in Pakistan, during the period 1994-2002) and Ahmed & Hanif, 2011 (for the firms in Pakistan, during the period 2001-2009) find that textile industry had high leverage ratio.

Therefore, from the above literature it is seen that tremendous work has been done when the firms are classified into various industries but to the authors’ best knowledge, there is hardly any study which shows the dynamics of capital structure when they are classified into the three sectors of the economy. So, the inquisitiveness here is how the capital structure decisions vary when the firms are classified into the three sectors of the economy?
2.5. Capital Structure and Firm Value

The modern theory of capital structure starts with the seminal work of Modigliani & Miller’s irrelevance proposition of 1958. Where, they claimed that in a “perfect market”, the firm value is unaffected by the capital structure of the firm. Later, in 1963, they revised this opinion after taking into consideration the influence of interest tax shield and stated that the firm value increases with debt. However, the Modigliani & Miller’s theorem did not provide a realistic description of how much debt the firms must take while financing their operations. Therefore, further exploring the dynamics of capital structure in the light of realistic assumptions relating to market frictions and the information asymmetries, there are three main theories of capital structure, namely, the Trade-off Theory, Pecking Order Theory and Market Timing Theory. Amongst these three theories, only the trade-off theory explains how much debt the companies should take. It states that debt is taken up to the level at which the tax benefits of debt are balanced against the bankruptcy costs (Kraus & Litzenberger, 1973).

Further, from a plethora of research done on the capital structure decisions, it has been found that the capital structure decisions affect the firm value in three main directions. The first category shows that firm leverage has a linear and a direct relationship with firm value, i.e., the coefficient of the firm leverage is positive and is same for all the levels of debt. The studies done by Roden & Lewellen, 1995 (for the firms in US, during the period 1981-1990); Ozkan, 2001 (for the firms in UK, during the period 1984-1996); Margaritis & Psillaki, 2010 (for the firms in France, during the period 2001-2006) etc. for developed nations and Chowdhury & Chowdhury, 2010 (for the firms in Bangladesh, during the period 1994-2003); Cheng & Tzeng, 2011 (for the firms in Taiwan, during the period 2000-2009); Javed & Akhtar, 2012 (for the firms in Pakistan, during the period 2004-2008); Maxwell & Kehinde, 2012 (for the sample of 124 companies quoted on the Nigeria Stock Exchange as at 31st December 2007) etc. for the emerging economies support this behaviour of firm value.

The second category reports a linear, but an indirect relationship of leverage on firm value, i.e., the coefficient of the firm leverage is negative and is same for all the levels of debt. Supporting
In this relation, there is only one study i.e., of Kinsman & Newman, 1998 (for the firms in the US, during the period 1987-1995) for a developed economy and for emerging economies, there are the works done by Krishnan & Moyer, 1997 (for the firms in Hong Kong, Malaysia, Singapore and Korea, for the fiscal year ending in 1992 and as five-year average ending in 1992); Abor, 2005 (for the firms in Ghana, during the period 1998-2003); Rao et al., 2007 (for the firms in Oman, during the period 1996-2000); Ibrahim El-Sayed, 2009 (for the firms in Egypt, during the period 1997-2005); Onaolapo & Kajola, 2010 (for the firms in Nigeria, during the period 2001-2007); Khan, 2012 (for the firms in Pakistan, during the period 2003-2009); Soumadi & Hayajneh, 2012 (for the firms in Jordan, during the period 2001-2006); Mwangi et al., 2014 (for the firms in Kenya, during the period 2006-2012) etc.

The third category provides evidence of an asymmetric non-linear relationship between firm leverage and value. According to these studies, there exists an optimal level of debt (i.e., threshold level), beyond which an increase in debt does not add to the firm value, but adds to the risk level. The empirical findings of Lin, 2007 (for the firms in Taiwan, during the period 1997-2005, threshold value ranges between 48.92% - 49.55%); Cheng et al., 2010 (for the firms in China, during the period 2001-2006, threshold value of 70%); Lin & Chang, 2011 (for the firms in Taiwan, during the period 1993-2005, threshold value of 33%); Halim Ahmad & Adriana Hiau Abdullah, 2013 (for the firms in Malaysia, during the period 2005-2009, threshold value of 64.33%) etc. have identified the exact turning point of debt effectiveness by using the powerful panel threshold regression model. These studies have shown that debt is positively related to firm value until it has not reached the threshold value and increasing debt beyond that will hurt the firm value. Here, it is seen that all these studies are done for the developing economies.

In this study Return on Assets (ROA) is used as a proxy for firm value. Though, there are many measurements for firm value, but ROA is the most widely used measure (Al-Matari et al., 2014) because it gauges the operating and financial performance of the firm (Klapper & Love, 2004). Further, since this measurement includes all of a firm's assets—those which arise out of debt as well as equity, so it is of more interest to management as they want to assess the use of all money put to work.
Besides the impact of capital structure decisions on the value of the firm, the empirical studies have shown that there are other factors like firm profitability and the sector to which the firms belong to, also affect the value of the firms. So, now let’s have a look on how each of these factors affects the firm value:

2.5.1. Profitability

Examining profitability of a firm in the recent past provides information that helps the analyst in projecting the firm's future profitability and the expected return on investment (Wahlen et al., 2014). Thus, the growth of profitability not only indicates the better prospect of the firm but also increases the trust of investors in the firm. So, a direct relation of profitability is seen with the firm value (Hermuningsih, 2013; Rasyid, 2015 etc.).

2.5.2. Sectoral Classification

The sectoral characteristics influence the firms’ choice of capital structure (as discussed above) and these different choices across the sectors, in turn, have a different impact on the firm value. So, the main interest here is to know how the capital structure decisions affect the firm value when the firms are classified into the three sectors of the economy is very important.

From the work done in this area, again it is seen that a lot of work has been done when the firms are classified into various industries and similar results were seen. There exists a linear direct relationship of debt with firm value in case of food/beverages, glass/concrete, electronics and heavy equipment industries (Rathinasamy et al., 2000; data is taken from Center for International Financial Analysis and Research of 47 countries, during the period 1987-1991); Commercial banks in the US (Berger & Di Patti, 2006; during the period 1990-1995); lodging industry in US (Michael, Seoki & Arun, 2007; during the period 1980-2005); manufacturing industry firms with the stocks indexed in ISE, Turkey (Altan & Arkan, 2011; on the quarterly data, during the period 2004-2007) etc. for developed nations and for developing nations there are the micro-finance institutions of Ghana (Kyerboach-Coleman, 2007; during the period 1995-2004); Palestinian financial institutions (Abbadi & Abu-Rub, 2012; during the period of 2007-2010); manufacturing
firms listed on the Indonesia Stock Exchange (Sudiyato et al., 2012; during the period 2008-2010) etc. Further, an indirect relation of debt with firm value is seen in case of cosmetics/toiletries industries (Rathinasamy et al., 2000; data is taken from Center for International Financial Analysis and Research of 47 countries, during the period 1987-1991); retailers in European countries (Gleason, Mathur & Mathur, 2000; during the period 1994-1998) etc. for developed nations whereas for the developing nations, it exists for property and construction sectors in Hong Kong (Chiang Yat Hung et al., 2002; during the period 1993-2000); manufacturing firms in Nigeria (Akeem et al., 2014; during 2003-2012) etc. A non-linear asymmetric relationship is also seen, but only for developing nations. There are the studies done for electronic firms in Taiwan (Nieh et al., 2008; from first quarter of 1999 to the third quarter of 2004, threshold value ranges between 12.37% - 28.70 %) and for Vietnam’s seafood industry (Cuong & Canh, 2012; during the period 2005-2010, threshold value of 59.27%).

So, here it is observed that depending upon the industry, to which the firms belong to, the capital structure decisions have a different impact on the value of the firms. However, as far as authors know, there is no study done which analyzes the impact of capital structure decisions on the value of the firms when they are classified into the three sectors of the economy.

From the above literature, it was found that the debt ratios in the developing countries are influenced by the same factors as they are in developed countries. However most of the work explores the capital structure choice of the firms in the developed countries and little is empirically known about such implications in emerging economies. Further, it has been seen that in comparison to the trade-off and pecking order theories, the theoretical part of the market timing theory is underdeveloped and has less empirical support. So, there is a need to study the market timing theory of capital structure.

So, after going through this literature, the questions which come in the mind are how the capital structure choices vary for Indian firms? Is there any work done which studies the capital structure of the Indian firms when they are classified into the three sectors? Do Indian firms time the market or not? How the determinants (both firm-specific and macroeconomic) affect the firms’ choice of capital? What is the effect of the firms’ capital structure on their value? How the capital
structure impacts the value of the firms across the three sectors of the economy? etc. Thus, the next chapter discusses in detail the work done on capital structure for Indian firms. Along with that, it also discusses the research gaps, objectives and limitations of the work.