

LOCATION AS A DETERMINANT OF CAPITAL STRUCTURE: A STUDY OF INDIAN PRIVATE SECTOR FIRMS

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ABSTRACT

Capital structure of a firm is determined by various internal and external factors. The macro variables of the economy of a country like tax policy of government, inflation rate, capital market condition, are the major external factors that affect the capital structure of a firm. The characteristics of an individual firm, which are termed as micro factors (internal), also affect the capital structure of enterprises. These factors include size of the firm, age of the firm, growth rate, business risk, profitability, leverage etc. But, whether the location of a firm affects its capital structure decisions and if yes then how and why is the subject matter of this paper. The present study is aimed at to understand the importance of location of the firm in making capital structure decisions of Indian companies. We propose to analyze the capital structure of 300 Indian private sector companies, comprising of 20 different sectors for the period 1999-2000 to 2007-2008, duly grouping them on the basis of their regions in which they are located. In this study, we try to find out the ways in which different companies at different times and in different institutional environments have financed their operations; and to identify possible implications of these financing patterns. The central issue we address is to examine the location variable that influence the capital structure decisions of Indian companies and check whether the region to which the company belongs has a bearing on its capital structure or not.

Keywords: Capital Structure, Leverage, Indian Corporate, Private sector, Funds flow.

INTRODUCTION

Capital structure of a firm is determined by various internal and external factors. The macro variables of the economy of a country like tax policy of government, inflation rate, capital market condition, are the major external factors that affect the capital structure of a firm. The characteristics of an individual firm, which are termed here as micro factors (internal), also affect the capital structure of enterprises. What factors determine the capital structure decisions made by Indian firms? Despite decades of intensive research, there is a surprising lack of consensus even about many of the basic empirical facts. This is unfortunate for financial theory since disagreement over basic facts implies disagreement about desirable features for theories. This is also unfortunate for empirical research in corporate finance; if an empirical researcher wants to offer new empirical insights, it may be unclear what other factors need to be controlled. Does the location of the firm also influence the capital structure decisions of Indian companies? There is strong, consistent evidence that investors tend to overweight their portfolios in nearby companies. This implies that companies located in urban areas have more potential shareholders than firms located in rural areas. It may therefore be easier for urban firms to raise money by selling equity, and they may be more likely to return to the equity market for additional capital. As already stated, the main objective of this study is to find out how the location of the company influences the capital structure decisions, apart from the other micro and macro variable factors.

REVIEW OF LITERATURE

Several studies show that investors earn higher returns on investments in local companies than on investments in more distant companies. Put another way, being located far from a company puts an investor at an information disadvantage that is clearly measurable in the bottom line. Other studies show that security analysts who are located closer to a company produce more accurate earnings forecasts than analysts who are located at a greater distance (see Malloy (2005)). Again, greater distance implies a meaningful disadvantage in obtaining information.

Myers and Majluf (1984) observed that information asymmetries between managers and outside investors could make it expensive to raise funds through equity offerings and may lead some financially constrained firms to forgo valuable projects rather than sell stock. Myers (1984) takes this observation further and develops a pecking order theory of capital structure. In this theory, firms issue equity only as a last resort, and capital structure is determined in large part by the firms' ability to finance internally.

Investors' bias toward nearby companies is documented in several studies. Huberman (2001) shows that customers of the regional Bell operating companies are much more likely to buy shares of the telephone company providing their service than another telephone company. Coval and Moskowitz (1999) examine the distance from mutual funds' headquarters to the companies the funds held in their portfolios in 1995. On average, companies held in a fund's portfolio were 10% closer to the fund's headquarters than the average distance of potential holdings. Individual investors are even more biased than fund managers toward local companies. Ivkovic and Weisbenner (2005) examine the stock investments of over 30,000 households in the continental United States from 1991 to 1996. They find that the average household invests 31% of its portfolio in stocks located within 250 miles. If investors had held the market portfolio instead, only 13% of the average household's investments would be this close.

A possible explanation for investor preference for local stocks is simply familiarity. Barber and Odean (2005) observe that with more than 7,000 U.S. stocks, investors cannot consider all securities in their investment decisions. They instead choose among stocks that have captured their attention.

Companies that are in the local news, that employ an investor's neighbor, or that an investor sees each day on the way to work are more likely to capture his or her attention.

The other explanation for investing in local stocks is better access to information. Much of the information that is useful for valuing stocks is informal, soft information. It comes from observing that a company is employing extra shifts, or from casual conversations with the company's employees or customers. Much of this information is only available to investors who are physically close to the company. Evidence that investors have better information on local stocks comes from their investment returns.

Several papers suggest that investors earn higher returns on stocks of nearby companies. Ivkovic and Weisbenner (2004) examine the returns of individual investors at a large discount brokerage firm. These retail investors earn 3.7% more per year on local stocks than on their other investments. When S&P 500 stocks are discarded the difference between returns on local stocks and others is even higher, about 6% annually. Ivkovic and Weisbenner find that the difference in returns between local stocks and others appears for investors all over the U.S. and is robust to various risk adjustments.

Investors in other countries also earn higher returns on investments in local companies. Bodnaruk (2003) examines Swedish investors' stockholdings and location every six months during 1995 to 2001. After controlling for various measures of risk, he estimates that an investor who purchases shares of companies 100 kilometers away earns between 1.8% and 3.8% less per year than an investor who buys stock in firms only 10 kilometers away.

Mutual funds also appear to earn significantly higher returns on their local-firm holdings than on their distant-firm holdings. Coval and Moskowitz (2001) separate mutual fund holdings into local and distant stocks, where local stocks are those with headquarters within 100 kilometers of the mutual fund. Local stocks that are held by funds earn annual returns that are about 3% higher on average than local stocks that are not held by funds. Interestingly, all else equal, funds tend to turn over local stocks less frequently than stocks of distant companies. Locally held firms tend to be small and highly levered. Coval and Moskowitz suggest that these are the sorts of stocks in which local investors may have an information advantage.

Other evidence that closeness to a company provides information advantages comes from work on equity analysts by Malloy (2005). He finds analysts located nearer a company's headquarters provide more accurate earnings forecasts. This greater accuracy is not explained by underwriting relationships. Enhanced accuracy of local forecasts is particularly strong for firms located in remote areas, for small firms, and for high book-to-market firms. Stock price responses to analyst rating changes are especially strong for analysts located near a particular firm.

A major part of the job for underwriters of equity offerings is reducing information asymmetries between issuers and investors. Corwin and Schultz (2005) examine underwriting syndicates for 1,638 U.S. initial public offerings (IPOs) issued between January 1997 and June 2002. They find that an underwriter is more likely to be included in an IPO syndicate if it is based in the same state as the firm that is going public. Underwriters who are located in an adjoining state (e.g., California for an Oregon issue) are less likely to be included in the syndicate than underwriters based in the same state, but more likely than underwriters based elsewhere. The comparative advantage of investment bankers in underwriting local companies suggests that it is easier for them to obtain information.

METHODOLOGY

The methodology that we have designed for our study and the techniques adopted in collection and analysis of data for the study, the scope of the study, procedure followed for selection of samples, collection of data, classification and analysis of the data etc. are elaborated in the following paragraphs.

SCOPE OF THE STUDY

The proposed research is intended to examine the impact of size variable on the capital structure decisions of Indian companies. The central issue we will address is to examine whether the location of the firm influence the capital structure decisions of Indian companies and if yes, to what extent?

NATURE OF THE DATA

The nature of the data required for the purpose of study are information relating to corporate growth, mobilization of corporate finance at the national and state levels. Further, information relating to nature of industry, size and age of sample companies and their annual financial statements from 1999-2000 to 2007-08 are also needed.

SOURCE OF THE DATA

For our study purpose, only secondary data is used which is sourced from the website www.moneycontrol.com. The information relating to nature of industry, size, age, state and region, company background, value of total assets and annual financial statements of sample companies for the period 1999-2000 to 2007-2008 have been obtained from the same. Information relating to industrial and corporate growth and mobilization of corporate finance has been collected from various books, periodicals, government reports and RBI Bulletins. In some cases we have also collected the required information directly from the sampled company.

SELECTION AND CLASSIFICATION OF SAMPLE

Keeping in view the scope of the study, it was decided to select companies on the basis of purposive sampling rather than taking the whole thing. Our sample consists of 300 firms from a heterogeneous set of 20 different sectors. For our study purpose we have taken the data of top 15 companies of each sector selected on the basis of their total assets value as on 31st March 2008. The study excludes financial and securities sector companies, as their financial characteristics and use of leverage are substantially different from other companies. In order to understand the impact location on the capital structure of the companies, the companies are classified under four regions i.e. north, south, east and west based upon the location of their registered offices.

PERIOD OF STUDY

The time period under consideration is a long time span of nine years i.e. 1999-2000 to 2007-08. The idea behind selecting a period of recent past was because the corporate performance in India has undergone rapid changes during this period because the Indian economy has experienced strong growth during recent times. The acceleration in real gross domestic product (GDP) has been contributed by the sustained expansion in industry and services sector. The improvement was widespread, touching all sub-sectors of manufacturing as well as service. Higher investment in power and transport sectors with increased efficiency and trade and industrial policy reforms had resulted in turnaround. This is well reflected in the performance of the manufacturing sectors during the post reform period, especially after 2000. For example, gross profits of the companies have registered an increase of 17 per cent per annum during

2000-2006. Recent phase of enhanced profitability has raised the capital intensity of Indian companies even more. Rapid growth in the size and operation of Indian companies during the current decade was much more as compared to the previous decade. This ultimately resulted into an increased requirement of capital, which is raised through both debt and equity.

DESIGN OF THE STUDY

This study makes a humble attempt to examine whether the capital structure decisions of Indian companies are same irrespective of their region and if not, then why? Some operating performance variables which have close interaction with capital structure decisions viz., size of investment (represented by the sum of gross fixed assets and current assets), asset structure (represented by fixed assets as a proportion of total assets), liquidity (represented by the current assets proportion over the current liabilities) are selected for analysis. The behavior of all these variables (including debt-equity ratio) is examined by computing index number of the relevant data for 9 years. Their inter-relationship is studied with the help of Karl Pearson's Coefficient of Correlation technique. Finally, the correlation of each of the selected variables vis-à-vis debt-equity ratio is analyzed for understanding the impact of the latter on the former and vice versa. Inferences are drawn based on the result of the analysis.

TOOLS AND TECHNIQUES OF ANALYSIS

The data collected from the financial statements of the companies are analyzed with the help of the following accounting and statistical tools each of which is discussed below:

- (i) Funds Flow Analysis
- (ii) Ratio Analysis
- (iii) Correlation Analysis

The funds flow statement is a statement which shows the movement of funds and is a report of the financial operations of the business undertaking. In our study, the information obtained from the financial statements of the companies is analyzed with the help of historical funds flow analysis technique. From the balance sheets of sample companies, year wise funds flow statements are prepared for each company. These give source wise details of the funds raised by the companies for asset formation under various heads during the accounting year. By and large, the increase in various items of assets and liabilities during the year represent the sources and uses of funds under respective heads.

A ratio is a simple arithmetical expression of the relationship of one number to another. We propose to calculate and compare various ratios of sample companies in the industry and across the industry for all the years of our study so as to know whether there exists any significant variation in different ratios from year to year.

The analysis of the trend in capital structure formation is aimed at establishing relationship between sources of funds and uses of funds. In the process we have tried to correlate each individual source with its best possible use. They are internal sources, external long-term fixed assets, current liability (short term sources) with current assets. The co-efficient of correlation are calculated for the total as well as for the classified variables. Significant tests, wherever necessary have also been undertaken to interpret the results of the analysis.

DATA ANALYSIS

The purpose of this section is to study the funds flow and capital structure of sample companies divided into different regions. The different sources from where the corporate sector has raised the funds and the ways and means by which the so raised funds have been utilized have been analyzed in detail. The analysis of the study is based on the historical funds flow statements of each company. For the total sample, the aggregate of (300 companies) individual sources of funds and their investment in acquiring different assets has also been made. The region of a company more or less influences its quantum of inflow of funds both debt and equity. The nature of capital structure and the behavior of quantum of sources and uses of funds of the companies of each region not only differ from one another, but also they exert different degrees of impact on the over all trend of the total sample. The total sample companies are classified into four regional groups, namely eastern, western, southern and northern companies. The number of companies in eastern region was 34, western region 135, northern region 46 and southern region 85.

FINDINGS

From the funds flow analysis of sample companies grouped under four different regions, it was found that the western region which comprises of 135 companies has raised the highest amount of funds among all the four regions during the period of study. The average amount of funds raised by the sample companies of eastern region was Rs.1832.76 crores, western region Rs.22205.46 crores, northern region Rs.5772.78 crores and southern region Rs.16939.08 crores.

With respect to raising of funds through internal sources, it was found that the eastern region companies raised funds internally Rs.9229.6 crores in total during the study period with an average of Rs.1153.7 crores yearly. In case of western region companies, the total amount of funds raised internally was Rs.105347.84 crores with an average of Rs.13168 annually, which is the highest among all the four regions. Similarly, the total internal funds raised by northern and southern companies during the period of study were Rs.21796.17 crores and 83421.13 crores respectively.

Total amount of funds raised by the issue of equity and preference shares were Rs.3479 crores by western region, Rs.1250 crores by northern region, and Rs.2521 crores by southern region. In case of eastern region, the amount of funds raised shows a negative figure of Rs.4.97 crores indicating that the amount paid towards the redemption of preference shares was more than the amount collected by issue of equity shares.

Companies also raised funds through long-term loans comprising of secured and unsecured loans. The total amount raised through debt or long term loan both secured and unsecured was Rs.3141 crores by eastern region companies, Rs.38915 crores by western region companies, Rs.12941 crores by northern region companies, and Rs.27435 crores by southern region companies. The common observation for the companies of all the four regions was that they have raised more funds through debt capital as compared to equity, may be due to the reason of easy and availability of cheap debt capital. Not a single company of any region has raised any fund through differed credit.

The annual average inflow of funds from current liabilities was Rs.287 crores by the eastern region companies, Rs.3737.59 crores by the western region, Rs.1274.26 crores by the northern region and Rs.2766.81 crores by the southern region companies.

The funds so raised by different regions were applied in acquiring fixed assets, current assets, etc. It was found that an annual average of Rs.938.16 crores were invested in acquiring fixed assets by the eastern region companies. The same in case of western region was Rs.9327.66 crores, northern region Rs.2768.21 crores and southern region Rs.5838.67 crores. Similarly, an annual average of Rs.241.16 crores were invested additionally every year in current assets by the eastern region companies whereas that in case of western region it was Rs.4384.07 crores, Rs.944.64 crores in case of northern region and Rs.3836.78 crores by the southern region companies.

The debt-equity ratios were calculated from the consolidated balance sheets of the respective regions. For our study purpose, debt includes secured loans, unsecured loans, current liabilities and deferred credits, i.e. all types of debts. Similarly equity or net worth consists of equity share capital, preference share capital, share application money, reserves and revaluation reserves. The debt-equity ratio for the above purpose is calculated by dividing debt by equity. The annual average ratio for the total period was 1.21, 1.24, 1.09 and 0.97 respectively for eastern, western, northern and southern region companies. The average so worked out for all the regions were fairly lower than the generally accepted norm of 2:1.

The annual average of size of investment for the whole period worked out to be Rs.8925.76 crores for eastern region companies, Rs.60983.47 crores for western region companies, Rs.16470.68 crores for northern region companies and Rs.38470.31 crores for southern region companies. Western region shows the highest with respect to average as well as total size of investments among all the regions.

While analyzing the asset structure of companies of different regions, it was observed that the proportion of net fixed assets to total assets for the eastern region companies varied in between 0.36 to 0.46. In case of western region it was 0.30 to 0.43, northern region 0.32 to 0.34 and in case of southern region it was in between 0.23 to 0.43. The average ratio of eastern, western, northern and southern region companies was 0.41, 0.38, 0.33 and 0.33 respectively.

With respect to the liquidity ratio or current ratio of different regions for the study period, it was observed that it varied from 0.89 to 1.41 with an annual average of 1.07 in case of eastern region companies, 1.23 to 1.77 with an annual average of 1.42 in case of western region companies, 0.96 to 1.87 with an annual average of 1.42 in case of northern region companies and 1.25 to 1.85 with an annual average of 1.48 in case of southern region companies.

The correlation between size of investment and debt-equity ratio for eastern, western and southern region were found to be -0.58349, -0.82911, 0.94371 and -0.74606 respectively.

A high negative ratio in case of eastern, western and southern region indicates that the investments are influenced much by equity funds than by the debt funds. But in case of northern region, the coefficient of correlation shows a positive figure which is 0.94371. This kind of high degree positive correlation indicates that a greater proportion of debt funds are used for acquiring fixed as well as current assets.

The correlation between asset structure and debt equity ratio shows that eastern, western and southern region companies had high degree of positive correlation between the asset structure and D/E ratio. This indicated that the proportions of fixed assets greatly depended on long-term debt funds. In the case of northern region, the coefficient of correlation between the asset structure and debt-equity ratio is -0.01077 which is a very low degree of negative correlation. This indicates that the fixed assets depended negatively on debt funds and positively on equity funds, particularly in case of northern region companies.

The correlation between liquidity and debt equity ratio shows that except for the southern region, all other regions indicated a negative association between the two variables. It implies that the current assets of the companies of those regions were negatively influenced by long-term debts. It might be from short-term sources or from equity sources. The positive correlation shown by southern region indicated that a portion of the long-term debt funds have been invested by the companies of this region in current assets.

CONCLUSION

In recent years, there has been a growing realization on the part of financial economists that information asymmetries may play an important role in determining capital structure. When outside investors are at a significant information disadvantage to insiders, selling equity may be very difficult. As a result, firms with the largest information asymmetries will have more debt and less equity in their capital structure. By analyzing the inflow of funds for individual regions, it is observed that the quantum of inflow was more in case of western region companies in comparison to other region. The average amount of funds raised by the sample companies of eastern region was Rs.1832.76 crores, western region Rs.22205.46 crores,

northern region Rs.5772.78 crores and southern region Rs.16939.08 crores. The annual average inflow of funds per company was Rs.53.90 crores, Rs.164.48 crores, Rs.125.49 crores and Rs.199.28 crores respectively for eastern, western, northern and southern region companies. This reveals that in terms of total average inflow of funds, western region stood highest as this region is the most industrially advanced region of our country and covers 135 companies out of the total sample size of 300 companies. In terms of mean average southern region has the highest inflow of funds as compared to other regions because most of the large sized companies are situated in this region, which are capable of generating more funds as compared to the companies of other region.

Thus, the results as calculated in forgoing paragraphs indicate that the average figures and ratios are different for all the regions. Hence, it can be concluded that the region or location of a company strongly influences the quantum of inflow of funds.

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