Journal of Management in Practice

Vol. 1, No. 1, 3 May 2016, ISSN: 2456-1509

Analysis of Capital Structure in Different Industries in India

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Abstract

The capital structure of a company is made up of debt and equity securities that comprise a firm's financing of its assets. It is the permanent financing of a firm represented by long-term debt, preferred stock, and net worth. So it relates to the arrangement of capital and excludes short-term borrowings. It denotes some degree of permanency as it excludes short-term sources of financing. The D/E ratio is a key metric used to examine a company's overall financial soundness. An increasing ratio over time indicates that a company is financing its operation increasingly through creditors rather than through employing its own resources and that it has a relatively higher fixed interest rate charges burden on its assets.

Some of the major reasons why the debt/equity (D/E) ratio varies significantly from one industry to another, and even between companies within an industry, include different capital intensity levels between industries and whether the nature of the business makes carrying a high level of debt relatively easier to manage.

The objectives of the study are to analyze the capital structure of different industries in India, to analyze the average debt – equity value of large cap, mid cap and small cap industries in India and identify the differences in financial statements especially in the balance sheet of a manufacturing company and a service industry. This study mainly depends on the secondary data available on the internet. For the analysis of capital structure, 132 companies from 20 different industries which belong to 5 sectors were taken. To determine the nature of the capital structure of the sample companies' debt-equity ratio is calculated. Thereafter, average of debt equity ratio was calculated by considering the weighted average based on their market capitalization.

The debt-equity ratios of the industry sectors covered in the study lie within the range of 0.004607- 8.237996. The lowest ratio observed in the case of Computer Software industry and the highest in the banking sector. The common understanding and theoretical studies show that the debt equity value of large cap companies should be more since they are more known to the public, especially the money lenders, it is easy for them to get more debt amount. But in this study what was found is that the average debt equity value of small cap companies is higher than that of mid cap and large cap.

It is therefore argued that the financial manager must identify factors and carefully analyze sector specific attributes before attempting to achieve the so-called optimal capital structure. The appropriate capital structure of the firm is warranted to sustain the value of the firm in the hyper-competitive corporate environment.

Introduction

The relative proportion of various sources of funds used in a business is termed as financial structure. The capital structure is a part of the financial structure and refers to the proportion of the various long-term sources of financing. It is concerned with making the array of the sources of the funds in a proper manner, which is in relative magnitude and proportion. The capital structure of a company is made up of debt and equity securities that comprise a firm's financing of its assets. It is the permanent financing of a firm represented by long-term debt, preferred stock, and net worth. So it relates to the arrangement of capital and excludes short-term borrowings.

Decisions relating to financing the assets of a firm are very crucial in every business and the finance manager is often caught in the dilemma of what the optimum proportion of debt and equity should be. As a general rule, there should be a proper mix of debt and equity capital in financing the firm's assets. The capital structure is usually designed to serve the interest of the equity shareholders. Therefore, instead of collecting the entire fund from shareholders a portion of the long-term fund may be raised as a loan in the form of debenture or bond by paying a fixed annual charge.

The D/E ratio is a key metric used to examine a company's overall financial soundness. Some of the major reasons why the debt/equity (D/E) ratio varies significantly from one industry to another, and even between companies within an industry, include different capital intensity levels between industries and whether the nature of the business makes carrying a high level of debt easier to manage that company. The present study emphasizes to make a comprehensive study of inter-industry variations in the capital structure of Indian industry with the latest data of Indian corporate sector.

Literature Review

Overview of Capital Structure

The relative proportion of various sources of funds used in a business is termed as financial structure. The capital structure is a part of the financial structure and refers to the proportion of the various long-term sources of financing. It is concerned with making the array of the sources of the funds in a proper manner, which is in relative magnitude and proportion.

The capital structure of a company is made up of debt and equity securities that comprise a firm's financing of its assets. It is the permanent financing of a firm represented by long-term debt, preferred stock, and net worth. So this capital structure relates to the arrangement of capital and excludes short- term borrowings. It denotes some degree of permanency as it excludes short-term sources of financing.

Each component of capital structure has a different cost to the firm. In the case of companies, it is financed from various sources. In proprietary concerns, usually, the capital employed, is wholly contributed by its owners. In this context, capital refers to the total of funds supplied by both—owners and long-term creditors.

The appropriate proportion between equity and debt capital depends on the financial policy of individual firms. In one company debt capital may be nil while in another such capital may even be greater than the owned capital. The proportion between the two, usually expressed in

terms of a ratio, denotes the capital structure of a company.

Definition of Capital Structure

The capital structure is the mix of the long-term sources of funds used by a firm. It is made up of debt and equity securities and refers to permanent financing of a firm. It is composed of long-term debt, preference share capital, and shareholders' funds. Various authors have defined a capital structure in different ways.

According to Gere Stenberg, 'capital structure of a company refers to the composition or makeup of its capitalization and it includes all long-term capital resources viz., loans, reserves, shares, and bonds'. Keown et al. defined capital structure as, 'balancing the array of funding sources in a proper manner, i.e. in relative magnitude or in proportions'.

In the words of P. Chandra, 'capital structure is essentially concerned with how the firm decides to divide its cash flows into two broad components, a fixed component that is earmarked to meet the obligations toward debt capital and a residual component that belongs to equity shareholders'.

Hence, capital structure implies the composition of funds raised from various sources broadly classified as debt and equity. It may be defined as the proportion of debt and equity in the total capital that will remain invested in a business over a long period of time. The capital structure is concerned with the quantitative aspect. A decision about the proportion among these types of securities refers to the capital structure decision of an enterprise.

Importance of Capital Structure

Decisions relating to financing the assets of a firm are very crucial in every business and the finance manager is often caught in the dilemma of what the optimum proportion of debt and equity should be. As a general rule, there should be a proper mix of debt and equity capital in financing the firm's assets. The capital structure is usually designed to serve the interest of the equity shareholders.

Therefore, instead of collecting the entire fund from shareholders a portion of the long-term fund may be raised as a loan in the form of debenture or bond by paying a fixed annual charge. Though these payments are considered as expenses to an entity, such method of financing is adopted to serve the interest of the ordinary shareholders in a better way. The importance of designing a proper capital structure is explained below:

- **Value Maximization:** Capital structure maximizes the market value of a firm, i.e. in a firm having a properly designed capital structure the aggregate value of the claims and ownership interests of the shareholders are maximized (Ross et al., 2005).
- **Ensure the Balance between Risk and Return:** A rise in debt will increase the company's risk and the expected return. High risk means an increase in debt that can lead to a decrease in stock price and an increase in the expected return of the stock price (Brigham and Houston, 2001). Hence, the motivation of an optimal capital structure is to ensure the balance between risk and return in order to maximize the stock price
- **Cost Minimization:** Capital structure minimizes the firm's cost of capital or cost of financing. By determining a proper mix of funding sources, a firm can keep the overall cost of capital to the lowest.
- **The increase in Share Price:** Capital structure maximizes the company's market price of a share by increasing earnings per share of the ordinary shareholders. It also increases

dividend receipt of the shareholders.

- **Investment Opportunity:** Capital structure increases the ability of the company to find new wealth- creating investment opportunities. In the proper capital gearing, it also increases the confidence of suppliers of debt to the company.
- **The growth of the Country:** Capital structure increases the country's rate of investment and growth by increasing the firm's opportunity to engage in future wealth-creating investments.

Patterns of Capital Structure

There are usually two sources of funds used by a firm: Debt and equity. A new company cannot collect sufficient funds as per their requirements as it has yet to establish its creditworthiness in the market; consequently, they have to depend only on equity shares, which is the simple type of capital structure. After establishing its creditworthiness in the market, its capital structure gradually becomes complex. A complex capital structure pattern may be of following forms:

1. Equity Shares and Debentures (i.e. long-term debt, including Bonds, etc.),
2. Equity Shares and Preference Shares
3. Equity Shares, Preference Shares and Debentures (i.e. long-term debt, including Bonds, etc.).

However, irrespective of the pattern of the capital structure, a firm must try to maximize the earnings per share for the equity shareholders and also the value of the firm.

Theories on Capital Structure

1. Modigliani-Miller Theory

The Modigliani-Miller Theory is the first theory of modern capital structure. It is the fundamental and modern philosophy of capital structure, which states that capital structure does not influence the company's value. There are some assumptions which support this theory (Brigham et al., 1999; Brigham and Houston, 2001).

- There are no agency costs.
- There are no taxes.
- Investors may have debt at the similar interest rate as corporations.
- Investors have similar information, such as managing about the prospect of a company in the future.
- There is no bankruptcy cost.
- The use of debt does not influence earnings before interest and taxes.
- The investor is the price taker
- An asset can be sold at market value if the company experiences bankruptcy.

It assumes capital in a perfect capital market. In addition, it assumes that financing decisions do not influence the investment decisions. It does not matter if the capital of a company is raised by issuing stock or selling a debt instrument such as bonds and what the company's dividend policy is (Dybvig, and Zener, 1991, Brigham and Houston, 2001). Therefore, the MM theory is also often called as the capital structure irrelevance principle (Eriotis et al, 2007).

1.1 MM proposition without tax
According to the assumptions above, this theory has two propositions which are called "MM proposition without tax" (Brigham and Houston, 2001).

Proposition I - Value of a debtor company is similar to a non-debtor company. It means that the value of a company is independent of its capital structure. The capital structure does not influence the company's value and the way of the company combines debt and equity do not affect its weighted average cost of capital (WACC).

Proposition II - Cost of capital will increase if a company uses external financing. The risks of equity depend on business risk and financial risk. Because of that, MM without tax theory is considered as unrealistic.

1.2 MM proposition with tax
Modigliani and Miller further added tax factors to the theory, which is known as MM with tax. Taxes to government means cash outflow. Debt is only used for tax saving, where the interest on debt can be used to reduce taxes. Hence, based on the MM with tax theory, there are another two propositions.

Proposition I - Value of a debtor company is similar to a non-debtor company plus tax saving. It means that the optimal capital structure of a company is 100% debt.

Proposition II - Cost of capital will rise as debt increases. It means the use of debt will increase tax saving and the cost of stock and thereby it reduces the weighted average cost of capital.

MM with tax theory stated that a company should use more debt for financing. Basically, there is no company which uses more debt because the high debt level means higher possibility of experiencing bankruptcy (Lin et al., 2010). The debt may lead a company to bankruptcy when the payment is due and the company does not have sufficient cash on hand.

2. Trade-off Theory
Trade-off theory states that the company will borrow when the marginal value of tax shields on additional debt is just offset by an increase in the present value of possible costs of financial distress (Brigham and Houston, 2001). According to Myers (2001), a company will have debt at a certain level, and the tax shields (tax saving) from additional debt is similar to the cost of financial distress. The cost of financial distress leads to the costs of bankruptcy or reorganization and creates the agency costs that arise because the company's creditworthiness is in doubt.

When determining the capital structure, the trade-off theory includes several factors such as taxes, agency costs, and cost of financial distress (Amidu, 2007). It also incorporates the assumptions of market efficiency and symmetric information as the benefit of using debt. The optimal debt is reached when tax shields reach a maximum amount of the cost of financial distress (Myers, 2001). The trade- off theory states that profitability is positively related to capital structure. The theory predicts that the profitable companies will use more debt because they are possible to have a high tax burden and low risk of bankruptcy.

3. Pecking Order Theory

The Pecking Order theory assumes that the purpose of a company is to maximize the shareholders' wealth. This theory states that there is a hierarchy in choosing sources of financing (Smart et al, 2004). The company will choose securities with lower risks if it needs external financing. A company will prefer to use internal financing than external financing. The internal financing is from the retained earnings that are earned by doing operational activities. The company will choose securities with lower risks if it needs external financing. There is a constant dividend policy where the company will decide a constant amount of dividend payment. There is a constant dividend policy where the company will decide a constant amount of dividend payment. The amount of dividend payment is not influenced by the company's loss or profit. The company will use a portfolio of investment to anticipate insufficient cash because of the dividend policy, fluctuation in profitability, and investment opportunities.

This theory states that the main problem of determining the capital structure of a company is asymmetric information between managers and investors (Amidu, 2007). In fact, this theory argues that the manager of a company will act on the existing stakeholder's interests (Abor, 2005). Consequently, the new investors will have a perception that the manager does not support their interests. The Pecking Order theory assumes that the purpose of a company is to maximize the shareholders' wealth. This theory states that there is a hierarchy in choosing sources of financing (Smart et al, 2004).

The evidence of the pecking order theory is as follows. According to MacKie-Mason (1990), the importance of asymmetric information ensures that companies care about those who provide the funds because different fund providers would have different access to information about the company and different ability to monitor the company's behavior. This is consistent with the pecking order theory since the private debt will require better information about the firm than public debt. Sunder et al (1999) asserted that companies follow the pecking order in their financing decisions where companies with a positive financial deficit are more likely to issue debt.

4. Agency Theory

This theory stated that management is the agent on behalf of shareholders, the owner of a company. The shareholders expect management to accommodate their interests. Costs, which emerge because of controlling the activities of management, are called agency costs (Morri and Beretta, 2008). It illustrates that company's capital structure is determined by agency costs, which includes the costs for both debt and equity issue. Agency costs exist due to the conflicts of interest between the owners of the companies and managers. The costs which are related to equity issue may be included in the monitoring expenses for the equity holders, and the bonding expenses for the agent. Agency costs are the costs to justify whether management acts consistently according to a contractual agreement to a company with the shareholders (Jensen and Meckling, 1976). In addition, the agency costs of debt include the opportunity costs which are caused by the impact of debt on the investment decisions of the company (Hunsaker, 1999 cited in Niu, 2008).

The Decision on Capital Structure

The decision on capital structure should consider several main factors such as business risk, tax position, financial flexibility, and managerial conservatism or aggressiveness.

Business Risk: Business risk is a risk that involves operating activities of a company when the

company does not finance these activities with debt. Higher business risk means lower optimal debt ratio. According to Brigham and Houston (2001), business risk is the risk associated with the projections of a company's future return on assets (ROA) or return on equity (ROE) if the company uses no debt. Business risk depends on several factors (Brigham and Houston, 2006).

- Variability of demand. The stable demand for a product makes business risk lower, ceteris paribus.
- Variability of the sales price. A company which sells a product in the stable market can avoid from business risk. The stable market refers to a market of a company in an industry that tends to be stable.
- Variability of input costs. A company with established input costs will have a lower business risk.
- Ability to adjust output prices for changes in input prices. If the company is able to do the adjustment for output prices for changes in input prices, it will reduce business risk.
- Ability to develop new products given cost efficiency.
- Foreign risk exposure. A high profit gained from the overseas operation means higher business risk.
- Operating leverage. If a company uses more fixed costs than other types of costs and the demand for its products decline, the company has a higher possibility to experience business risk.

Tax position of a company: Tax position of a company. The main reason to use debt for financing is to decrease earnings before taxes and to increase tax saving (Brigham and Houston, 2006).

Financial flexibility: Financial flexibility is an ability of a company to get capital to fulfill its needs for funds in a certain condition or under less than ideal conditions (Brigham and Houston, 2006). Gamba and Triantis (2008) stated that financial flexibility indicates the ability of a company to access and restructure its financing at a low cost. Companies which have financial flexibility are able to avoid financial distress and to fund investment when the profitable opportunities come (Gamba and Triantis, 2008). Flexibility means the capital structure should have borrowing power, which can be used in conditions that come due to favorable capital market, and government policies (Ramagopal, 2008). Companies which have strong balance sheets will be able to get funds with reasonable terms than other companies in the period of economic downturn (Brigham and Houston, 2006).

Managerial conservatism or aggressiveness: Managerial conservatism or aggressiveness. Most of the management in companies tends to use debt financing to increase profit (Brigham and Houston, 2006).

Factors Influencing Capital Structure

The company characteristics such as asset structure variable, growth, profitability, the size of a company, age, revenue, employee, and liquidity can influence the decision on sourcing capital.

Asset Structure: Choate (1997) claimed that the debt ratio depends on the asset specificity. Asset specificity is a feature of an asset which makes it useful for specific purposes such as specialized machine and emergency power plant. It may affect the capital structure of a company through bankruptcy costs that reflect the loss in a company's value due to the possibility of financial distress (Balakrishnan and Fox, 1993). Debt financing is suitable for the

low specificity assets, and equity is suitable for the high-level specificity assets. The total debt is positively related to the fixed asset turnover. If the level of tangible assets in the companies is high, the possibility to obtain debt financing would be greater.

Growth: A company with a high growth level tends to resist the company's position by having a lower debt level in order to avoid issuing new stock for financing investment in the future. Notwithstanding the company needs debt financing to finance its business activities bear in mind that it does not mean that the company would be free from risks. The use of debt financing creates risk which can result in higher expected return (Hall et al., 2004). Based on the pecking order theory, the reason is that the issuance of new company shares may cause its stock price to fall and subsequently, the company may experience losses.

Profitability: Modigliani et al (1958) argued that the use of debt will improve a company's value as high as a tax shield. Therefore, companies with a high profit tend to have a high debt level, probably long term debt, in order to get benefit from the tax shield. Nevertheless, Lemmon et al. (2008) asserted that profitability has a negative influence on leverage.

The size of the Company: There are many reasons as to why company size is related to the capital structure of a company. Most of the large companies have higher credit ratings than smaller companies. Thus, they have easier access to debt financing due to lower information asymmetry. Because they diversify their businesses in various forms, these companies hope to borrow more debt in order to obtain benefits from the tax shield. Uglurlu (2000) asserted that larger companies have higher leverage because the bankruptcy costs of debt are smaller. On the contrary, smaller companies are difficult to resolve information asymmetries with lenders and financiers and that could incur high costs. Therefore, smaller companies are often offered less capital and this reduces the use of outside financing (Viviani, 2008).

Age of the Company: Age of a company is a standard measure of reputation for capital structure models. It is identified by finding the year when the company commenced its operation. The age is used to identify the relationship between age of a company and total long-term debt (Talberg, 2008).

Revenue per Employee: Every company in different industries needs labors in order to keep the continuity of business operations and earning profits. Different industries have a different rate for revenue per employee. It depends on the qualifications and the field of industries where the labors work (Talberg, 2008).

Liquidity: Previous studies found some evidence that the relationships between capital structure and asset liquidity exist. According to Alderson et al (1995), companies with high liquidation and assets are preferable to the capital structure which contains less debt. These companies will increase their borrowing during the period of financial distress (Kim, 1998).

Cash Flow Position: While making a choice of the capital structure the future cash flow position should be kept in mind. Debt capital should be used only if the cash flow position is really good because a lot of cash is needed in order to make payment of interest and refund of capital.

The cost of Debt: The capacity of a company to take debt depends on the cost of debt. In case the rate of interest on the debt capital is less, more debt capital can be utilized and vice versa.

The cost of Equity Capital: Cost of equity capital (the expectations of the equity shareholders of the company) is affected by the use of debt capital. If the debt capital is utilized more, it will increase the cost of the equity capital. The simple reason for this is that the greater use of debt capital increases the risk of the equity shareholders.

Flotation Costs: Floatation costs are those expenses which are incurred while issuing securities (e.g., equity shares, preference shares, debentures, etc.). These include the commission of underwriters, brokerage, stationery expenses, etc. Generally, the cost of issuing debt capital is less than the share capital. This attracts the company towards debt capital.

Flexibility: Capital structure should be fairly flexible. Flexibility means that the amount of capital in the business could be increased or decreased easily. Reducing the amount of capital in the business is possible only in case of debt capital or preference share capital. If at any given time company has more capital than necessary, then both the above-mentioned capitals can be repaid. On the other hand, repayment of equity share capital is not possible by the company during its lifetime. Thus, from the viewpoint of flexibility, issuing debt capital and preference share capital is the best.

Control: At the time of preparing capital structure, it should be ensured that the control of the existing shareholders (owners) over the affairs of the company is not adversely affected. If funds are raised by issuing equity shares, then the number of the company's shareholders will be increased and it directly affects the control of existing shareholders. In other words, now the number of owners (shareholders) controlling the company is increased. This situation will not be acceptable to the existing shareholders. Contrariwise, when funds are raised through debt capital, there is no effect on the control of the company because the debenture holders have no control over the affairs of the company. Thus, for those who support this principle debt capital is the best.

Regulatory Framework: Capital structure is also influenced by government regulations such as it may be compulsory for companies to maintain a given debt-equity ratio while raising funds.

Stock Market Conditions: Stock market conditions refer to upward or downward trends in the capital market. Both these conditions have their influence on the selection of sources of finance. When the market is dull, investors are mostly afraid of investing in the share capital due to high risk. On the contrary, when conditions in the capital market are cheerful, they treat investment in the share capital as the best choice to reap profits. Companies should, therefore, make a selection of capital sources, keeping in view the conditions prevailing in the capital market.

Capital Structure of Other Companies in the Same Industry: The capital structure is influenced by the industry to which a company is related. All companies related to a given industry produce almost similar product, their costs of production are similar, they depend on identical technology, they have similar profitability, and hence the pattern of their capital structure is almost similar.

Conflicts in Capital Structure

There are two types of conflicts: conflicts between shareholders and managers, and conflicts between shareholders and bondholders (Jensen and Meckling, 1976).

Shareholders-managers' conflicts

This kind of conflict is the separation of ownership and control. If managers do not own 100% of the company, they can only get a fraction gain from their investment activities and bear the whole cost of these activities at the same time (Harris and Raviv, 1991). The shareholder-manager conflicts take several forms. First, different shareholders' interests in a company's value maximization make managers prefer to do less work and to have greater additional facilities, such as luxuriant office and corporate jets, etc. (Eriotis, 2007; Niu, 2008). Second, since the debt forces managers pay cash, the managers reduce the company's free cash flow by purchasing additional facilities. They may prefer choosing short-term projects because these investments could produce positive short-term earnings and improve their reputation quickly. Third, managers may choose less risky investments and lower leverage to reduce the possibility of bankruptcy. Lastly, managers aim to stay in their positions, and therefore, they wish to minimize the possibility of employment termination. In addition, management may resist takeovers and change corporate control irrespective of their influences on shareholder values (Niu, 2008).

Managers and shareholders may also have different preferences in making decisions. According to Harris and Raviv (1991), managers will continue to operate the company's businesses although liquidation is preferred by shareholders. The managers are preferable to investing most funds in projects, whereas the shareholders want dividends to be paid.

Shareholder-bondholder conflicts

These conflicts arise when the shareholders make decisions to transfer wealth from bondholders to shareholders. Indeed, the bondholders are aware of any situation that could occur. Hence, they will demand a higher return on their bonds or debts (Niu, 2008). Bondholders receive only the specific payment in the debt contract and no cash flow outside the specific payment. High-risk projects reduce the expected payment to bondholders. It is called asset substitution problem (Myers, 1977). When the bondholders have money paid in advance to the stockholders, the stockholders will have an incentive for taking on high-risk projects than what the bondholders would prefer. The bondholders recognize the incentive and will want a higher price for debt capital (Balakrishnan and Fox, 1993).

There are some positive net present value projects which shareholder will accept if the company is fully equity financed, but they will refuse when the company is financed by debt partially. While the payment for the investment may be large enough for being profitable, they may not be sufficient for repaying the debt holders. Therefore, the lenders will get right to the positive payment while the stockholders will get nothing. This problem is called "the under-investment problem". These problems are serious for assets which give the company the option for undertaking growth opportunities in the future. The larger of the company's investment in such assets, the lower it will choose debt financing. It indicates that there is a negative relationship between growth and capital structure of the company.

Optimal Debt-Equity Relationship

In financial terms, debt is a good example of the proverbial two-edged sword. Astute use of leverage (debt) increases the amount of financial resources available to a company for growth and expansion. The assumption is that management of the company can earn more on borrowed funds than it pays in interest expense and the fees on these funds. However, as successful as this formula may seem, it does require that a company maintains a solid record of complying with its various borrowing commitments.

A company considered too highly leveraged (too much debt versus equity) may find its freedom of action restricted by its creditors and/or may have its profitability hurt as a result of paying high-interest amounts. The worst-case scenario would be having trouble meeting operating and debt liabilities during periods of adverse economic conditions. Lastly, a company in a highly competitive business, if hobbled by high debt, may find its competitors taking advantage of its problems to grab more market share.

The debt-equity relationship varies according to industries involved, a company's line of business and its stage of development. However, because investors are better off putting their money into companies with strong balance sheets, common sense tells us that these companies should have, generally speaking, lower debt and higher equity levels.

Capital Ratios and Indicators

In general, analysts use three different ratios to assess the financial strength of a company's capitalization structure. The first two, the so-called debt and debt/equity ratios, are popular measurements; however, it's the capitalization ratio that delivers the key insights to evaluating a company's capital position.

The debt ratio compares total liabilities to total assets. Obviously, more of the debt ratio means less equity and, therefore, it indicates a more leveraged position. The problem with this measurement is that it is too broad in scope, which, as a consequence, gives equal weight to operational and debt liabilities. The same criticism can be applied to the debt/equity ratio (D/E Value), which compares total liabilities to total shareholders' equity. Current and non-current operational liabilities, particularly the non-current operational liabilities, represent obligations that will be with the company forever. Also, unlike debt, there are no fixed payments of principal or interest attached to operational liabilities.

The capitalization ratio (total debt/total capitalization) compares the debt component of a company's capital structure (the sum of obligations categorized as debt + total shareholders' equity) to the equity component. Expressed as a percentage, a low number is indicative of a healthy equity cushion, which is always more desirable than a high percentage of debt.

Importance of Relative Debt and Equity

The D/E ratio is a key metric used to examine a company's overall financial soundness. An increasing ratio over time indicates that a company is financing its operation increasingly through creditors rather than through employing its own resources and that it has a relatively higher fixed interest rate charges burden on its assets. Investors typically prefer companies with low D/E ratios, as it means their interests are better protected in the event of liquidation. Extraordinarily high ratios are unattractive to lenders and may make it more difficult to obtain additional financing.

The average D/E ratio among S&P 500 companies is approximately 1.5. A ratio lower than 1 is considered favorable as it tends to indicate that a company is relying more on equity than on debt to finance its operating costs. Ratios higher than 2 are generally unfavorable, although industry and similar company averages have to be considered in the evaluation. The D/E ratio can also indicate how generally successful a company is at attracting equity investors.

Capital structure variations in Industry

Some of the major reasons why the debt/equity (D/E) ratio varies significantly from one industry to another, and even between companies within an industry, include different capital intensity levels between industries and whether the nature of the business makes carrying a high level of debt easier to manage the business. The industries that typically have the highest D/E ratios include utilities and financial services. Wholesalers and service industries are common among those with the lowest. The D/E ratio is a basic metric used to assess a company's financial situation. It indicates the relative proportion of equity and debt that a company uses to finance its assets and operations. The ratio reveals the amount of financial leverage a company is utilizing.

One of the major reasons why D/E ratios vary is the capital-intensive nature of the industry. Capital- intensive industries, such as oil and gas refining or telecommunications, require significant financial resources and large amounts of money to produce goods or services.
Another reason why D/E ratios vary is based upon whether the nature of the business means that it can manage a high level of debt. For example, utility companies bring in a stable amount of income; demand for their services remains relatively constant regardless of overall economic conditions. Also, most public utilities operate as virtual monopolies in the regions where they do business, so they do not have to worry about being cut out of the marketplace by a competitor. Such companies can carry larger amounts of debt with less genuine risk exposure than a business with revenues that are more subject to fluctuation in accord with the overall health of the economy.

The financial sector overall has one of the highest D/E ratios, but looked at as a measure of financial risk exposure, this can be misleading. Borrowed money is a bank's stock in trade. Banks borrow large amounts of money to loan out large amounts of money, and they typically operate with a high degree of financial leverage. D/E ratios higher than 2 are common for financial institutions.

Other industries that commonly show a relatively higher ratio are capital-intensive industries, such as the airline industry or large manufacturing companies, which utilize a high level of debt financing as a common practice.

Objectives and Methodology

The objectives of the study are as follows

- To analyze the capital structure of different industries in India
- To analyze the average debt – equity value of large cap, mid cap and small cap industries in India
- Identify the differences in financial statements, especially in the balance sheet of a manufacturing company and a service industry.

Method of Study

This study mainly depends on the secondary data available on the internet. To get the data more reliable, we selected the data from a single website (www.moneycontrol.com) and verified this with other websites which provide the same kind of information. Also, all these data are taken on a single day in order to avoid the possibility of market fluctuations.

All the studies on capital structure are based on the theory of the Modigliani-Miller Theory, which is the first theory of modern capital structure. It is the fundamental and modern philosophy of capital structure, which states that capital structure does not influence the company's value. The literature reviews are based on this study and four major theories followed by this main theory, which contains more elaborate and clear explanations which are relevant to this modern world.

We studied 23 research articles which are done in similar areas, especially in the Indian context. These dealt with the capital structure analysis of specific industries such as agriculture, cement, sugar, fertilizers, telecommunications, Computer software services, banking, service sector, real estate, automobile, construction, oil drilling, pharmaceuticals, food processing etc.

Analysis of Capital Structures of Different Companies

This study intends to make a comprehensive study of inter-industry variations in the capital structure of Indian industry with the latest data of Indian corporate sector. Before diving into the analysis of the data collected, we would like to define and explain a few terms for the benefit of our readers.

Leverage: In business, leverage is the means of increasing profits. It may be favorable or unfavorable. The leverage of a firm is essentially related to a profit measure, which may be a return on investment or on earnings before taxes. Leverage can be broadly classified into two types as ***Operating Leverage*** and ***Financial Leverage***.

Operating Leverage: Operating leverage is defined as the change in earnings before interest and taxes (EBIT) due to changes in sales. If all the costs of the product are variable, the expected percentage change in the income before taxes will be equal to the percentage change in sales. Operating leverage is concerned with the operation of any firm. The cost structure of any firm gives rise to operating leverage because of the existence of the fixed nature of the costs. This leverage relates to the sales and profit variations. Operating leverage is the responsiveness of firm's earnings before interest and taxes to the changes in sales value. It refers to the sensitivity of operating profit before interest and tax to the changes in quantity produced and sold. The firm's operating leverage would be higher if the firm has a high quantum of fixed costs and low variable cost.

A low operating leverage represents the higher variable cost and low fixed cost. If the operating leverage of the firm is higher, the more its profits will vary with a given percentage of sales. The operating leverage is an attribute of the firm's business risk. The operating leverage falls with the increase in sales beyond the firm's break-even point. A company with a high proportion of fixed costs to total costs will have a high operating leverage. A company with a high operating leverage will have a higher break-even level. If the contribution to sales ratio of a firm is high, it can achieve higher profitability at maximum operating level. In times of recession, higher operating leverage will act as a disadvantage to the firm for the reason that lower level of operating profits due to higher fixed costs.

Financial Leverage: Financial leverage refers to the use of debt financing and the resultant sensitivity of the earnings available to shareholders (EPS) by the substitution of their capital with fixed charge finance. If the firm has no fixed financial charges, then any change in the levels of EBIT will be transferred to shareholders as it is.

The change in the shareholders' wealth would be identical to that of the change in EBIT. In such a case, all the business risk is borne by the shareholders. However, if some of the equity capital is substituted by fixed charge capital, changes in earnings per share will be larger as compared to all equity financing options. Replacing equity with debt leaves the risk with the remaining equity shareholders.

Financial leverage indicates the effects on earnings by the rise of fixed cost funds. It refers to the use of debt in the capital structure. Financial leverage arises when a firm deploys debt funds with fixed charge. The higher the ratio, the lower the cushion for paying interest on borrowings. A low ratio indicates a low-interest outflow and consequently lower borrowings. A high ratio is risky and constitutes a strain on profits. This ratio is considered along with the operating ratio and gives a fairly and accurate idea about the firm's earnings, its fixed costs and the interest expenses on long-term borrowings. The financial leverage is an indicator of responsiveness of firm's EPS to the changes in its profit before interest and tax.

Measuring Financial Leverage

The long-term financial stability of the firm may be considered as dependent upon its ability to meet all its liabilities, including those not currently payable. The ratios which are important in measuring the financial leverage of the company is as follows:

Debt-Equity Ratio: This ratio indicates the relationship between loan funds and net worth of the company, which is known as 'gearing'. If the proportion of debt to equity is low, a company is said to be low-geared, and vice versa. A debt-equity ratio of 2:1 is the norm accepted by financial institutions for the financing of projects. The Higher debt-equity ratio of 3:1 may be permitted for highly capital intensive industries like petrochemicals, fertilizers, power, etc. The higher the gearing, the more is volatile the return to the shareholders. The use of debt capital has direct implications for the profit accruing to the ordinary shareholders, and expansion is often financed in this manner with the objective of increasing the shareholders' rate of return. This objective is achieved only if the rate of return earned on the additional funds raised exceeds that payable to the providers of the loan. The shareholders of a highly geared company reap disproportionate benefits when earnings before interest and tax increase. This is because interest payable on a large proportion of total finance remains unchanged. The converse is also true, and a highly geared company is likely to find itself in severe financial difficulties if it suffers a succession of trading losses. It is not possible to specify an optimal level of gearing for companies, but, as a general rule, gearing should be low in those industries where demand is volatile and profits are subject to fluctuation. A debt-equity ratio declining over the years is usually taken as a positive sign reflecting on increasing cash accrual and debt repayment.

Shareholders' Equity Ratio: It is assumed that larger the proportion of the shareholders' equity, the stronger is the financial position of the firm. This ratio will supplement the debt equity ratio. In this ratio, the relationship is established between the shareholders' fund and the total assets. The shareholders fund represents equity and preference capital plus reserves and surplus less accumulated losses. A reduction in shareholders' equity signaling the over-dependence on outside sources for long-term financial needs and this carries the risk of higher levels of gearing. This ratio indicates the degree to which unsecured creditors are protected against loss in the event of liquidation.

Long-term Debt to Shareholders Net Worth Ratio: The ratio compares long-term debt to the net worth of the firm i.e, the capital and free reserves less intangible assets. This ratio is finer

than the debt equity ratio and includes capital, which is invested in fictitious assets like deferred expenditure and carried forward losses. This ratio would be of more interest to the contributors of long-term finance to the firm as the ratio gives a factual idea of the assets available to meet the long-term liabilities.

Capital Gearing Ratio: The fixed interest bearing funds include debentures, long-term loans and preference share capital. The equity shareholders' funds include equity share capital, reserves, and surplus. The capital gearing ratio indicates the degree of vulnerability of earnings available for equity shareholders. This ratio signals the firm which is operating on trading on equity. It also indicates the changes in benefits accruing to equity shareholders by changing the levels of fixed interest bearing funds in the organization.

Fixed Assets to Long –Term Funds Ratio: This ratio indicates the proportion of long –term funds deployed in fixed assets. Fixed assets represent the gross fixed assets minus depreciation provided on this till the date of calculation. Long –term funds include share capital, reserve and surplus and long-term loans. The higher the ratio indicates the safer the funds available in case of liquidation. It also indicates the proportion of long-term funds that is invested in working capital.

Debt Service Coverage Ratio (DSCR): The ratio is the key indicator to the lender to assess the extent of the ability of the borrower to service the loan in regard to timely payment of interest and repayment of loan installment. It indicates whether the business is earning sufficient profits to pay not only the interest charges but also the installments due on the principal amount. A ratio of 2 is considered satisfactory by the financial institution. The greater debt service coverage ratio indicates the better debt servicing capacity of the organization to manage.

Debt to Total Capital Ratio: The relationship between creditors fund and owner's capital can also be expressed in terms of another leverage ratio. This is the debt to total capital ratio. Here, the outsider's liabilities are related to the total capitalization of the firm and not merely to the shareholders' equity.

Here, permanent capital comprises of total debt capital, equity capital, preference capital and free reserve.

Interest Coverage Ratio: This is also known as time- interest- earned ratio. This ratio measures the debt servicing capacity of a firm in so far as fixed interest on the long-term loan is concerned. It is determined by dividing the operating profits or earnings before interest and taxes by the fixed interest charges on loans. A very high ratio indicates that the firm is conservative in using debt and a very low ratio indicates excessive use of debt. Further, it indicates how many times a company can cover its current interest payments out of current profits. It gives an indication of a problem in servicing the debt. An interest cover of more than 7 times is regarded as safe and more than 3 times is desirable. An interest cover of 2 times is considered reasonable by financial institutions.

Dividend Coverage Ratio: It measures the ability of a firm to pay a dividend on preference shares which carry a stated rate of return. This ratio is the ratio of net profits after taxes (EAT) and the amount of preference dividend. It is seen that although preference dividend is a fixed obligation, the earnings taken into account are after taxes. This is because, unlike debt on which interest is a charge on the profits of the firm, the preference dividend is treated as an appropriation of profit. The ratio like the interest coverage ratio reveals the safety margin

available to the preference shareholders.

Problems related to measuring leverage

In measuring leverage, a question always arises regarding the use of the market value measures of leverage or the book value? Theoretically, the market value leverage is desirable as it reflects the market expectation of the firm's future profitability and is devoid of the diversities of the accounting practices of the firms. But its limitations from an empirical point of view are that its use results in significant vices. Further, Bargers has pointed out that the use of market value measure of leverage could introduce a serious bias into the regression analysis. Therefore, to avoid such a bias, leverage is computed on book values in this study.

It is seen that leverage may be measured in different ways, but as the present study mainly concentrates on examining the proportions of debt-equity mix, we used debt-equity ratio for the analysis.

Difference between Equity Shares and Preference Shares

The capital structure of a company may consist of common stock, preferred stock or debentures or a combination of all the three. The combination of all the three is considered as the best one. Equity shares are the ordinary shares of the company. The holder of the equity shares are the real owners of the company, i.e. the amount of shares held by them is the portion of their ownership in the company.

Equity shareholders have some privileges like they get voting rights at the general meeting, they can appoint or remove the directors and auditors of the company. Apart from that, they have the right to get the profits of the company, i.e. the more the profit the more is their dividend and vice versa, therefore the amount paid in dividends is not fixed. This does not mean that they will get the whole profit, but the residual profit, which remains after paying all expenses and liabilities of the company. Equity Shares are the shares that carry voting rights and the rate of dividend also fluctuates every year.

On the other hand, Preference Shares, as its name suggests, gets precedence over equity shares on the matters like distribution of dividend at a fixed rate and repayment of capital in the event of liquidation of the company. The preference shareholders are also the part owners of the company like equity shareholders, but in general, they do not have voting rights. However, they get voting rights on the matters which directly affect their rights like the resolution of winding up of the company, or in the case of the reduction of capital. Preference Shares are the shares that do not carry voting rights in the company as well as the amount of dividend is also fixed.

Basis for Comparison	Equity Shares	Preference Shares
Meaning	Equity shares are the ordinary shares of the company representing the part ownership of the shareholder in the company.	Preference shares are the shares that carry preferential rights on the matters of payment of dividend and repayment of capital.
Payment of dividend	The dividend is paid after the payment of all liabilities.	Priority in payment of dividend over equity shareholders.
Repayment of capital	In the event of winding up of the company, equity shares are repaid at the end.	In the event of winding up of the company, preference shares are repaid before equity shares.
Rate of dividend	Fluctuating	Fixed
Redemption	No	Yes
Voting rights	Equity shares carry voting rights.	Normally, preference shares do not carry voting rights. However, in special circumstances, they get voting rights.
Convertibility	Equity shares can never be converted.	Preference shares can be converted into equity shares.
Arrears of Dividend	Equity shareholders have no rights to get arrears of the dividend for the previous years.	Preference shareholders generally get the arrears of dividend along with the present year's dividend, if not paid in the last previous year, except in the case of non-cumulative preference shares.

Table 1: Comparison between equity and preference shares

Market Capitalization: Large Cap, Mid Cap & Small Caps

Market capitalization, commonly known as a market cap, is calculated by multiplying a company's outstanding shares by the company's stock price per share. A company's stock price by itself does not tell you much about the total value or size of a company; a company whose stock price is $60 is not necessarily worth more than a company whose stock price is $25. For example, a company with a stock price of $60 and 100 million shares outstanding (a market cap of $6 billion) is actually smaller in size than a company with a stock price of $25 and 500 million shares outstanding (a market cap of $12.5 billion). Publicly traded companies are typically grouped into three different market cap categories: large cap, mid cap, and small cap. Not everyone agrees on the same market cap cutoffs for each category, but the categories are often described as follows (in the Indian context):

Large Caps: One can look at the BSE-Sensex or BSE-100 Index as a reference point for large cap stocks. Market capitalization for stocks in the BSE-100 Index, for instance, ranges from Rs. 200 bn to Rs. 3,500 bn. These are stocks of usually large and well-established companies that have a strong market presence and are generally considered as safe investments. One important fact about large caps is that information regarding these companies is readily available in newspapers and magazines. Most of the large cap companies have good disclosures and therefore there is no dearth of information for an investor looking into them.

Large companies such as Infosys, TCS, and Wipro are classified as large cap stocks. These companies have been around in the industry long enough and have firmly established themselves as leading players. These companies' stocks are publicly traded which are available in the secondary market and have large market capitalizations.

Mid-cap stocks: Mid-caps lie between large cap stocks and small cap stocks. Mid-cap stocks are those that generally have a market capitalization within the range of Rs. 50 bn and Rs 200 bn. These represent mid-sized companies that are relatively riskier than large cap as investment options yet, they are not considered as risky as small cap companies. They rank between the two extremes on all the important parameters like size, revenues, employee and client base.

Small-cap stocks: Small cap companies have smaller revenue and client bases, and usually include the startups or companies in the early stage of development. Small cap stocks are potentially big gainers as they are yet to be discovered within the sector and can show growth potential in large numbers once unfurled in the market. However, as these enterprises are small ventures, these should be researched properly. This is considering that a lot of small companies do not have the financial strength to survive bad times and some of them might be mismanaged businesses run by greedy promoters. Hence, it is essential, especially in the case of small cap investments that one does a thorough research regarding the promoters' credentials, management strength, and track record, and long and short-term growth plans of the company before investing.

Differences between Service and Manufacturing Organizations

There are five main differences between service and manufacturing organizations: the tangibility of their output; production on demand or for inventory; customer-specific production; labor-intensive or automated operations; and the need for a physical production location. However, in practice, service organizations and manufacturing organizations share many characteristics. Many manufacturers offer their own service operations and both require skilled people to create a profitable business.

Goods: The key difference between service firms and manufacturers is the tangibility of their output. The output of a service firm, such as consultancy, training or maintenance, for example, is intangible. On the other hand, manufacturers produce physical goods that customers can see and touch, ie. it is tangible.

Inventory: Service firms, unlike manufacturers, do not hold inventory; they create a service when a client requires it. Manufacturers produce goods in stock, with inventory levels aligned to forecasts of market demand. Some manufacturers maintain minimum stock levels, relying on the accuracy of demand forecasts and their production capacity to meet demand on a just-in-time basis. The inventory also represents a cost for a manufacturing organization.

Customers: Service firms do not produce a service unless a customer requires it, although they design and develop the scope and content of services in advance of any orders. Service firms generally produce a service tailored to customers' needs, such as 12 hours of consultancy, plus 14 hours of design and 10 hours of installation. Manufacturers can produce goods without a customer order or forecast of customer demand. However, producing goods that do not meet market needs is a poor strategy.

Labor: A service firm recruits people with specific knowledge and skills in the service disciplines that it offers. Service delivery is labor intensive and cannot be easily automated, although knowledge management systems enable a degree of knowledge capture and sharing. Manufacturers can automate many of their production processes to reduce their labor requirements, although some manufacturing organizations are labor intensive, particularly in countries where labor costs are low.

Location: Service firms do not require a physical production site. The people creating and delivering the service can be located anywhere. For example, global firms such as consultants Deloitte use communication networks to access the most appropriate service skills and knowledge from offices around the world. Manufacturers must have a physical location for their production and stockholding operations. Production does not necessarily take place on the manufacturer's own site; it can take place at any point in the supply chain.

Comparing companies by using the debt-to-equity ratio

The debt-to-equity ratio is a measure of a company's financial leverage that relates the amount of a firms' debt financing to the amount of equity financing. It is calculated by dividing a firm's total liabilities by total shareholders' equity.

Because some industries tend to use more debt financing than others, it generally is not helpful to compare the debt-to-equity ratio of companies from different sectors. A company in the industrial goods sector, for example, is likely to have a much higher debt-to-equity ratio than a company in the basic materials sector. Average debt-to-equity ratios also vary within the sector by industry. In the consumer goods sector, for example, the electronic equipment industry tends to have lower debt-to- equity ratios than the beverages/soft drinks industry.

A company's debt to equity ratio shows you what proportion of debt or equity a company is using to finance its assets. The debt to equity ratio is calculated by dividing its total debt by its total shareholder equity: **Debt / equity ratio = Total debt / shareholder equity**.

Even though a high debt to equity ratio means that the company has a relatively heavy debt load, it is not necessarily bad. Different kinds of companies have a different debt to equity

ratios. For example, a ratio of 2 is considered healthy for capital-intensive industries like car makers, while software makers could have a ratio as low as 0.5. This is usually a bad sign for share investors because the cost of servicing high debt levels can pressure a company's earnings and make them more volatile. It can also do the same to its share price.

As has been said before, we have used debt / equity ratio for our analysis. Table 2 below summarizes our sample of 132 companies.

Industry	**No. of companies**	**Percentage**	**Debt -Equity value**
2 & 3 Wheelers	6	4.54	0.102602625
Automobile	8	6.06	0.378
Automobile Ancillaries	6	4.54	0.261011452
Banking	6	4.54	8.237995918
Cement	6	4.54	0.257308817
Computer Software Services	6	4.54	0.004607073
Construction & Contracting	12	9.09	0.4688
Fertilizers & Pesticides	10	7.57	0.625871426
Food Processing	6	4.54	0.502444293
Hospitals	6	4.54	0.394684742
Hotels	6	4.54	0.496105677
Infrastructure	6	4.54	0.502779129
Media & Entertainment	6	4.54	0.08463702
Oil Drilling and Exploration	6	4.54	0.075338143
Pharmaceuticals	6	4.54	0.118561298
Real Estate	6	4.54	0.075338143
Sugar	6	4.54	1.040887021
Tea Plantations	6	4.54	0.368621223
Telecommunication Services	6	4.54	0.457129598
Transport & Logistics	6	4.54	3.49242999
Total	132	100	

Table 2

The firms summarized in table 2 were selected on the basis of market capitalization as of 20 January 2016. The Capital line database was used in this respect.

To determine the nature of the capital structure of the sample companies we have calculated debt equity ratio of individual companies pertaining to the year of reference. Thereafter, average of debt equity ratio was calculated by considering the weighted average based on their market capitalization. The following table 3 exhibits an average value of debt equity ratio for all the period, highlighting the extent of leverage of the industry.

Debt -Equity Ratio	Industry	Value
Below 0.5	Computer Software Services	0.004607
	Real Estate	0.075338
	Oil Drilling and Exploration	0.075338
	Media & Entertainment	0.084637
	2 & 3 Wheelers	0.102603
	Pharmaceuticals	0.118561
	Cement	0.257309
	Automobile Ancillaries	0.261011
	Tea Plantations	0.368621
	Automobile	0.377986
	Hospitals	0.394685
	Telecommunication Services	0.45713
	Construction & Contracting	0.468751
	Hotels	0.496106
0.5-1.00	Food Processing	0.502444
	Infrastructure	0.502779
	Fertilizers & Pesticides	0.625871
1.00-1.5	Sugar	1.040887
Above 1.5	Transport & Logistics	3.49243
	Banking	8.237996

Table 3

The table above exhibits that, the debt equity ratios of the industry sectors covered in the study lie within the range of 0.004607-8.237996. The lowest ratio (0.004607) observed in the case of Computer Software industry and the highest in the banking (8.237996) sector.

The Computer Software Services industry is one with least borrowing; the mean ratios were 0.004607. As related to individual classification a slightly higher ratio was seen in small market capitalization companies like Rotla and AGC Networks. The IT industry is one of the cash-rich industries with low borrowings. Most of the project in this industry is financed through equity

resulting in the lower debt ratio. The TCS, for example, has comparatively low borrowings with an average value of 0.003665 indicating its rigidness in the capital structure decision. This may be due to its strong internal fund generating capacity, which can meet capital requirements when needed.

The construction, cement, oil drilling and exploration, pharmaceutical industries witnessed uniform leverage across the firms. The firms in these the sectors are maintaining the standard norms of debt equity ratio as the average value of the sectors are 0.468751, 0.257309, 0.075338, and 0.118561 respectively. It implies that the equity capital, as well as debt capital in designing capital structure, holds more or less equal importance. The average value of the debt-equity ratio of the sugar industry is 1.047 which signifies borrowed capital is doubling of equity capital.

The average value of the debt-equity ratio of telecommunication sector is 0.45713, Except Mahanagar Telecommunications, all other firms under this group have witnessed low debt-equity ratio.

The average debt equity ratio in the automobile industry is 0.377986 which is well below than 1.00. High leverage has been seen Hind Motors. High debt ratios were seen in the Transport & Logistics sectors. Interglobe Aviation (6.573233) and Arshya (3.132332) are the companies which are using a high value of debt ratio indicating that the company is heavily relying on borrowed capital.

In the fertilizer industry, there is only one mid-market Capitalization Company in India. All other companies are of small market capitalization. Also in Pesticides & Agro Chemicals, there is only one large market Capitalization Company in India. There are no large cap companies in the sugar and tea Plantation industry in India. In total, there are no dominant companies in Agriculture sector in India.

Following are detailed observations on our findings for the major industry sectors in India.

Banking sector observations

The average debt-to-equity ratio for retail and commercial U.S. banks, as of January 2015, is approximately 2.2. For investment banks, the average debt/equity is higher, about 3.1. Typically, a debt/equity ratio of 1.5 or lower is considered good, and ratios higher than 2 are considered less favorable, but average debt/equity ratios vary significantly between industries. Therefore, when examining a company's debt/equity situation, investors should compare it with that of similar companies in the same industry. A relatively high debt/equity ratio is commonplace in the banking industry and in the financial services sector as a whole. Banks carry greater debt amounts because the money they borrow is also the money they lend. To put it another way, the major product that banks sell is debt. Therefore, it is logical that they have more of that product on hand than is common in other industries (Investopedia).

Here in this study, we noticed a much higher ratio in the banking sector (8.237996). This can happen because of the strong financial confidence of people in the banking sector and the clear and powerful regulations of RBI.

Pharmaceuticals sector observations

The average long-term debt-to-equity (D/E) ratio common for companies in the drugs sector is 70.66 based on trailing 12-month data as of May 12, 2015. The drugs sector is composed of

more specialized industries, including drug delivery, drug manufacturers - major, drug manufacturers - other, drug- related products and drugs - generic industries.

The simple average of the D/E ratio for companies in the drugs sector is 70.66, which indicates that for every $1 of shareholders' equity, companies in the drugs sector have $70.66 in total liabilities. Since the drugs sector is highly capital-intensive, companies in this sector have high D/E ratios.

The drug delivery industry is included in the drugs sector and has the highest long-term D/E ratio in the sector of 152.6. In comparison to the average D/E ratio of the drugs sector, investors in the drug delivery industry assume $81.94, or 152.6 - 70.66, in debt per $1 in shareholders' equity.

The drug manufacturers - major has a long-term D/E of 66.86. In comparison to the long-term D/E ratio of the industrial goods sector, companies in this industry have $66.86 in debt per $1 of shareholders' equity. The drug manufacturers - other industry offers the lowest long-term D/E ratio for investors in the drugs sector. The industry's long-term D/E ratio is 29.85. This indicates that for every $1 of shareholders' equity for companies in the drug manufacturers - other industry, companies have an average of $29.85 in debt.

But in this study what we found is that the debt-equity ratio of Pharmaceutical industry is much lower (0.118561) compared to other industries. A possible explanation could be that this sector needs high investment in its research and development and therefore they should derive their financial strength from their equity capital.

Oil Drilling and Exploration sector observations

Oil and gas operations are very capital-intensive, yet most oil and gas companies carry relatively small amounts of debt, at least as a percentage of total financing. This can be seen in debt-to-equity, or D/E, ratios that are common between 0.3 and 0.5, although that figure has been rising since the financial crisis of 2007-2008 A company's position along the supply chain influences its D/E ratio.

Many oil companies reduced their D/E ratios during the mid-2000s on the back of ever-rising oil prices. Higher profit margins allowed companies to pay off debt and rely less heavily on debt for future financing. Starting around 2008-2009, oil prices dropped dramatically. There were three main reasons: fracking allowed companies to reach new oil reserves in an economical way; oil and gas shale production exploded, particularly in North America; and a global recession puts downward pressure on commodity prices.

Profit margins and cash flow fell for many oil and gas producers. Many turned to debt financing as a stop-gap; the idea was to keep production flowing through low-interest debt until prices rebounded. This, in turn, pushed up D/E ratios across the industry. Before the financial crisis of 2008, common D/E ratios among oil and gas companies was in the 0.2 to 0.6 range.

Telecommunication sector observations

Telecommunications companies engage in capital-intensive projects that require large investments in infrastructure, wireless towers, data lines and other communication equipment. In order to avoid stock dilution, telecom companies typically finance their investment projects by issuing corporate bonds or secure term loans from financial institutions, resulting in high debt-to-equity ratios. In June 2015, the average debt-to-equity, or D/E, the ratio for companies

in the telecommunication sector was 114.5%. Companies in the integrated telecommunication services subsector tend to have a lower average D/E ratio of 89% while wireless communication companies have a D/E ratio of 192%.

Automobile sector observations

Investors and creditors assess an automotive sector company's financial stability and health by determining its debt-to-equity (D/E) ratio. Investors can use this ratio to determine whether a company is able to fulfill its debt obligations. The automotive sector includes auto dealerships, auto parts stores, auto parts wholesale, auto manufacturers - major, auto parts, recreational vehicles, and trucks and other vehicle industries.

Using trailing 12-month data, as of May 2015, the respective average long-term D/E ratios of companies in these industries are 65.11 for auto dealerships, 70.81 for auto parts stores, 25.52 for auto parts wholesale, 108.01 for auto manufacturers - majors, 70.53 for auto parts, 151.47 for recreational vehicles and 152.91 for trucks and other vehicles.

The simple average of the D/E ratios of companies in the automotive sector is 92.05, or (65.11 + 70.81 + 25.52 + 108.01 + 70.53 + 151.47 + 152.91) / 7. This average D/E ratio of the automotive sector comprises the D/E ratios of all small-, mid- and large-cap companies included in the sector.

Since the automotive sector is a capital-intensive industry and requires more borrowing than other sectors, companies in this sector are more likely to have higher D/E ratios. Ford Motor Co., a large- cap stock in the automotive sector, has a long-term D/E ratio of 489.87. This indicates that for each $1 of shareholders' equity, Ford has $489.87 in debt. Similarly, Tesla Motors Inc. has a long-term D/E ratio of 312.90, which indicates that for each $1 of shareholders' equity Tesla Motors has $312.90 in debt.

Real estate sector observations

The real estate sector comprises different groups of companies that own, develop and operate properties, such as residential land, buildings, industrial property, and offices. Because real estate companies usually buy out the entire property, such transactions require large upfront investments, which are quite often funded with a large quantity of debt. One metric that investors pay attention to is the degree of leverage the real estate company has, which is measured by the debt-to-equity (D/E) ratio. In May 2015, the D/E ratio for the real estate sector ranged from 0 to 1,451, and the average was 161.

Real estate companies represent one of the most attractive investment options due to their stable revenue stream and high dividend yields. Many real estate companies are incorporated as real estate investment trusts to take advantage of their special tax status. A company with REIT incorporation is allowed to deduct its dividends from taxable income. Real estate companies are usually highly leveraged due to large buyout transactions. A higher D/E ratio indicates a higher default risk for the real estate company. Real Estate, Media & Entertainment, Hospitals, and Hotel industries have witnessed a low debt ratio. Except a few firms, the companies under these industries are maintaining low debt ratios.

Classification of D/E Value

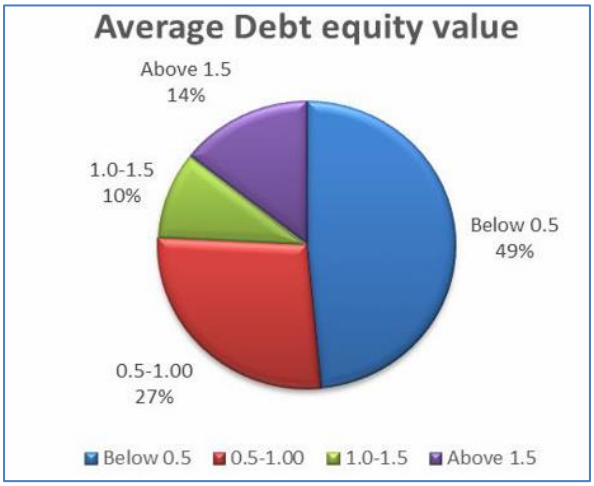
The debt-equity ratio of the sample companies was classified and exhibited in the following table 4.

Industry	Below 0.5	0.5-1.00	1.0-1.5	Above 1.5
Food Processing	0	2	0	4
Fertilizers & Pesticides	4	3	2	1
Sugar	2	1	2	1
Tea Plantations	2	2	1	1
2 & 3 Wheelers	3	2	1	0
Automobile Ancillaries	3	1	2	0
Automobile	5	1	1	1
Computer Software Services	4	2	0	0
Cement	4	2	0	0
Construction & Contracting	8	2	2	0
Infrastructure	2	4	0	0
Real Estate	1	4	1	0
Oil Drilling and Exploration	5	1	0	0
Pharmaceuticals	5	1	0	0
Banking	0	0	0	6
Hospitals	4	0	1	1
Hotels	3	3	0	0
Transport & Logistics	4	0	0	2
Telecommunication Services	1	4	0	1
Media & Entertainment	4	1	0	1
Total	64	36	13	19

Table 4

It can be inferred from table 4 that 75% of the sample companies accounted debt-equity ratio below one. This means maximum numbers of companies in our sample depend more on equity capital for their financing needs. The companies under I T, Media & Entertainment, Oil Drilling and Exploration and Real Estate sectors, mainly depend on the internal source of funds. The industries like 2 & 3 Wheelers, Pharmaceuticals, Cement, Automobile Ancillaries, Hotels, Tea Plantations, Automobile, Hospitals, Telecommunication Services and Construction & Contracting are mostly using equity capital and also depending on the internal source of funds.

The companies under Food Processing, Infrastructure, Fertilizers & Pesticides and Sugar sector are depending on borrowed capital rather than issuing more equity capital.



Graph 1

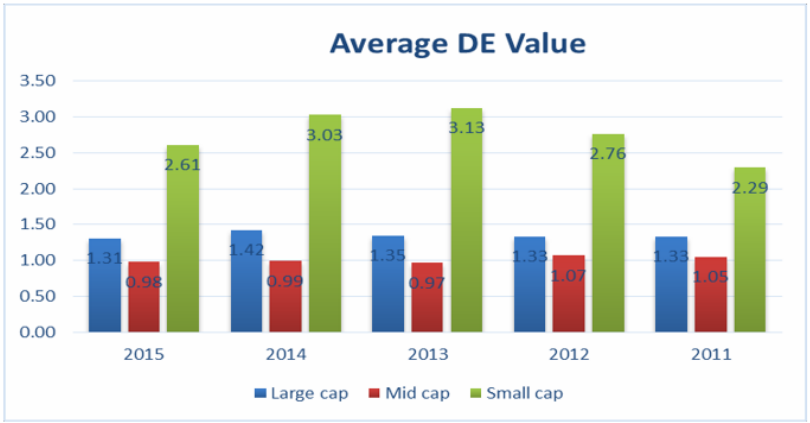
Thus, it is seen that debt-equity ratio of 75% of sample companies across the industry falls below 1.0, 9.07% are within the range of 1.00-1.50 and the rest is categorized under the group of the debt-equity ratio of 1.5 and above. This clearly shows that; companies are mostly depending on their internal source of fund.

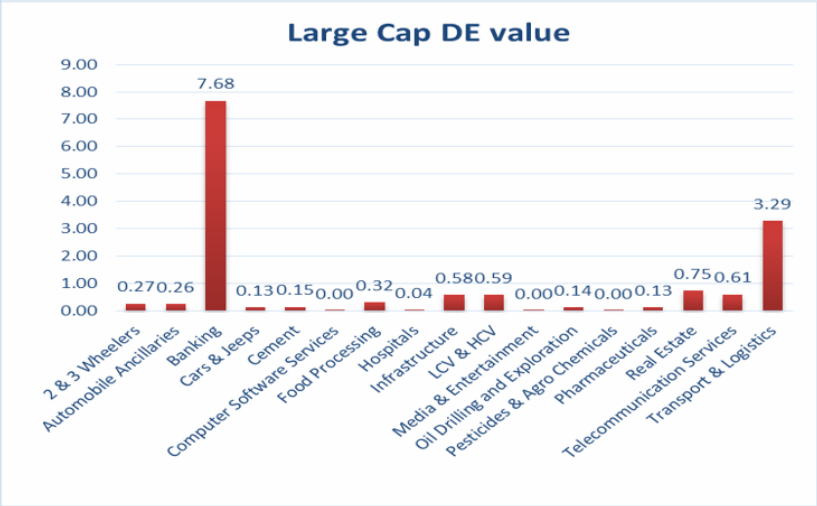
Besides, the market regulations, SEBI & MOF have boosted the primary issue market by introducing a host of incentives and investor protection measures which ultimately led to increasing at the pace of growth of industrial finance in the country. The corporate sectors rushed to capital market and used IPO mode of raising finance.

Debt Equity value versus size of the company

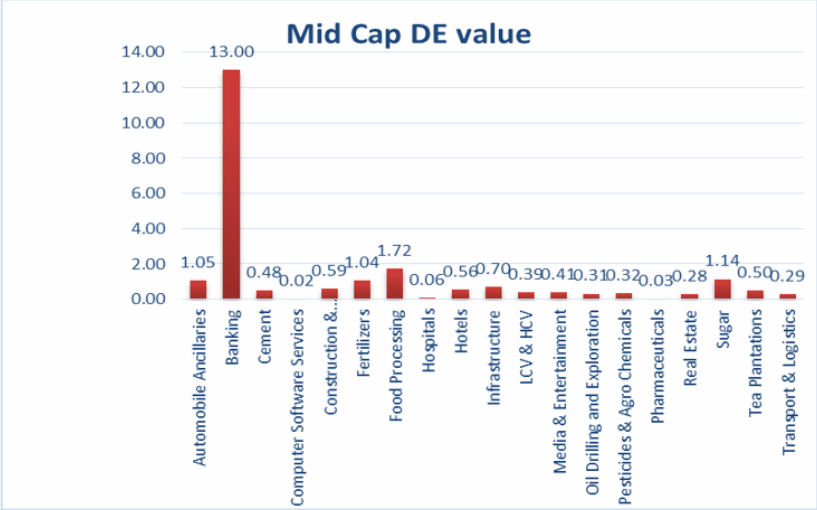
The common understanding and theoretical studies show that the debt equity value of large cap companies should be more since they are more known to the public, especially the money lenders, it is easy for them to get more debt amount. But in this study, we found that the average debt equity value of small cap companies is higher than that of mid cap and large cap. Some of the research papers which are mainly concentrating on the capital structure of Indian industries also tells the same. This contradicts the earlier assumptions that size has a positive correlation with the debt ratio. However, the findings of Fisher, Heinkel, and Zechner (1989) suggest that firm's size is a significant predictor of leverage. However, the size of the firm has no significant impact on the financial leverage of the firms as per the sample is concerned. Our findings are graphically expressed below.

Graph 2

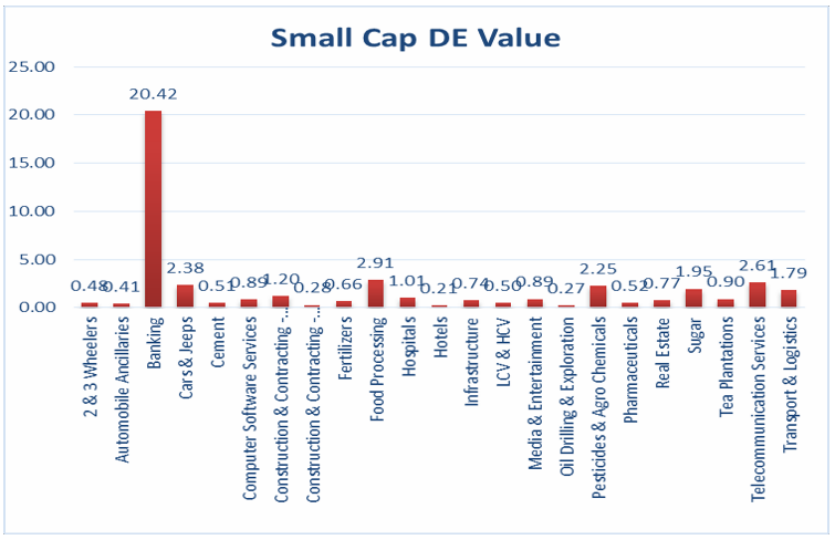




Graph 3



Graph 4



Graph 5

Conclusions

From the foregoing analysis, significant variations have been observed in the debt-equity ratio in the industry sector selected for the purpose of the study. The lowest ratio (0.004607) observed in the case of Computer Software industry and the highest in the banking (8.237996) sector. In the context of the determination of appropriate constituents of capital structure, most of the findings of the study are consistent with those of the earlier studies. However, a few are not aligned with the previous theories, especially in the Indian context. The size of the firm was found not related to the leverage. This refuses the earlier research findings, which established a positive relationship between the size of the company and leverage ratios.

In India, legal determinants play a significant role in shaping the capital structure of the corporation. Important ones are creditor rights, maintenance of legal reserves and law enforcement. Some studies have shown that debt structure is also determined by how right, are enforced by creditors. Debentures in India are, by definition, secured loans having a floating charge on all the aspects of the company compared to the working capital financed by a commercial bank, which generally have a second or inferior charge on assets. It is therefore argued that the financial manager must consider the factors and carefully analyze sector specific attributes before attempting to achieve the so-called optimal capital structure, as they are vital in the Indian context. The designing appropriate capital structure of the firm is warranted to sustain the value of the firm in the hyper-competitive corporate environment.

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