



Taxonomy of Financing Decision

Archana Pratik Badani & Meda Srinivasa Rao

Marwadi University, Rajkot, India

Abstract

The financing decisions are crucial to frame the Capital Structure (CS) of the company. The financing decision aims at maximizing the firm's value by arranging the quantity of equity and debt appropriately. Different factors are affecting the Capital Structure decision. Hence, the selection of the best Capital Structure is the most dynamic process. As the selection of Capital Structure is still a puzzle, many empirical studies have contributed to it. The paper discusses the essence of various theories of Capital Structure propounded by different authors from the year 1952. According to the different Indian and foreign scenarios, many Indian and foreign authors have conducted various recent studies for the Capital Structure decisions. With regards to relevance and irrelevance of longterm financing decisions on the firm's value and the cost of capital, the attempt has been made to review the recent literature of India and Foreign studies. The research gap has been found out from the outcome which has helped in identifying the scope of further research.

Keywords: Capital Structure (CS), Net Income Theory (NI), Net Operating Income Theory (NOI), Modigliani and Miller Theorem (MM), Trade-off Theory (TOT), Pecking Order Theory (POT)

JEL Classification: G32

Paper Classification: Literature Review

Introduction

The financing decision is having a high impact on a company's strategic plan. The managers of the company should carefully select the Capital Structure so that they can maximize the firm's value (V) and minimize the overall cost of capital K_0 . The Capital Structure decisions deal with deciding the proportion of equity (E) and debt (D). Therefore, it is $D+E$. Some firms prefer high debt so that it can take tax advantage of interest on debt in the Capital Structure; therefore, they are called levered (L) firms. Whereas other firms opt for zero leverage policy that means they keep only equity in their Capital Structure with the ultimate objective to satisfy their shareholders, these firms are known as unlevered (U) firms. It has been argued that when the capital market condition is perfect, the financing decisions are not applicable to increase the firm's value or to decrease the overall capital's cost K_0 /Weighted Average Cost of Capital (WACC). However, under imperfect market conditions, Capital Structure decisions are most relevant and affect the firm's value and capitalization rate.



With regards to relevance and irrelevance of longterm financing decisions on the firm’s value and the overall cost of capital, the attempt has been made to review the recent literature of India and Foreign studies. By reviewing the original contribution and the recent outcomes, the scholars will be able to identify the scope and the areas of opportunity where further contributions can be added. To achieve this objective the research scholars have undertaken review of existing theories of financial decision.

Net Income Theory (NI)

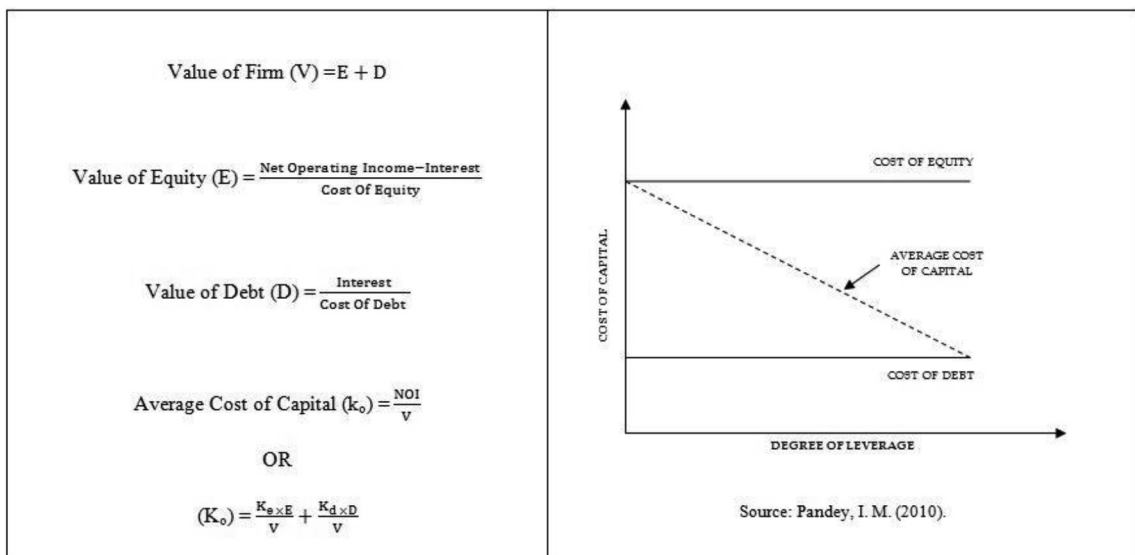
Essence

The research titled ‘cost of debt and equity funds for business: trends and problems of measurement’ by Durand (1952) opened a debate whether the Capital Structure decisions influence Value of the firm(V). He had propounded two approaches in support of his argument. One of them was recognized as NI theory and another one was known as NOI theory. NI theory was also named as financial leverage theory. As per author, NI theory of Capital Structure is linked with K_O and V. The theory assumed that...

- There is a mix of two components of finance. i.e. debt and equity
- The total capital required by the firm remains constant
- K_D should be lesser than K_E
- A higher proportion of debt does not alter the sensitivity of the shareholders towards risk
- There are no corporate taxes

The argument in favor of NI was, as K_D is lower than K_E infusing the more percentage of D in the Capital Structure the firm can take the benefit of the lower K_D funds as compared to the higher K_E funds.

Figure 1: Behavior of K_E , K_D , K_O as per NI approach



The K_D and K_E remained constant. K_O in Capital Structure depended on the ratio of equity and debt. In the Capital Structure, if the Debt portion is increased, then it may lead to cheaper source

of cost of funds. As an outcome, K_o falls and V rises. Hence his argument was proved.

However, the argument against the NI approach was that the most important aspect of leverage was not focused. It had ignored risk factor associated with the price. As price will vary in the same direction of the changing proportion of debt in the Capital Structure.

Recent Studies and Outcome

Foreign Studies

- Kabeer and Rafique (2018) analyzed the determinants of financing decisions from a sample of 400 manufacturing firms from the Pakistan Stock Exchange (PSE) during the phase of 2001-2014, to detect how the risk of business affected debt ratios of the firm under study. The Ordinary Least Square (OLS) analysis showed that profitability, cash ratio, and firm's age were negatively affecting the debt ratio. However, the debt ratio was having a positive impact on the size of the firm, Tobin's Q, tangibility and business risk. Therefore, more focus should be given to all such factors which can reduce the debt ratio thereby decreasing WACC and increasing the firm's value.
- Maksum (2018) discovered the relationship between the firm's value and Capital Structure through the path analysis of the Tourism Industry of Indonesia during 2007-2014. For this purpose, factors like profitability, firm size, institutional ownership, and growth were taken into consideration. The result derived from the 19 selected tourism companies through the path analysis revealed that profitability, institutional ownership, growth and the debt-asset ratio affected the firm's value. Whereas firm size was contrasting with the above result.

Indian Studies

- Bhayani and Ajmera (2018) observed the impact of longterm financing decisions on the firm's performance and value for the year 2013-2017 of listed pharmaceutical companies in India. The results of Regression Analysis were: (a) financial leverage was negative and insignificant on Tobin's Q. (b) Financial leverage was positive but insignificant to V . Therefore, the authors have concluded that V and financial performance were not affecting the decision relating to Capital Structure.
- Shilpa and Amulya (2018) demonstrated that the firm's value is affected by Capital Structure decisions. They had selected factors such as firm, year and sector-related factors for the analysis. A sample of 56 firms of Indian chemical industries listed in the NSE from 2010 to 2016 had been selected. They had used a multilevel regression model including cross-sectional and time series analysis concurrently. The empirical result concluded that the firm related factors of Capital Structure affect the value of the firm.

Research Gap

Foreign Studies

- Kabeer and Rafique (2018) supported the NI approach as the factors of financing decisions affected the K_o and V . However, the result may vary provided different sector is selected under the mentioned period.
- Maksum (2018) embraced the NI theory with one exceptional factor i.e. firm size. However, if the number of companies under study gets increased for the analysis there is a possibility for the reversal of results shown by exceptional factors.

Indian Studies

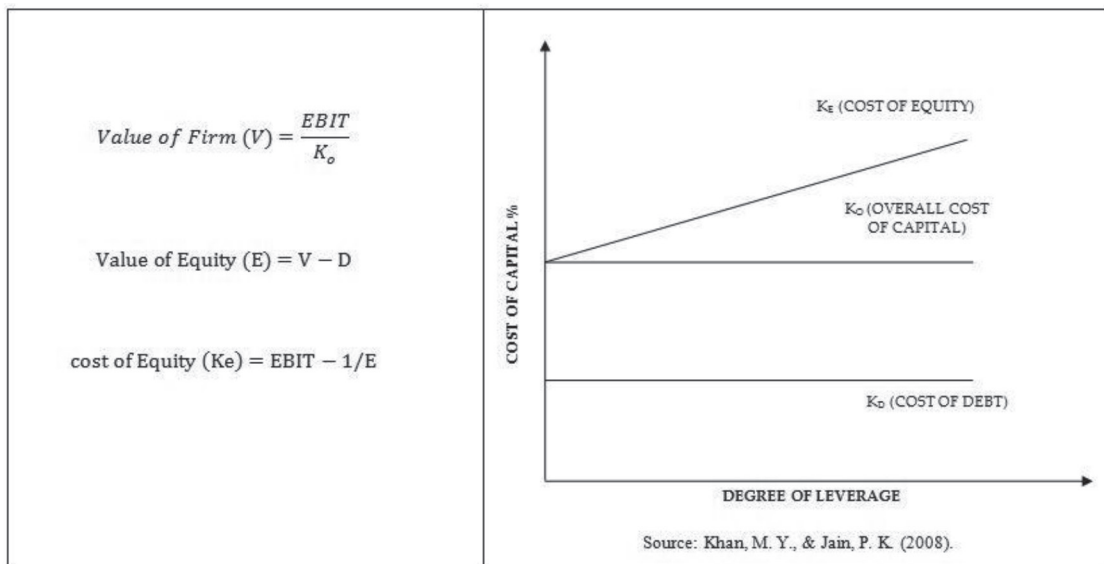
- NI approach proposed that K_o and V are relevant to the financing decision. However, the study conducted by Bhayani and Ajmera (2018) showed an insignificant result for the listed Indian pharmaceutical companies.
- Shilpa and Amulya (2018) arrived at the result that was parallel with NI theory of Capital Structure. However, only 56 companies were selected as a sample under the study. Therefore, there is a chance of variance in the result if more than 56 companies were selected for the study.

Net Operating Income Theory (NOI)

Essence

Durand(1952) propounded another theory of financing decision identified as NOI. It is the opposite of the previous theory. NOI suggests that Capital Structure decision is not linked to V and K_o . He prescribed that Earnings before Interest and Tax (EBIT) and WACC affected the market value of the firm. The propositions offered by him were as under.

Figure 2: Behavior of K_E , K_D , and K_O as per NOI approach



- The investors will evaluate the value of the firm. There is no need to split debt and equity due to its irrelevance.
- The overall capitalization rate which is indicated by K_o is dependent on business risk and it is assumed that K_o will remain unchanged.
- There is an assumption of the constant cost of debt which has been indicated by K_D
- When the value of debt is subtracted from the total value of the firm, the residual value of equity is achieved.
- In the Capital Structure if the quantity of debt grows, the investors may find it unsafe to invest. Because of higher leverage in the Capital Structure, the investors will start demanding higher risk premiums to bear with the risk and hence K_E will increase.

- There is no corporate tax.

Recent Studies and Outcome

Foreign Studies

- A'yun and Suhadak (2018) conducted the study for the period ranging from 2014-2016. The study is based on the property, construction and real estate sector of the Indonesian Stock exchange. The hypothesis formulated by them observed that the financing structure has an impact on the firm's value, is failed to be accepted. The outcome displayed that there was insignificant relationship of Capital Structure on V. The situation so happened was because the investors in most of the cases would be valuing the closing price of the firm as compared to the debt of the firm. This result supported the NOI approach. As it explained that the value of the firm did not change regardless of debt used by the firm in the expenditure of it.
- Uzliawati et al., (2018) presented the analysis of the connection between the value of the firm and Capital Structure. For the above-mentioned purpose, a sample of 101 manufacturing companies listed in the Indonesian Stock exchange had been selected for the period ranging from 2012-2015. According to the analytical result, higher debt-equity ratio and higher debt-asset ratio revealed the higher firm value and vice versa. The empirical analysis concluded that the relationship between debt-equity ratios were hand in hand along with the longterm debt-asset ratio. However, the negative correlation had been reflected in long term debt and firm value, whereas the debt-asset ratio was not having an impact on the value of the firm.

Indian Studies

- Sinha (2017) attempted to show the puzzling nature of Capital Structure decision on the firm's value. The author had selected power companies listed on the BSE between 2007 and 2015 as a sample of the study. Two measurements had been applied for the firm's value of which one was Tobin's Q and another one was Enterprise value to EBT, Depreciation and tax ratio. The debt-equity ratio measured the leverage. One of the results of the panel data regression model was showing the adverse correlation between the firm's value measured by Tobin's Q and financial leverage measured by the debt-equity ratio. However, another result showed that the enterprise value to PBT, depreciation and tax measure were having no impact on the financial leverage through debt-equity ratio.
- Venugopal et al., (2018) conducted the empirical analysis to know the impact of Capital Structure decisions on the value of a firm, a sample of 77 Indian Pharmaceutical companies listed in the BSE from 2009 to 2015 had been selected. The result of the regression model had concluded that the debt-equity ratio, long term and short-term debt ratios were positively correlated and impacted the created shareholders' value. When the tax aspects were not taken into consideration, created shareholder value was negatively related to the total debt ratio.

Research Gap

Foreign Studies

- A'yun and Suhadak (2018) conducted the study from the period of 2014 to 2016. The analysis was just for 2 years. So, on that basis the general conclusion of proving the NOI theory was not sufficient. The analysis was required to be done at least for 10-15 years to derive any specific conclusion.

- Uzliawati et al., (2018) partially supported NOI approach of Capital Structure because only one of the variables of Capital Structure was not affecting the firm value, other variables were either negatively or positively related with the firm value.

Indian Studies

- Sinha (2017) attempted to prove that NOI theory did not always hold because of the puzzling nature of Capital Structure.
- Venugopal et al., (2018) rejected NOI theory because the empirical results were different than the result suggested by NOI. The theory suggest that the Capital Structure decisions are irrelevant to the V and the K_O .

Modigliani and Miller (MM)Irrelevance Approach (Assuming No Corporate Tax)

Essence

Modigliani and Miller(1958) developed the MM Approach by keeping the base of NOI. According to MM, the Capital Structure decision is immaterial with relation to the K_O and V. They had developed the operational behavioral justification for their theory which was built on the ground of NOI. The operational behavioral justification was based on the following propositions formulated by MM.

Proposition I: Capital Structure has no impact on V and K_O . The V and K_O are constant

Proposition II: the increase in K_E would be equalized by using a cheaper source of debt fund.

Proposition III: The minimum investment rate is not dependent on sources through which investments are funded.

The Propositions were assumed as below:

- Free exchange of information due to non-restrictive capital market
- Identical expectation of EBIT
- 100% payout of dividend
- Equal level of business risk for all the firms which belong to the same industry group
- No transaction cost
- No taxes (However, this assumption was removed later)

As we are interested in exploring the relationship of degree of leverage and value of the firm, the below description is limited to the proposition- 1.

Proposition -1

- Based on the above-mentioned assumption, the proposition -1 was developed, which states that changes in a debt-equity ratio of Capital Structure will not alter the weighted average cost of capital WACC, Value of the firm (V) and its market price. The operational justification of this proposition is the introduction of the concept of the Arbitrage Process. When the investor buys the security from one stock exchange (with lower price) and sells the securities to another stock exchange (with higher price) is referred to as the arbitrage process. Example: Suppose, an investor buys shares of RIL from the Bombay Stock exchange (BSE) at a lower price and as and when the price rises, he sells it to National Stock Exchange (NSE).

- The essence of the arbitrage process is to bring the market price and the values of two securities at an equilibrium level. The securities with a lower price (undervalued) will experience a higher amount of purchase, which will lead to a higher price. Similarly, securities with a higher price (overvalued) will experience aggressive selling and consequently decrease in the price. This process will continue until both the securities are in the same line. Therefore, the arbitrage process is a balancing mechanism. It is an operational justification of MM proposition because in order to balance the price and value of two different securities, there is no need to alter a Capital Structure decision, as the financial leverage decisions do not affect V .
- Now, suppose an investor has the investment in the levered firm. The combined Capital Structure of equity along with debt is called the levered firm. The investor sells the securities from the levered firm and from that cash flow, invests the amount in the unlevered firm and simultaneously wants to take the benefit of debt on his investment. Therefore, he invests in the unlevered firm his own equity (cash flow realized from the sale proceeds of levered firm) and borrows the personal finance and introduced the concept of homemade finance in his arbitrage process. The argument in favor of homemade leverage by MM is that investors can substitute personal leverage for corporate leverage. Here, it is assumed that both levered and unlevered firms are similar in all aspects except the debt-equity ratio.
- Selling of securities from a levered firm and purchasing the securities of the unlevered firm, as both the firms have the same risk characteristics and same income, the investment outlay is lower in the unlevered firm, so the investor will automatically wish to switch over from levered firm to unlevered. As the assumption is investors are rational, the demand for the unlevered securities would be shifting upward at the same time, the demand for levered firms would be shifting downward and, therefore, the prices will also start decreasing. This will continue unless it is possible to reduce the outlay and get the same amount of return. After exercising the homemade leverage, this is the point of equilibrium, where the change in the debt-equity mix is not affecting the K_0 and value. However, beyond this point, switch over from the unlevered firm to the levered firm will not be similar in all the aspects.
- Criticism: The arbitrage process is criticized on the ground that, whether the homemade leverage is a substitution for corporate leverage. The arbitrage process is based on theoretical ground and practical relevance is lacking because of its limitations like cost aspects, risk perception, institutional restrictions, procedures and formalities and the risk of double leverage.

Recent Studies and Outcome

Foreign Studies

- Lawson and Osaremwindi (2019) had selected 15 manufacturing firms registered in the Nigerian Stock Exchange in the period of 2012-2017 to study the correlation between Capital Structure and the value of the firm. The empirical results of correlation analysis and panel ordinary least square (OSL) regression analysis displayed that leverage, profitability, the tangibility of assets and age of the firm significantly affected the value of a firm. Whereas firm size was insignificant to the value of the firm.
- Zavala and Salgado (2019) conducted a study of 69 non-financial firms registered on the Mexico stock exchange in the period of 2004 -2014. The paper examined the consequence of changes in leverage on the market value of Mexican publicly traded firms using econometric estimation methods. They rejected the irrelevance theory of MM (1958) and showed that Capital Structure changes certainly affect V of their sample firms.

Indian Studies

- Aggarwal and Padhan (2017) examined the Indian hospitality firms listed on the BSE from 2001-2015 to check whether there was any influence of financial structure and firm quality on V . The empirical results of the study disclosed the substantial correlation of the Capital Structure and V .
- Bagga and Kaur (2016) concentrated on the impact of K_O and V on the Capital Structure concerning the service and manufacturing sectors in India. For this purpose, 100 manufacturing companies and 100 service sector companies were identified for the period ranging from 2004-2014. The conclusion of regression analysis showed the inverse relationship with the K_O and leverage. There is a direct relationship between value and the Capital Structure of the firms. Therefore, the study was not proving the MM proposition(1958) that the higher the levered firm, the higher the value of the firm.

Research Gap

Foreign Studies

- Lawson and Osaremwindi (2019) showed the opposite MM Proposition (1958) because as per MM propositions V and K_O are irrelevant to the Capital Structure.
- Zavala and Salgado (2019) provided the empirical result of the study according to the relevance theory of Capital Structure(1963) and (1958). But the study was only limited to non-financial companies, therefore the results may differ for other sectors.

Indian Studies:

- Aggarwal and Padhan (2017) had conducted a study based on the Indian hospitality sector. The empirical result of the hospitality sector demonstrated that the irrelevance theorem of Capital Structure on V and K_O did not hold. However, the data and the results may vary if another sector was selected for the study.
- Bagga and Kaur (2016) performed an analysis based on the Indian Manufacturing and service sectors. The study did not consider any parameter in the selection of companies in both industries. Therefore, variation in results could be possible if the study was conducted with similar parameters (like the highest net worth, highest sales, etc.) of the companies under study.

Modigliani and Miller (MM) Relevance Approach (With the assumption of Corporate Tax)

Essence

Modigliani and Miller (1958) shifted from their earlier irrelevance approach with the assumption of no corporate tax to the relevance approach assuming the presence of corporate tax. They realized the importance of corporate tax on the firm's value. Therefore, Modigliani and Miller (1963) in their article showed that levered firm will have more value as compared to the unlevered firm. They developed three propositions under the assumption of corporate tax, which are elaborated below:

Proposition I: V of L firm will be greater than the V of U firm by the present value of interest on debt tax shield.

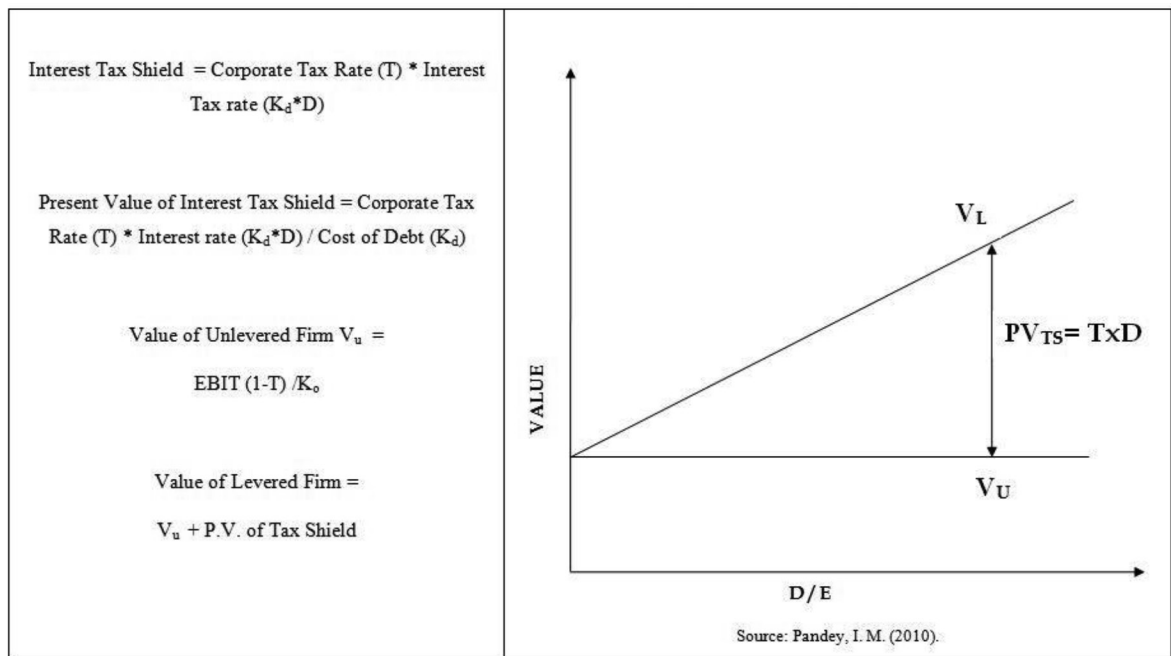
Proposition II: They propose that as the proportion of debt increases in the financial structure, K_E will be moving up but at a decreasing rate as compared to the K_E in no tax assumption approach.

Proposition III: As the D is higher in Capital Structure, the K_O will rise at the decreasing rate as compared with no tax assumption.

The detailed explanation of Proposition I is as under.

Proposition I: MM had given proposition under no tax assumption in the year 1958. By realizing the fact that corporate income tax does exist and the interest on the debt is deductible from the corporate tax, MM have shifted from an irrelevance approach to relevance approach of financial structure with K_O and V. Suppose, if there are two firms Levered (L) and Unlevered (U). U firm is all-equity financed firm and L firm employs debt in its Capital Structure. The resulting value of L firm will be more because the interest expense is deducted from tax. By that amount, L firm will be paying less tax and thereby increasing the firm's value. Whereas U firm has full liability for the payment of tax, therefore, the value will be less as compared to L firm.

Figure 3: Behavior of K_E , K_D , K_O as per MM Proposition (With Corporate Tax)



Institutionalization of Optimum Capital Structure: Because of the advantage of higher interest tax shield, value of L firm will be higher as compared to the U firm. Therefore, the optimum Capital Structure can be achieved by keeping 100% D in the Capital Structure, as it maximizes V and minimizes K_O . The following three implications are responsible for the institutionalization of optimum Capital Structure.

- Value of Firm (V): The levered firm will enjoy more benefits due to the amount of tax saved than unlevered firm.
- Cost of Equity (K_E): It will rise with the rise in debt in Capital Structure, but due to interest tax shield advantage the cost of equity will be lesser than that in non-tax assumption.

- Cost of capital (K_0): As the financial risk got reduced, risk premium goes down resulting in lower WACC.

However, the existence of a debt does not necessarily mean that the firm should always opt for higher debt in the Capital Structure due to two constraints: (1) need to know the influence on personal tax and corporate tax for corporate borrowing because the personal income tax will offset interest tax shield. (2) Beyond a certain level of borrowing it may lead to loss of interest shield due to financial distress.

Recent Studies and Outcome

Foreign Studies

- Devereux et al., (2018) analyzed confidential report of corporate tax returns to precisely measure the tax enticements for the companies to borrow rather than depending merely on financial statement's accounting data. The study had been conducted for a panel of UK private sector companies for the year 2001-09 to estimate the relationship of leverage in response to the firm's marginal tax rate. Their dynamic Capital Structure model concluded that corporate tax was one of the important determinants of the financing decision of the firm. Their study also proved that depending only upon the financial statement for marginal tax rates might give biased results and might turn into measurement errors.
- Fleckenstein et al., (2019) conducted an empirical examination to analyze the correlation between corporate tax and financial structure decisions of US firms for the longer horizon for the period of 1926- 2013. The findings of the analysis were based on the categories of industry and not on the individual tax return. The researchers concluded a robust relationship between marginal tax rates and leverage for large firms including financial and non-financial firms. But the results were not consistent for small firms.

Indian Studies

- Sharma (2018) conducted empirical research by applying multiple regression analysis from 2009-2015 to analyze the factors affecting Capital Structure. The factors of Capital Structure had been identified based on market capitalization from 125 real estate companies listed on the BSE. The outcomes disclosed that size, age, profitability, tax shield variables were significantly affecting the Capital Structure decisions.
- Abey and Velmurugan (2019) analyzed that the Capital Structure should be designed by considering the present financial solvency position, earning potential and future growth of companies. Therefore, they studied about Indian Automobile companies from 2008 to 2017 to ascertain the financial leverage of the Indian Automobile Industry. The correlation and multiple regression techniques of the research determined the impact of financial leverage on Liquidity, ROI, Sales growth, Size of the company, and the Provision for taxation of the Indian Automobile Sector.

Research Gap

Foreign Studies

- Devereux et al., (2018) concluded the responsiveness of leverage with corporate tax for UK based private sector firms. The study indicated that marginal tax derived only from financial statements may be misleading. Therefore, it was necessary to measure leverage and marginal tax rate with firm-level tax returns. However, the study had not focused on listed public sector

companies to arrive at the same conclusion as that for private sector companies.

- Fleckenstein et al., (2018) described only for the large size categories of firms. The firms with a smaller size had no dependency between leverage and marginal tax rates. The smaller companies either found it too costly or might not be able to change the leverage proportion in the Capital Structure along with tax incentives.

Indian Studies

- Sharma(2018) concluded the study based on only 25 sample companies of real estate listed on the BSE with a limited time frame of 2009-2015. Therefore, the results might vary if the sample size or the time horizon of the study gets increased.
- Abey and Velmurugan (2019) restricted their research to limited Indian Automobile companies for the time frame of 10 years. The findings of tax provision and leverage revealed a negative relationship. It indicated that reduced tax rate provision increases financial leverage. This showed that the results were inconsistent with the relevance theory projected by Modigliani and Miller (1963)

Trade-off Theory (Static Trade-off theory)

Essence

The irrelevance propositions of MM (1958) had been eliminated by Stewart C. Myers (1984) and he had used the trade-off theory to explain the Capital Structure dilemma. Therefore, it is necessary to have an insight into static TOT. According to Stewart C. Myers (2001) the optimum Capital Structure could be attained when the marginal cost of debt was matching the marginal benefit of debt. The optimal Capital Structure can be recognized as per the research of Fama and French (2002). Therefore, let's have a glance at the above mentioned debt advantages and disadvantages.

- Tax Shield: The tax shield advantage can be achieved when the firm keeps a larger amount of debt proportion in the financial structure. As the interest on the debt is deducted from the tax, it brings a positive impact on the profitability of the firm. Therefore, those firms which are having a higher tax rate, they will tend to have higher debt in their Capital Structure as compared to equity. But the firm must make sure that it should not keep much higher amount of debt which may lead to insolvency, bankruptcy and further it may lead to loss of tax.
- Cost of Financial Distress: The most dangerous factor that may dominate the tax advantage of debt is the cost of financial distress. The financial distress is described as the difficulty a firm may face in meeting its commitments, which may include the interest to be paid to lenders of funds. The cost of financial distress includes legal and administrative cost which is direct bankruptcy costs and the indirect bankruptcy costs like the loosing of its customers, faulty decision making and moral hazard as included in the article of Bradley et al.,(1984). In the literature of financial distress as stated by Myers(2001) two qualitative statements are derived (a) risky firms should borrow a smaller amount. Here, the risky firm is explained as the variance rate of the market value of a firm's assets. The probability of default will increase due to a higher variable rate. However, safe firms are advised to borrow more because of its less risky nature. (b)Firms occupying fixed assets will borrow less as compared to the firms occupying more specialized or current assets, because of more volatility in the value of the current asset.
- Agency Cost: According to Harris and Raviv (1991), Jensen and Meckling (1976) and Fama and Miller (1972) identified the conflicts between stockholders and managers. As the

managers are not authorized to get 100% profits like shareholders, the conflicts will arise between them. Therefore, managers will not be allowed for complete gain from the takings, but they must tolerate the overheads which are incurred to achieve profits. In short, agency cost befalls because of separation of ownership and control. Therefore, to reduce the conflicts amongst stockholders and managers and thereby to reduce the agency cost, Harris and Raviv (1991) suggest that, the usage of debt in the Capital Structure provides worthwhile evidence to examine the agency bearing and therefore, the managers for the sake of their motives can't afford to reduce agency cost due to their commitment to pay more cash by increasing more debt in the Capital Structure. Further, Fama (2002) hold that additional debt in the Capital Structure may give rise to conflicts between debt holders and bondholders. Therefore, the TOT of optimal Capital Structure as provided by Brounen et.al (2005) increases the shareholder's wealth. They also enlighten that even the value capitalizing corporations use debt capital at the maximum level; they face the low possibility of going insolvent.

Recent Studies and Outcome

Foreign Studies

- Campbell and Rogers (2018) found that European companies moved exactly in the opposite trend of trade-off theory. The study conducted for the period 2006-2016 and the results revealed that many companies in Europe had substantial variability in the Capital Structure. The results concluded that smaller and less profitable companies turn out to be more debt volatile. The debt volatility was the ultimate result of instability in operational and investing activities and only a part was responsible for the financing activities.
- Chaleeda et al., (2019) collected samples of 256 firms from 9 sectors listed on the Malaysian stock exchange during 2000-2015 through a panel data approach. The findings were: (a) short-term debt and long-term debt to total assets had a positive and significant relationship with the value of the firm. It was provided that leverage and dividend can solve the problem of agency cost of free cash flow and thereby increasing the firm's value. (b) Total debt to total assets was affecting the firm's value negatively. It demonstrated that the debt proportion was beneficial to some extent, but if it reaches beyond some level, debt financing will increase the cost of bankruptcy.

Indian Studies

- Pandey et al., (2019) attempted to analyze the different variables of Capital Structure due to recession. The study had been bifurcated into the pre and post-recession period. The study had been conducted for NSE 500 firms for the period of 2001-2016. The empirical result of the panel estimation model of fixed effect showed that in the prior recession period; growth, dividend payout, age and tax rate were the significant determinants causing Capital Structure decisions. But after the end of the recession period, the result was insignificant. Some factors like profitability, tangibility, liquidity and debt service capacity were significant for both the periods under study. The result of the post-recession period also revealed that factors like financial distress, size, and cost of debt will be having a different perspective in the long term and short term debt ratios.
- Dakua (2019) conducted the examination on Capital Structure of the Indian Steel industry, for the span of 2010-2017. The factors impacting the Capital Structure decisions were ascertained and the correlation of factors with the debt ratio had been calculated through empirical research. The empirical result showed that profitability and liquidity were significant and had

a positive association with the debt ratio and other elements like asset structure, non-debt tax shield and size were also statistically significant with the negative relationship.

Research Gap

Foreign Studies

- Campbell and Rogers (2018) concluded that debt volatility was because of operating or investing activities and not because of financial activities. Therefore, this research was in the opposite direction of TOT of Capital Structure.
- Chaleeda et al., (2019) presented only two aspects of TOT, one was total debt to total assets and bankruptcy cost, but another important balance which was required in TOT is the tax shield advantage of debt, which was not taken into consideration in the present study.

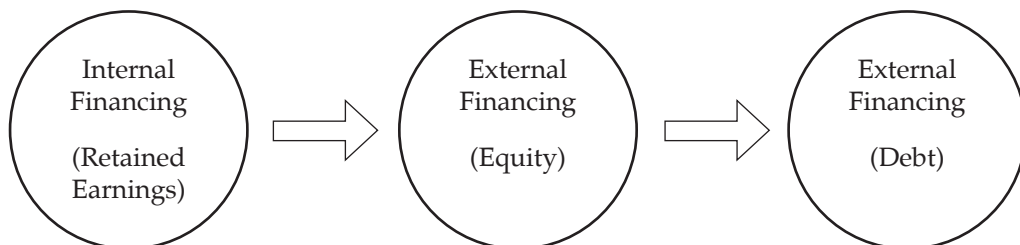
Indian Studies

- Pandey et al., (2019) analyzed Capital Structure determinants before and after the recession period. The results did not support the trade-off theory in isolation; some of the findings also confirmed the presence of POT as well. Therefore, the results were a mixture of TOT and POT both.
- Dakua (2019) followed the trend of the trade-off theory. But the survey was limited to only 42 companies out of 300 listed companies of the steel industry. So, the result might not always support the TOT if the research was extended to more than 42 companies.

Pecking Order Theory (POT)

Essence

Trade-off Theory and Pecking Order Theory of financing structure decisions are the utmost competing theories developed to suggest and justify the debt-equity mix in the Capital Structure decision. The TOT emphasized that profitable firms with higher tax-shield will get more benefit with borrowing. The POT was originally developed by Donaldson (2000) had conducted a study of the Capital Structure pattern followed by industry. Following him, Stewart C. Myers and Nicolas Majluf (1984) had made the theory more useful. The authors had called it POT because there was no structured target Capital Structure. There are two kinds of equity internal as well as external. One at the upper side of the pecking order and another at the lower side. The POT is based on following the pronouncement of preferential financing:



- The firms prefer internal financing from internal earnings inclusive of retained earnings and depreciation, provided that the firm is profitable, and it has sufficient availability of cash flow to meet the need for capital financing. One of the preference for internal financing is that there is no need to bear the floatation costs.

- The firms set the “sticky dividend payout policy” after consideration of future investment opportunities. If the firm has more than enough internal funds, it will retire debts, invest in marketable securities, increase dividends and buy back the shares.
- If firms are less profitable and do not have sufficient retained earnings to make it a financing option, then they may switch over and give preference to debt financing options from the choices of external financing as it is an economical source of external financing. The selection of debt in financing decisions is due to the unavailability of adequate internal financing. However, the logic for the consideration of debt financing is because of the consequences of asymmetric information. The managers know more than the investors about the firm. They are reluctant for the issuance of shares when the price of shares is undervalued.
- The firm generally opts issuing equity as a last resort to external financing. According to this, when the firms believe that shares are overvalued, they select issuing equity shares. As and when there is an announcement regarding the new issue of the shares, the prices of the shares tend to fall. Another disadvantage of issuing stock is a dilution of relative shares of existing shareholders.

In a nutshell, POT is a behavioral justification of way of funding the companies. Some rational arguments like asymmetric information, signaling and floatation cost stress upon the POT. Profitability and leverage have negative relation according to this theory. When the firm is having unexploited cash or unexploited debt capacity then the firm will be at the top of the pecking order. But more than sufficient financial slack is encouraging the managers to over-invest. Therefore, in such a situation high debt ratio may serve the purpose.

Recent studies and Outcome

Foreign Studies

- The research article of Jarallah et al., (2019) empirically examined the Capital Structure theories of the pecking order and trade-off for 1362 publicly registered companies in the Tokyo stock exchange from the period of 1991 to 2015. It directed to the elaboration of agency theory to explore the behavior and financing pattern of Japanese firms. Book-value and Market-value were taken as a measure for the choice of Capital Structure incorporating explanatory variables like the size, profitability, growth, dividend behavior. The study confirmed that profitability and the debt ratio were negatively related. Hence, the result was according to POT. Besides, other variables like growth, dividend, and size were positively related to leverage. Further, the result also revealed that during 1989 (asset bubble burst) and 1998 (banking crisis) in Japan, the trade-off theory was the perfect base. But during the growth period POT surpassed the other.
- A study conducted by Nurhalis et al., (2019) found out the significant negative relation of profitability, asset structure and sales growth with financing (debt) policy with the help of multiple linear regression analysis for wholesale and retail companies of Indonesia. The result also disclosed that there was an insignificant difference in the debt policy of wholesale and retail companies by applying independent t-test.

Indian Studies

- Rao et al., (2019) tested a sample size of 174 non-financial companies. Empirical findings discovered that profitability and leverage were inversely related to each other. Hence, it proved that SMEs had a pattern of hierarchical financing. Positive return on equity to debt indicated the ROE of the firm increases because of the lower K_p . Firm size and leverage were

negatively associated which led to stability in a firm's earnings.

- Singh (2018) studied financial data for 26 listed IT companies from 2012-2017. For this purpose, the firms were divided into levered and unlevered firms. The result of the unlevered firms found that the profitability and Capital Structure were inversely related. Whereas liquidity, size and tangibility were positively associated with Capital Structure. While the result of the levered firms showed the negative relationship of profitability and liquidity with Capital Structure and a positive relationship with the size and tangibility. Therefore, the research was on the same track of POT. The firm preferred more internal financing with increased profitability.

Research Gap

Foreign Studies

- The research conducted by Jarallah et al.,(2019) concluded that results under a non-stable economic period like crises, supported the TOT. While the results under growing or stable economic markets supported the POT.
- Nurhalis et al.,(2019) agreed with the POT. However, the sample size selected for the research was restricted to only 48 firms. Therefore, the result could not be generalized. Another gap in this study was the consideration of limited factors like profitability, assets structure and sales growth influenced debt policy. However, if the number of factors increases, the result might vary.

Indian Studies

- The study of Rao et al. (2019) found the results were in the congruence with POT. The scope of the results was limited to listed small business organizations. The availability of data was based on the 'Prowess' database. Therefore, generalizing the results required proper care.
- Singh (2018) showed a similar result as explained in POT. But the scope of the present research was limited to only 26 IT sector companies. The analysis period of study was 6 years only. As the IT sector is fast-moving, the change in the result is bound to happen if the study calls for at least 10-15 years with more than 26 companies.

Limitations of the Study

- The present literature is not a comprehensive review of the taxonomy of financing decisions. The paper has been drafted based on recent research pertaining to the ongoing debate on capital structure decisions.
- The literature review under each theory of capital structure is based on only two recent foreign studies and two recent Indian studies.
- The study based on the present literature review is giving different results because the selected sample of the studies is based on different time horizons, different sectors and different countries and, therefore, the debate of the puzzling nature of capital structure theories remains as it is.
- The availability of data is the major concern for the study.
- The generalization of result for the everlasting debate whether the Capital Structure decisions affect the K_0 and V of the firm is not possible as the literature review shows that the dependent and independent variables so selected are also different in each foreign and Indian study.

Scope of Further Research

- The researchers have ample of scope to strengthen the current literature reviews by adding more studies to it.
- The researchers can contribute to the novel variables other than which are included in the study.

Conclusion

The conclusion after reviewing recent Indian and foreign studies can be summarized as below:

The study conducted by one foreign author concerning NI theory is disclosing mixed disclosure because NI approach is possible only if the firm operates at 100 % debt financing. This is practically impossible whereas another author approves NI approach. Likewise, Indian authors for NI give mixed results. One of the Indian authors is approving NI and another author is rejecting NI theory and discloses that there is no influence of leverage on the V.

One of the Indian and foreign authors is revealing mixed judgment regarding their result because few measures like Tobin's Q are supporting NOI approach and other measures like debt-asset ratios are not supporting NOI theory. But another Indian and foreign authors support NOI theory of Capital Structure. In fact, NOI lacks the operational justification for the irrelevance of Capital Structure. The NOI is just conceptual and definitional but lacks behavioral significance. There is much scope for further research, as Modigliani and Miller (1958) devised the MM Approach, by keeping the base of NOI theory.

The Indian authors have concluded that the hospitality and manufacturing sectors do not support MM irrelevance theorem. Likewise, foreign authors have concluded that for non-financial companies, results do not hold for the MM irrelevance theory but for the manufacturing sector, the results do hold for the MM irrelevance theory. However, with the applicability of corporate taxation, MM shifted from irrelevance to relevance of financing decisions. The value of L firm will be more than U firm because of corporate taxation. Foreign studies of private sector companies support the MM relevance theorem. Likewise, the Real estate and Automobile sectors of India support MM relevance theorem. The debate of MM theorem gave birth to TOT. The ideal Capital Structure can be attained through the trade-off between marginal benefits of taxation and marginal costs of financial distress and agency.

The Asian countries show the mix results in favor of TOT, whereas European countries do not favor the trade-off theory. These studies are based on static TOT. However, the TOT is not only limited to it, as it opens the door for the dynamic TOT.

Both Indian and foreign studies are giving proof for the applicability of POT. There are a few restrictions of POT like; not incorporating the cost of financial distress, tax effects, the cost of issuing new securities and the problem of managerial decision for the financial slack. Therefore, Modified Pecking Order (MPO) Theory has ample of scope when the firms have exhausted retained earnings and no equity issue at that time.

Table 1: Glossary

Cost of Capital	K_O	Value of Equity	E
Cost of Equity	K_E	Value of Debt	D
Cost of Debt	K_D	Value of Firm	V
Levered Firm	L	Unlevered Firm	U
Capital structure	CS	Modigliani and Miller	MM
Net Income Theory	NI	Tradeoff Theory	TOT
Net operating Income	NOI	Pecking Order Theory	POT

References

- A'yun, Q., & Suhadak, S. (2018). The influence of capital structure and profitability on firms' value: Study at Property, Real Estate, and Building Construction Sector Indonesia Stock Exchange during the Periods of 2014-2016. *Jurnal Administrasi Bisnis*, 57(1), 22-31.
- Abey, J., & Velmurugan, R. (2019). Financial Leverage: A Study based on Indian Automobile Industry. *International Journal of Management and Business Research*, 9(1), 108-114.
- Aggarwal, D., & Padhan, P. C. (2017). Impact of capital structure on firm value: evidence from Indian Hospitality Industry. *Theoretical Economics Letters*, 7(04), 982-1000.
- Bagga, R., & Kaur, J. (2016). Capital structure: A study of manufacturing v/s service Industries in India. *Apeejay Journal of Management and Technology*, 11(1), 441-443.
- Bhayani, S. J., & Ajmera, B. (2018). An empirical study on effect of financial leverage on firm's performance and valuation of selected pharmaceutical companies in India. *Indian Journal of Accounting*, 50(2), 101-110.
- Bradley, M., Jarrell, G. A., & Kim, E. H. (1984). On the existence of an optimal capital structure: Theory and evidence. *The Journal of Finance*, 39(3), 857-878.
- Brounen, D., De-Jong, A., & Koedijk, K. (2005). Capital structure Policies in Europe: Survey evidence. *Journal of Banking & Finance*, 30(5), 1409-1442.
- Campbell, G., & Rogers, M. (2018). Capital structure volatility in Europe. *International Review of Financial Analysis*, 55, 128-139.
- Chaleeda, I., Islam, A., Ahmad, T. S., & Ghazalat, A. N. (2019). The Effects of Corporate Financing Decisions on Firm Value in Bursa Malaysia. *International Journal of Economics and Finance*, 11(3), 127-135.
- Dakua, S. (2019). Effect of determinants on financial leverage in Indian steel industry: A study on capital structure. *International Journal of Finance & Economics*, 24(1), 427-436.
- Devereux, M. P., Maffini, G., & Xing, J. (2018). Corporate tax incentives and capital structure: New evidence from UK firm-level tax returns. *Journal of Banking & Finance*, 88, 250-266.
- Donaldson, G. (2000). *Corporate debt capacity: A study of corporate debt policy and the determination of corporate debt capacity*. Washington, D.C.: Beard Books.
- Durand, D. (1952). Costs of debt and equity funds for business: trends and problems of measurement. Retrieved from <https://www.nber.org/system/files/chapters/c4790/c4790.pdf>
- Fama, E. F., & French, K. R. (2002). Testing trade-off and pecking order predictions about dividends and debt. *The Review of Financial Studies*, 15(1), 1-33.

- Fama, E. F., & Miller, M. H. (1972). *The Theory of Finance*. New York: Holt, Rinehart, and Winston.
- Fleckenstein, M., Longstaff, F. A., & Strebulaev, I. A. (2019). Corporate Taxes and capital structure: A Long-Term Historical Perspective. *Critical Finance Review*, 9(1-2), 1-28.
- Harris, M., & Raviv, A. (1991). The theory of capital structure. *The Journal of Finance*, 46(1), 297-355.
- Jarallah, S., Saleh, A. S., & Salim, R. (2019). Examining pecking order versus trade-off theories of capital structure: New evidence from Japanese firms. *International Journal of Finance & Economics*, 24(1), 204-211.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.
- Kabeer, M. A., & Rafique, S. (2018). The Determinants of capital structure: Evidence from Pakistani Manufacturing Companies. *Journal of Banking and Finance*, 1(3), 1-16.
- Khan, M. Y., & Jain, P. K. (2008). *Basic Financial Management*. New York: NY: Tata McGraw-Hill Companies.
- Lawson, I. E., & Osarewindu, O. D. (2019). Capital structure and Firm Value of Selected Quoted Manufacturing Firms in Nigeria. *Journal of Economics and Development Studies*, 7(2), 66-77.
- Maksum, A. (2018). Value of the Firm in capital structure perspective. *Economics*, 6(1), 91-102.
- Modigliani, F., & Miller, M. H. (1958). The cost of capital, corporation finance and the theory of investment. *The American*, 1, 3.
- Modigliani, F., & Miller, M. H. (1963). Corporate income taxes and the cost of capital: a correction. *The American Economic Review*, 53(3), 433-443.
- Myers, S. C. (1984). The capital structure puzzle. *The Journal of Finance*, 39(3), 574-592.
- Myers, S. C. (2001). Capital structure. *Journal of Economic perspectives*, 15(2), 81-102. Retrieved from <https://www.aeaweb.org/journals/jep>
- Myers, S. C., & Majluf, N. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13, 187-221.
- Nurhalis, N., Faisal, F., Juanda, J., Rahmawati, S., Anwar, F., & Prihartini, N. (2019). Analysis of Factors Affecting the Company's Debt Policy with Pecking Order Theory in Wholesale and Retail Companies in Indonesia. In W. Strielkowski, & C. Jiuqing (Ed.), *Proceedings of the 1st Aceh Global Conference (AGC 2018)* (pp. 726-730). Paris, France: Atlantis Press. Retrieved from <https://www.atlantispress.com/proceedings/agc-18/55911123>
- Pandey, A., Bhamu, V., & Singh, M. (2019). Recession impact on capital structure determinants: Evidences from India. *Journal of Management Research*, 19(3), 205-218.
- Pandey, I. M. (2010). *Financial management*. New Delhi; India.: Vikas Publishing House Pvt. Ltd.
- Rao, P., Kumar, S., & Madhavan, V. (2019). A study on factors driving the capital structure decisions of small and medium enterprises in India. *IIMB Management Review*, 31(1), 37-50.
- Sharma, R. K. (2018). Factors affecting financial leveraging for BSE listed real estate development companies in India. *Journal of Financial Management of Property and Construction*, 23(3), 274-294.
- Shilpa, N. C., & Amulya, M. (2018). Sector and Firm Specific Variance Composition of capital structure: A Panel Data Analysis on Indian Chemical Industry. *International Journal of Management Studies*, 2(1), 38-44.
- Singh, A. (2018). Financing Pattern of Indian IT Companies. *JIM QUEST*, 14(1), 2.
- Sinha, A. (2017). An Enquiry into Effect of capital structure on Firm Value: A Study of Power Sector Companies in India. *Parikalpana: KIIT Journal of Management*, 13(2), 107-117.

- Uzliawati, L., Yuliana, A., Januarsi, Y., & Santos. (2018). Optimization of capital structure and Firm Value. *European Research Studies Journal*, 21(2), 705-713.
- Venugopal, M., Bhanu Prakash Sharma, G., & Reddy, R. (2018). Impact of capital structure on Shareholder Value in Indian Pharmaceutical Industry: An Empirical Approach through Created Shareholder Value. *Global Business Review*, 19(5), 1290-1302.
- Zavala, M. R., & Salgado, R. S. (2019). Empirical evidence on the relationship of capital structure and market value among Mexican publicly listed companies. *Contaduría 'y administración*, 64(1), 7.
-

Author's Profile

Archana Pratik Badani is a Research Scholar of Marwadi University, Rajkot, Gujarat, India. Her Specialization is in Finance. She has a work experience of more than 8 years. She has a number of articles published in refereed journals. She has presented and published research papers in National and International Conferences. Her research interests are Corporate Finance, Accounting for Managers, Financial Management, Economics for Managers, Cost and Management Accounting & Management of Financial Services.

Meda Srinivasa Rao is a Professor and Ph.D Supervisor in Marwadi University, Rajkot, Gujarat, India. His specialization is in Finance. He has an experience of 27 years. He has a number of books and articles published in the refereed journals. He has published a book, and a number of articles in National Journals and articles in International Journals. His research interests are Corporate Finance, Economics for Managers, Investment Analysis and Portfolio Management, Investment Banking, Corporate Restructuring, International Business.
