INTRODUCTION

1.1. Introduction

Corporate failure has often been associated with the financing behavior of the firms (Pike & Neale, 2009; Mwangi et al., 2104). Therefore, for improving the performance of a firm, it is imperative for the managers to know how to obtain the financing. Capital structure is a very important decision as it is directly related to the value and risk of a firm. It is seen that if a firm uses debt excessively, it may jeopardize its survival and on the other hand non-usage of debt prevents the firm from an opportunity to enhance its value. So, the financial managers are often caught in the dilemma of what the optimum proportion of debt and equity should be. At the same time, it is observed that if the timing of raising funds is perfect, then it will reduce the cost of financing and would maximize the value of the firm. Thus, here an effort is being made to understand how the firms make their choice of capital and how the firms’ capital structure influences their value, in context to the Indian market.

1.2. Concept of Capital Structure

The term capital structure refers to different types of financing employed by a firm, to acquire the resources necessary for its operations and growth. A firm can mobilize its capital through external and internal sources of finance. The external sources of finance consist of debt and equity, whereas, the internal source is the retained earnings. Further, as it is known that the raison d'être of corporate finance is to maximize the value of a firm and this is possible when the firms have an optimal capital structure (Mohamad & Saad, 2012 and Chauhan et al., 2014) i.e., a combination of the sources which minimizes the average cost of capital, thereby maximizing the value of the firm. So, it is the job of the managers to strike the best mix of these securities.
The process of selecting the appropriate mix of finances involves an in-depth analysis of these sources since they have different characteristics. For instance, debt financing allows the firms to retain ownership and control of the company. Moreover, being a cheaper source of finance, debt reduces the overall cost of capital and hence adds to the value of the firm. But, at the same time care must be taken as to how much debt the firms should take because along with debt comes risk (of insolvency). On the other hand, financing through equity is less risky because there’s no fixed obligation on the firm to pay dividend. So, for this reason, equity is considered as a cushion and debt as a sword (Jensen, 1986; Damodaran, 2007). However, equity capital appeals to those firms who are willing to lose control to the outsiders (in-case the firm decides to raise substantially large amount through equity shares). But, if the existing shareholders are averse in raising additional funds through share capital as well as through debt, so another option available with the firms is to go for retained earnings, in which there is neither the dilution of control nor the risk of insolvency. Therefore, it is vital for the managers to be aware of these characteristics in order to determine the best mix of sources of finance which finally increases the value of the firm.

The capital structure of a firm tells how risky the firm is. A firm with a high percentage of debt in its capital will have high fixed obligations, which in turn increases its risk (Gilson, 1997; Kapil, 2013). Moreover, it is observed that a firm with high risk would have a high cost of financing, so as to compensate the lenders and the stockholders for that risk. Now, this high financing cost, in turn, affects the value of the firm because it is seen that unless a firm gains in excess of its cost of capital, it will not be able to add to the value of the firm. Yet, in the worse situations, if the firm is not able to meet its obligations, then it may enter in a debt overhang or in a bankruptcy situation. Therefore, it is very important for the financial managers to know the value of this optimal or “threshold” level of debt (Halim Ahmad & Adiana Hiau Abdullah, 2013) beyond which such a situation can be avoided.

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1 In a debt overhang situation, the firm cannot issue new debt because it is likely to default. In addition, the equity holders will be reluctant to invest in such a firm as most of the benefits will be reaped by the debt holders.
In addition to this, the capital structure of a firm also tells whether the firm can survive an economic shock or not (Martis, 2013). It has been observed that during the financial crises most of the firms face difficulties in raising capital– they have trouble in accessing the stock market, they face higher costs of borrowing and have difficulties in opening or renewing a credit line. Moreover, in the worst situations, the firms even sell their assets to get cash in order to support their operations (Campello, Graham & Harvey, 2010). Hence, the firms must design their capital structure in such a way that increases the resilience to future shocks and retains flexibility in future financing choices.

Thus, it could be said that the capital structure of a firm is the pivot on which the firm runs. It provides security, stability and flexibility to the firms; and it also enables them to adapt and compete in the changing economic environments. The policy makers should place greater emphasis on the facilitation of the finance, as the correct decision would reduce the businesses sensitivity on economic cycles and would help in maximizing the value of the firms. Therefore, an immature capital structure decision can result in high cost of capital, thereby lowering the firm’s value, but on the other hand, an effective capital structure decision can do the opposite (Hasan et al., 2014).

### 1.3. Research Problem

The firms’ choice of capital generated great interest among the financial researchers after the seminal work of Modigliani and Miller in 1958 and 1963. However, their research encouraged the other researchers also to investigate in the direction of realism. So, the three important theories of capital structure were proposed– the trade-off theory, which 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); the pecking order theory, in which the firms finance their investments first with retained earnings, then with debt and finally, with equity (Myers & Majluf, 1984); and the equity market timing theory, according to which the firms attempt to issue (or repurchase) equity when their market values in general are over- (or under-) valued relative to their book and past market values (Baker & Wurgler, 2002).
It has been seen that both the trade-off, as well as the pecking order theories, have provided a theoretical framework for studying the capital structure choice of the firms, but they relied more on the internal factors of the firm and did not consider the importance of external environmental factors. The market timing theory, however, overcomes this limitation and focuses on the changes in the capital structure of a firm which come respect to changes in time, changes in government policies and changes in market conditions etc. Here, the theory has shifted the focus to the market conditions while designing an optimal capital structure. As per the theory, the bottom line is that the managers try to exploit the temporary fluctuations in the equity market relative to the other forms of capital in order to decide whether to issue equity or not. In addition to this, the theory also emphasizes the importance of timing of raising funds, because if the timing is perfect then the cost of financing would be cheaper, thereby maximizing the value of the firm (Panda, Mohapatra & Moharana, 2013). Since, the market timing theory gives the most natural explanation for the capital structure choice (Baker & Wurgler, 2002) so, in this thesis the capital structure decisions of firms are studied in context to the equity market timing theory.

Further, from the work done on the capital structure, it was evident that as compared to developing nations a lot of work has been done for developed nations and how the capital structure choices vary across the developing nations remains an open empirical question. In addition to this, the literature for Indian market also shows that there was less work done on the capital structure and there was no empirical support for the equity market timing theory. Moreover, it was also observed that no study has been done so far which explores the dynamics of capital structure when the firms have been classified into three sectors of the economy—primary, secondary and tertiary (especially in context of the equity market timing). Therefore, it would be interesting to explore the timing behavior of Indian firms while they raise capital from the market. In addition to this, it is also vital to know how the capital structure decisions of the firms differ across the three sectors of the economy. Thus, the capital structure decisions of Indian firms are analyzed in the context of the equity market timing theory. The analysis is further extended when the firms are categorized into the three sectors of the economy. So as per the authors’ knowledge, the present study is the first one, which explores the validity of Equity Market Timing for Indian firms, with empirical support.
Additionally, it has also been seen that for improved financial performances of the firms, it is important for the managers to understand the implications of the various determinants of the capital structure decisions of the firms. The literature broadly classifies the determinants of the capital structure into two categories—firm-specific factors (or the internal factors) such as profitability, asset tangibility, size etc. and the macroeconomic factors (or the external factors) like inflation, economic growth, stock market indicators and so on. So, the question to be answered here are how these determinants affect the firms’ choice of capital? Further, it was observed that the three theories of capital structure provided a different theoretical framework for studying the effect of these determinants on the capital structure decision of the firms. For instance, the trade-off theory predicts a direct relation of debt with profitability (Taub, 1975; Salawu & Agboola, 2008 etc.), economic growth (Gertler & Hubbard, 1991; Zwiebel, 1996) etc. On the other hand, the pecking order theory predicts an inverse relation of debt with profitability (Rajan & Zingales, 1995; Booth et al., 2001; Afza & Hussain, 2011 etc.), economic growth (Korajczyk & Levy, 2003) etc., stating the preference for retained earnings. Whereas, the equity market timing theory states that the firms issue equity when the market is high and repurchase equity when the market is low. So, as per the theory the managers who are able to take the advantages of market fluctuations, lower the overall cost of capital and add to the shareholder value. Hence, it would be interesting to know that among these three theories of capital structure, which theory provides a better explanation for Indian firms (and also when the firms are categorized into the three sectors of the economy).

Another question which has been mystifying the minds of the managers and academicians ever since the publication of the Modigliani and Miller’s work in 1958, is how the capital structure dynamics affect the value of firms? The literature shows (Roden & Lewellen, 1995; Kinsman & Newman, 1998; Majumdar & Chhibber, 1999), that the majority of the work done in this area consider the firm value as a linear function of capital structure (i.e., the regression function is identical across all the observations in the sample) but, in reality, additional debt is good only up to a certain level because going beyond that would increase the bankruptcy cost of the firms (Kraus & Litzenberger, 1973; Altman, 1984) and would decrease their value (Modigliani & Miller, 1963). Thus, this reflects that firm value has an asymmetric non-linear relationship with the capital structure (i.e., the regression function is not identical across all the observations in the
sample and fall into discrete classes). So, the main objective here is to find out that proportion of debt and equity which would maximize the firm value while minimizing the average cost of capital. Further, it is seen that the research on finding out the level of optimal capital structure for Indian firms is scant. Therefore, the optimal capital structure of Indian firms is explored in totality as well as when they are categorized into the three sectors.

As it is known that the right capital structure planning not only imparts higher returns to its shareholders but also increases the ability of the firm to face the losses and changes in financial markets. So, this study aims at understanding the capital structure decisions of Indian firms in context to the equity market timing theory. Thus, here the analysis is done to answer the following questions:

- Whether the Indian firms time the market or not?
- Does the year in which the firms’ raise capital plays an important role in designing the capital structure of the firms or not?
- How the various determinants (both firm-specific as well as macroeconomic) affect the firms’ choice of capital?
- Does there exist an inter-sectoral variation in the effect of these determinants on the firms’ choice of capital?
- How efficient are the managers in taking the capital structure decisions of the firms during the period of recession?
- How the capital structure dynamics affect the value of firms?
- Is there an inter-sectoral variation in the effect of the capital structure decisions on the value of the firms?

Therefore, the intention here is to propose a model, which would help the Indian firms in formulating their strategies regarding the capital structure.
1.4. Structure of the thesis

There are eight chapters in the thesis. The ‘Introduction’ chapter provides the broad framework and design of the study. This chapter introduces the research topic and delineates the research problem to be investigated in the study. The second chapter ‘Review of Literature’ presents a synoptic view of the development done in the area of the capital structure. It discusses the theoretical evolution and empirical advancements in the area of capital structure for developed as well as developing nations. The third chapter titled ‘Indian Studies’ provides an overview of the Indian economy and also discusses the significance of classifying the Indian economy into the three sectors— primary, secondary and tertiary. It further presents the work done on capital structure for Indian firms. The objective of this chapter is to identify the research gap that exists in the literature. This helps in identifying the pertinent research problem in the area and defines it in simple, clear and plausible manner. Further, it is followed by the objectives and limitations of the study.

The fourth chapter titled ‘Equity Market Timing and Capital Structure of the Indian firms’ forms the analytical part of the study. The objective of the chapter is to study the effect of equity market timing on the capital structure of the Indian firms and also when the firms are categorized into the three sectors of the economy. In addition to this, the impact of different firm-specific factors namely— asset tangibility, profitability and size on the capital structure of firms are also studied.

The fifth chapter ‘Macroeconomic Variables and Capital Structure Decisions of Indian firms’ presents the causal effect of the macroeconomic variables on the capital structure decisions of Indian firms. The analysis is also extended when the firms are categorized into the three sectors of the economy. In the sixth chapter entitled ‘Capital Structure Dynamics during Recession’ the capital structure decisions of Indian firms during the period of recession (2008-09) are studied. Further, depending upon their choice of capital, i.e., debt or equity during the period of recession, their performances are also studied.
The seventh chapter ‘Capital Structure Dynamics and Value of Indian firms’ analyzes how the capital structure decisions affect the value of a firm. Here, the existence of an asymmetric non-linear relationship between debt ratio and value of the firm is tested; and if it exists, then to determine the optimal (or the threshold) level of debt. Again the analysis is also done for the sectoral classification. The eighth chapter ‘Findings and Conclusion’ summarizes the major findings of the study with a conclusion. It also discusses the policy implications emanating from the study and the possible future course of action. Further, it is followed by References and Appendix.