

CAPITAL STRUCTURE ANALYSIS OF SELECTED COMPANIES IN INDIAN TEXTILE INDUSTRY

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Abstract

Capital structure is the composition of debt and equity securities that are used to finance company's assets. Both debt and equity securities are used by most of the companies to raise funds. Having determined its investment policy, a company should plan the sources of finance and their mix. Companies which do not formally plan their capital structures are likely to face difficulties in raising capital on favourable terms in the long-run. Financial experts and authorities differ as to the composition of funds in capital structure. Some believe that the capital structure and the financial structure are the same and hence, the capital structure represents both long-term and short-term sources of finance...Hence the researcher has made an attempt to study the capital structure analysis of textile industry in India and to make suitable suggestion towards to improve capital structure in future.

Key Words: Cost of Capital, Capital Structure and Textile.

Introduction

Indian Textile Industry can essentially be categorized into two segments:Organized Textile Industry and Unorganized Textile Industry. Organized Textile Industry is a highly organized one with immense importance on capital intensive production process. This sector is characterized by sophisticated mills where technologically advanced machineries are utilized for mass production of textile products. Unorganized Textile Industry sector is the dominant part in this industry which mainly utilizes the traditional practices (woven or spun) in cloth production and hence is labour intensive in nature. This industry is characterized by the production of clothes either through weaving or spinning with the help of hands. The decentralized nature is considered as another important feature of the unorganized textile industry in India.

Need for the Study

There is a need to study the industries internal efficiency which ultimately shall determine the overall industrial development in future. Hence the present study is attempted to offer a detailed investigation of analysis of capital structure of Indian textile industry. The importance of textile products in the modern life is so obvious that no other manufactured product possesses such diversity of use. Some research studies have been undertaken to empirically investigate the design of capital structure of textile industry at the state level and a few studies relating to individual mills. But no study has been exclusively conducted to analyze the pattern of capital structure of textile industries. In this context an attempt has been made to investigate the design of capital structure of large scale companies in Indian textile industry for a period of ten years from 2003-04 to 2013-14.

Statement of the problem

Numerous studies have been carried out to empirically test capital structure theories which try to establish whether they could explain the capital structure of companies as well as figuring out which determinants were important when considering companies' capital structure. With regard to other industries in India, a few scientific and detailed studies have been undertaken by different researchers and institutions. It is observed from the existing literature on capital structure that there is no a single comprehensive and intensive study touching upon various aspects of capital structure of textile industry yet.

Objectives

The primary purpose of the present study is to obtain a true insight into the capital structure analysis of Indian textile industry. For carrying out the study, the following specific objectives have been set.

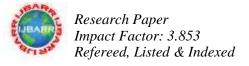
- 1. To examine the capital structure of selected textile companies.
- 2. To offer suggestions for improving capital structure of selected companies in Indian textile industry.

Scope of the Study

The study investigated the capital structure analysis of Indian textile industry of listed companies in India.

Limitations of the Study

- a) The entire study is based on secondary data.
- b) The nature of the present study is just of an explanatory nature; it does not claim to examine in an exhaustive manner to various other possible diverse factors influencing a company's overall cost of capital.
- c) The study is confined only to those companies which are listed on the Bombay Stock Exchange (BSE).



Review of Literature

Anand (2002) in his study surveyed 81 Chief Financial Officers (CFOs) of India to find about their corporate finance practices (capital structure, cost of capital, divided policy decisions and capital budgeting decisions) and analyzed the responses by the firm characteristics like firm size, profitability, leverage, PIE ratio and the sector. The study revealed that the firms with low long-term debt ratio are more likely to use internally generated funds than the firms with high long-term debt proportion in their capital structure. Most of the CFO respondents not preferring the equity capital between the firms classified on the basis of size, profitability, risk, growth, and sector.

Dogra and Gupta (2009) in a research paper entitled "An empirical study on capital structure of SMEs in Punjab" analyzed various factors influencing Capital Structure and their impact on the decision-making ability of the Small and Medium Enterprises. A sample of 50 manufacturing units was taken for the purpose of analysis. They pointed out that optimum Capital Structure enhances the P and the value of the firm; Small and Medium Enterprises relied more on their own funds and comparatively less on borrowed funds. They ranked flexibility, management control, liquidity and cost of capital with ranks from 1-4 respectively as the prime determinants of Capital Structure.

Study Period

The period of study was held as 2003-04 to 2013-14. Secondary data published by CMIE was available for the sample companies under the selected sectors of textile industry.

Sample Size and Sampling Method

In India Textile industry broadly classified in to 27 sectors. It is decided to include all the textile companies under Indian textile industry working during the financial years 2003 -2004 to 2013- 2014. But study covers only 15 major sectors due to not in operation for a year during the period of study, non-availability of data for the whole study period.

| Table: 1 Sector-wise Distribution of Sample companies | | | | | | | | |
|---|-----------------------------------|-----------------|------------|--|--|--|--|--|
| S.No | Sector of the Textile Industry | No of companies | Percentage | | | | | |
| 1 | Cotton Yarn 100% | 8 | 7.34% | | | | | |
| 2 | Cotton Yarn Open Ended Spinning | 6 | 5.50% | | | | | |
| 3 | Hosiery Knitwear | 6 | 5.50% | | | | | |
| 4 | Processing | 9 | 8.26% | | | | | |
| 5 | Jute Yarn | 3 | 2.75% | | | | | |
| 6 | Man Made PPFY | 4 | 3.67% | | | | | |
| 7 | Rayon | 2 | 1.83% | | | | | |
| 8 | Readymade Apparel | 14 | 12.84% | | | | | |
| 9 | Silk | 1 | 0.92% | | | | | |
| 10 | Socks | 3 | 2.75% | | | | | |
| 11 | Spinning Cotton Blended | 4 | 3.67% | | | | | |
| 12 | Spinning Synthetic Blended | 5 | 4.59% | | | | | |
| 13 | Texturising | 18 | 16.51% | | | | | |
| 14 | Textile Machinery | 8 | 7.34% | | | | | |
| 15 | Weaving | 18 | 16.51% | | | | | |
| | Total no of firms | 109 | 100% | | | | | |

Table: 1 Sector-wise Distribution of Sample companies

Source: Compiled from the CMIE Database

Employed Capital of Sample Companies

Capital employed is widely used tool to measure size of the firm. The sample companies are categorized into four groups on the basis of volume of capital employed. Average of capital employed was computed for the study period from 2003-04 to 2013-14.Distribution of Sample companies based on the Average Capital Employed is presented in Table: 2



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| Table: 2 Distributions of Sample Companies B | ased on the Average Capital Employed |
|--|--------------------------------------|
| | |

| | (Rupees in Crores) | | | | | | | |
|---------------------------------|------------------------------|------------|----------|----------|----------|------------|--|--|
| Fastor | Average Capital | Nu Av | T- 4-1 | | | | | |
| Sector | Employed in the Sector | 0-300 | 300-600 | 600-900 | >900 | Total | | |
| Readymade apparel | 134.43 | 12 | 2 | 0 | 0 | 14 | | |
| Spinning Cotton Blended | 195.97 | 3 | 1 | 0 | 0 | 4 | | |
| Cotton yarn 100% | 276.98 | 6 | 2 | 0 | 0 | 8 | | |
| Cotton yarn open ended spinning | 241.73 | 5 | 0 | 0 | 1 | 6 | | |
| Hosiery knitwear | 362.62 | 4 | 0 | 0 | 2 | 6 | | |
| Jute yarn | 98.66 | 3 | 0 | 0 | 0 | 3 | | |
| Man made ppfy | 395.19 | 3 | 0 | 0 | 1 | 4 | | |
| Processing | 132.14 | 8 | 1 | 0 | 0 | 9 | | |
| Rayon | 3356.39 | 1 | 0 | 0 | 1 | 2 | | |
| Silk | 789.42 | 0 | 0 | 1 | 0 | 1 | | |
| Socks | 453.24 | 2 | 0 | 0 | 1 | 3 | | |
| Spinning Synthetic Blended | 451.93 | 4 | 0 | 0 | 1 | 5 | | |
| Textile Machinery | 131.09 | 7 | 0 | 1 | 0 | 8 | | |
| Texturising | 142.66 | 17 | 0 | 0 | 1 | 18 | | |
| Weaving | 136.57 | 16 | 1 | 0 | 1 | 18 | | |
| Total | | 91(83.49%) | 7(6.42%) | 2(1.83%) | 9(8.26%) | 109 (100%) | | |

Source: Computed by the Researcher from the CMIE Database

Analysis revealed that 83.49% of the sample companies are employing up to Rs 300 Crores in their capital structure and 6.42% of the companies are keeping capital between Rs 300 to Rs 600 Crores. Majority of the companies are belonging to the Readymade apparel are employed their capital below Rs.300 Crores. Out of 109 companies, 91 companies employ their capital under the range of Rs300 Crores, in their businesses which are basically depending on their nature of operation and observed less amount of capital for smooth operation of the business, while others are keeping almost same range of capital. It is observed that 9 companies are employed more than 900 Crores.

Debt to Equity Ratio

Nature of capital structure of the sample companies is determined by the debt equity ratio of the individual company pertaining to the year of reference. The average of debt to equity ratio was calculated for the sample of 109 companies distributed on 15 major sectors of the Indian Textile industry. Average debt to equity ratio for the period from 2003-4 to 2013-14, highlighting the extent of leverage of the sectors is presented in Table:3

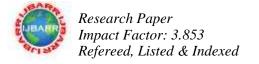
Table: 3 Average debt to equity ratio for the various Sectors of Textile Industry for the period from 2003-04 to2013-14

| (Figures i |) parenthesis | indicate | debt to | equity ratio) |
|---------------|------------------|----------|---------|---------------|
| (1 1901 00 11 | - par entitiesis | marcare | acor 10 | equity runo) |

| Debt Equity Ratio | Sector | Extent of leverage |
|-------------------|--|--------------------|
| below 0.5 | Rayon(0.34), Textile Machinery(0.24) | Low |
| 0.5 to 0.99 | Silk(0.51) | Medium |
| 1.0 to 1.49 | Cotton yarn open ended spinning(1.36), Hosiery knitwear(1.02), Jute yarn(1.41), Manmade ppfy (1.28), Socks(1.19), Texturising (1.37), Weaving (1.14) | Average |
| 1.50 and above | Readymade apparel(1.50), Spinning Cotton Blended(2.16),Cotton yarn 100%(3.54),Processing (1.51),Spinning Synthetic Blended(2.41) | High |

Source: Computed by the Researcher from the CMIE Database

The analysis indicated that, the debt equity ratios of the textile sectors covered in the study lie within the range of 0.24 to 3.54. The low debt equity ratio (0.24) observed in the case of Textile Machinery sector and the highest in Cotton yarn 100% (3.54) sector. However, Silk (0.51) sector has shown a medium extent of debt equity ratio. Cotton yarn open ended spinning



(1.36), Hosiery knitwear (1.02), Jute yarn (1.41), Manmade ppfy (1.28), Socks (1.19), Texturising (1.37), Weaving (1.14) sectors have recorded an average extent of debt equity ratio. High debt equity ratio is observed in the sectors of Readymade apparel (1.50), Spinning Cotton Blended (2.16), Processing (1.51) and Spinning Synthetic Blended (2.41). Among the individual sample companies.

| | nin the Sector are ir | Debt-Equity Rat | io |
|---------------------------------|-----------------------|-----------------|---------------|
| Sector | Below 1 | 1 to 1.5 | 1.5 and above |
| Cotton Yarn 100% | 0 (0%) | 1 (12.5%) | 7 (87.5%) |
| Cotton yarn open ended spinning | 3 (50%) | 1 (16.67%) | 2 (33.33%) |
| Hosiery knitwear | 3 (50%) | 2 (33.33%) | 1 (16.67%) |
| Processing | 3 (33.33%) | 1 (11.11%) | 5 (55.56%) |
| Jute yarn | 2 (66.67%) | Nil | 1 (33.33%) |
| Man made ppfy | 1 (25%) | Nil | 3 (75%) |
| Rayon | 2 (100%) | Nil | Nil |
| Readymade apparel | 7 (50%) | 2 (14.29%) | 5 (35.71%) |
| Silk | 1 (100%) | Nil | Nil |
| Socks | 1 (33.33%) | 1 (33.33%) | 1 (33.33%) |
| Spinning Cotton Blended | Nil | 2 (50%) | 2 (50%) |
| Spinning Synthetic Blended | 1 (20%) | Nil | 4 (80%) |
| Texturising | 7 (38.89%) | 5 (27.78%) | 6 (33.33%) |
| Textile Machinery | 8 (100%) | Nil | Nil |
| Weaving | 9 (50%) | 4 (22.22%) | 5 (27.78%) |
| Total | 47 (43.12%) | 20 (18.35%) | 42 (38.53%) |

Table: .4, Distribution of the sample companies based on their debt-equity ratio is presented sector wise. (Percentages within the Sector are in parenthesis)

Source: Computed by the Researcher from the CMIE Database.

Analysis revealed that 38.53% of the sample companies accounted debt-equity ratio of above 1.5 which means maximum numbers of companies of the sample are equity capital oriented. The companies under Rayon and Manmade ppfy sector depend on internal source of funds. The industries like Cotton Yarn 100%, Spinning Synthetic Blended, are mostly using equity capital and also depending on internal source of funds. The companies under Spinning Synthetic Blended and Manmade ppfy sector are depending on borrowed capital rather than issuing more equity capital. Thus, it is seen that debt-equity ratio of 43.12% of sample companies across the industry falls below 1.0, 18.35% are within the range of 1-1.5 and rest are categorized under the group of debt-equity ratio of 1.5 and above. This clearly shows that, companies are mostly depending on their internal source of fund.

Cost of Capital

The cost of capital constitutes an integral part of investment decisions. A company uses more than one type of capital. The composite cost of capital lies between the least and the most expensive funds. In order to calculate the composite cost of



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capital, the determination of specific cost of capital should be made first. Since no information regarding cost of capital was available in the published data, an attempt has been made in this part to calculate the cost of debt and cost of equity as specific cost of capital and finally the overall cost of capital i.e. weighted average cost of capital of the selected large scale companies in Indian textile industry for the periods under study. Cost of preference share capital was not attempted in this study because of the reliance of preference share capital is very little in the selected companies and it is believed that this exclusion would not materially affect the broad conclusions and trends in cost of capital.

Cost of Debt

The cost of debt is defined in terms of the minimum required rate of return that the debt investment must yield to protect the shareholders' interest. Since payment of interest on debt is tax deductible, the cost of debt is the contractual interest rate adjusted for the tax liability of a firm. As per the formula the cost of debt is calculated by-

 $K_d = (Interest/Total Borrowings)^*(1-t)$

Where,

Kd - Cost of debt capital after taxes

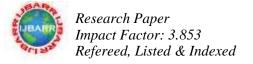
't' - Marginal tax rate applicable to the company.

While calculating the total debt, all short-term as well as long-term borrowings have been included because all debts are interest bearing. Therefore, interest paid during the financial year has been considered as total interest expenses. Because of the tax deductibility of interest, generally the cost of borrowed fund is computed as an after-tax rate of interest. The cost of debt capital of different sector selected in Indian textile industry during the study period is presented in below Table: 5

| Sector | companies | <0.5 | 0.5 to 1 | 1.00 to 2 | above 2 |
|-------------------------------------|------------|----------------------|----------|-----------|-------------|
| Sector | companies | <0.5 | 0.5 10 1 | 1.00 to 2 | 13 |
| Readymade apparel | 14 | 0.00% | 0.00% | (7, 140/) | |
| | | | | (7.14%) | (92.86%) |
| Spinning Cotton Blended | 4 | 0.00% | 0.00% | 0.00% | 4 (100.00%) |
| | | | | | (100.00%) |
| Cotton yarn 100% | 8 | 0.00% | 0.00% | 0.00% | (100.00%) |
| | | | | | 5 |
| Cotton yarn open ended spinning | 6 | 0.00% | 0.00% | 1(16.67%) | (83.33%) |
| | | | | | 5 |
| Hosiery knitwear | 6 | 0.00% | 0.00% | 1(16.67%) | (83.33%) |
| | _ | | | | 3 |
| Jute yarn | 3 | 0.00% | 0.00% | 0.00% | (100.00%) |
| | 4 | 0.000/ | 0.000/ | 0.000/ | 4 |
| Man made ppfy | 4 | 0.00% | 0.00% | 0.00% | (100.00%) |
| During | 0 | 0.000/ | 0.000/ | 0.000/ | 9 |
| Processing | 9 | 0.00% | 0.00% | 0.00% | (100.00%) |
| Dovon | 2 | 0.00% | 0.00% | 0.00% | 2 |
| Rayon | 2 | 0.00% | 0.00% | 0.00% | (100.00%) |
| Silk | 1 | 0.00% | 0.00% | 0.00% | 1 |
| SIIK | 1 | 0.00% | 0.00% | 0.00% | (100.00%) |
| Socks | 3 | 0.00% | 0.00% | 0.00% | 3 |
| BOCKS | 5 | 0.0070 | 0.0070 | 0.0070 | (100.00%) |
| Spinning Synthetic Blended | 5 | 0.00% | 0.00% | 0.00% | 8 |
| Spinning Synanous Dionaca | | 0.0070 | 0.0070 | 0.0070 | (100.00%) |
| Textile Machinery | 8 | 0.00% | 0.00% | 0.00% | 8 |
| | | | | | (100.00%) |
| Texturising | 18 | 0.00% | 1 | 0.00% | 17 |
| | | | (5.56%) | | (94.44%) |
| Weaving | 18 | $\frac{3}{(16,670)}$ | 2 | 0.00% | 13 |
| č | | (16.67%) | (11.11%) | 3 | (72.22%) |
| Total | 109 | - | - | - | 100 |
| rce: Computed by the Researcher fro | the CMIE D | (2.75%) | (2.75%) | (2.75%) | (91.75%) |

Table: 5, Distribution of sample companies by their Cost of debt

Source: Computed by the Researcher from the CMIE Database



(**D**

Out of 109 companies, 91.75% of the sample companies has cost of debt between the above 2 which means maximum numbers of companies of the sample are debt oriented. A highly leveraged position becomes riskier and less profitable in poor economy. On weaving sector Out of 18 companies only three companies hold lower cost of debt less than 0.5, two companies between 0.5 and 1. On Texturising sector, only one firm hold below one and 17 companies holds the cost of debt greater than 2.

To test whether the cost of debt differs among the selected sector, analysis of variance technique was applied. In this regard the following null hypothesis has been framed and tested.

HO: There is no significant difference in the cost of debt among the selected sectors of companies during the study period.

| e:o | :6 Results of the ANOVA Test for the difference in cost of debt | | | | | e various se |
|-----|---|----------|-----|---------|-------|--------------|
| | | Sum of | | Mean | | |
| | | Squares | df | Square | F | Sig. |
| | Between Groups | 733.823 | 14 | 52.416 | 0.355 | 0.984 |
| | Within Groups | 13859.75 | 94 | 147.444 | | |
| | Total | 14593.57 | 108 | | | |

 Table:6 Results of the ANOVA Test for the difference in cost of debt
 among the various sectors

It is evident from the ANOVA results that the calculated value of F is0.355 as against the table value of 1.96 respectively at five per cent level of significance. The p-value of significance is 0.984 higher than 0.05, it indicated that null hypothesis is accepted. Hence, it is concluded that there is no significant difference in the cost of debt among the selected sectors of the companies during the study period.

Cost of Equity

As the company is not legally bound to pay dividends to equity shareholders and also the rate of dividend on equity capital is not fixed, it is sometimes called that the equity capital is free of cost. But, it is fallacious to assume equity capital is free of cost, because equity shareholders supply funds to the firm in expectation of dividend plus capital gains. Thus, the shareholders required rate of return, which equates to the present value of the expected dividends with the market price of the share is the cost of equity. Estimating cost of equity is very much cumbersome because no specific and certain cash inflow by way of dividends is available. Instead of profits, there may be losses. However, in the financial literature, the experts have identified several alternative approaches for estimating cost of equity capital. Keeping in view of several limitations of the approaches, the CAPM approach has been attempted in this study.

Capital Asset Pricing Model Approach (CAPM)

Capital Asset Pricing Model Approach (CAPM) approach is used as it incorporates risk element also while estimating the cost of equity. From this point of view, CAPM approach is used irrespective of profit or losses.

| | | | | (Perce | entage) | |
|---------------------------------|---------------------|----------------|---------------|---------------|----------|--|
| | Number of | Cost of Equity | | | | |
| Sector | Sample companies | 0 -10 | 10-20 | 20-40 | above 40 | |
| Readymade apparel | 14 | 4 (28.57%) | 5 (35.71%) | 5 (35.71%) | 0.00% | |
| Spinning Cotton Blended | 4 | 1 (25.00%) | 2 (50.00%) | 1 (25.00%) | 0.00% | |
| Cotton yarn 100% | 8 | 3 (37.50%) | 2 (25.00%) | 3 (37.50%) | 0.00% | |
| Cotton yarn open ended spinning | 6 | 4 (66.67%) | 2 (33.33%) | 0.00% | 0.00% | |
| Hosiery knitwear | 6 | 2 (33.33%) | 3 (50.00%) | 1 (16.67%) | 0.00% | |
| Jute yarn | 3 | 1 (33.33%) | 2 (66.67%) | 0.00% | 0.00% | |

Table: 7 Distribution of sample companies by their Cost of Equity

Source: Computed by the Researcher from the CMIE Database



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| Man made ppfy | 4 | 1 (25.00%) | 2 (50.00%) | 1 (25.00%) | 0.00% |
|-------------------------------|-----|----------------|---------------|----------------|--------------|
| Processing | 9 | 2 (22.22%) | 7 (77.78%) | 0.00% | 0.00% |
| Rayon | 2 | 1 (50.00%) | 0.00% | 1 (50.00%) | 0.00% |
| Silk | 1 | 0.00% | 1 (100.00%) | 0.00% | 0.00% |
| Socks | 3 | 1 (33.33%) | 0.00% | 2 (66.67%) | 0.00% |
| Spinning Synthetic Blended | 5 | 0.00% | 4 (80.00%) | 1 (20.00%) | 0.00% |
| Textile Machinery | 8 | 3 (37.50%) | 3 (37.50%) | 2 (25.00%) | 0.00% |
| Texturising | 18 | 7 (38.89%) | 7 (38.89%) | 4 (22.22%) | 0.00% |
| Weaving | 18 | 5 (27.78%) | 5 (27.78%) | 6 (33.33%) | 2 (11.11%) |
| Total | 109 | 35 (32.11%) | 45 (41.28%) | 27 (21.78%) | 2 (1.83%) |

Source: Computed by the Researcher from the CMIE Database

Out of 109 selected companies, 41.28% of the sample companies have the cost of equity between the between 10-20%. The cost of capital is considered to be return rate that the company could earn and it is essentially the opportunity cost of investing capital resources for a specific purpose. Out of 109 companies in Textile sector, 45 companies are able to generate the rate of return between 10-20%, 35 companies less than 10%, 27 companies in range 20-40% and 2 company's falls above 40%.

To check whether cost of equity differs among the selected companies, Analysis of Variance technique was applied. In this regard, the following hypothesis has been framed and tested using ANOVA at 5% level of significance.

Table: 8 Results of the ANOVA Test for the difference in cost of equity among the selected sectors

| | Sum of Squares | df | Mean Square | F | Sig. |
|----------------|-------------------|-----|----------------|-------|-------|
| Between Groups | 1512.953 | 14 | 108.068 | 0.906 | 0.555 |
| Within Groups | 11207.31 | 94 | 119.227 | | |
| Total | 12720.26 | 108 | | | |

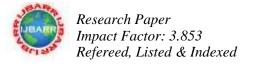
Source: Computed by the Researcher from the CMIE Database

As the value of p is greater than 0.05, the null hypothesis is accepted and inferred that there is no significant difference in cost of equity among various sectors of the Textile industry during the study period.

Weighted Average Cost Of Capital (WACC)

The Weighted Average Cost of Capital (WACC) is the overall cost of capital, which is calculated by taking into account the cost of various components of capital structure of a company. It depends upon the specific cost of capital of individual sources of finance and the proportion of different sources in the total capital structure of the firm. One financing mix or capital structure is represented by one WACC, which may change whenever there is change in the financial mix. So, a firm can change its WACC by changing the financing mix and can thus affect the value of the firm. An increase in the usage of debt in the overall capital structure will result in an overall decline in the weighted average cost of capital (WACC). The composite cost of all capital lies between the least and the most expensive funds. Thus, the cost of capital when it is measured on the basis of the weights in the total capital structure is known as weighted average cost of capital. The weighted average cost of capital can be calculated as:

(Ko) = Pd (Kd) + Pe (Ke)Where,



- Ko Overall weighted average cost of capital
- Pd Proportion of debt to total capital
- Kd Cost of debt
- Pe Proportion of equity to total capital
- Ke Cost of equity

| Sector | No. of companies | 0 -10 | 10-20 | 20-40 | above 40 |
|---------------------------------|---------------------|----------------|----------------|---------------|----------|
| Readymade apparel | 14 | 5 (35.71%) | 8 (57.14%) | 1 (7.14%) | 0.00% |
| Spinning Cotton Blended | 4 | 2 (50.00%) | 2 (50.00%) | 0.00% | 0.00% |
| Cotton yarn 100% | 8 | 5 (62.50%) | 3 (37.50%) | 0.00% | 0.00% |
| Cotton yarn open ended spinning | 6 | 6 (100.00%) | 0.00% | 0.00% | 0.00% |
| Hosiery knitwear | 6 | 5 (83.33%) | 1 (16.67%) | 0.00% | 0.00% |
| Jute yarn | 3 | 1 (33.33%) | 0.00% | 2 (66.67%) | 0.00% |
| Man made ppfy | 4 | 2 (50.00%) | 2 (50.00%) | 0.00% | 0.00% |
| Processing | 9 | 5 (55.56%) | 4 (44.44%) | 0.00% | 0.00% |
| Rayon | 2 | 1 (50.00%) | 1 (50.00%) | 0.00% | 0.00% |
| Silk | 1 | 0.00% | 1 (100.00%) | 0.00% | 0.00% |
| Socks | 3 | 2 (66.67%) | 1 (33.33%) | 0.00% | 0.00% |
| Spinning Synthetic Blended | 5 | 3 (60.00%) | 2 (40.00%) | 0.00% | 0.00% |
| Textile Machinery | 8 | 2 (25.00%) | 4 (50.00%) | 2(25.00%) | 0.00% |
| Texturising | 18 | 10 (55.56%) | 7 (38.89%) | 1(5.56%) | 0.00% |
| Weaving | 18 | 8 (44.44%) | 7 (38.89%) | 3(16.67%) | 0.00% |

| Table: 9 Distribution of selected textile companies based on their computed weighted average cost of capital |
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|--|

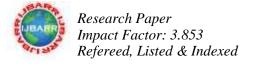
Source: Computed by the Researcher from the CMIE Database

Out of 109 companies, Weighted average cost of capital(WACC) is registered between 0-10% for 57 companies, 43 companies has registered of about 10-20% WACC and 9 companies registered between 20-40%.

In order to test the difference in WACC among the selected sectors, analysis of variance test (ANOVA) was applied. The Null hypothesis: "Ho – There is no significant difference in the weighted average cost of capital among the sectors" was tested at 5% level of significance using SPSS. Results of ANOVA are presented

 Table: 10
 Results of the ANOVA Test for the difference in weighted average cost of capital among the selected sectors

| | | Sum of Squares | df | Mean Square | F | Sig. |
|---|----------------|-------------------|-----|----------------|-------|------|
| | Between Groups | 855.86 | 14 | 61.133 | 1.304 | 0.22 |
| | Within Groups | 4406.062 | 94 | 46.873 | | |
| | Total | 5261.923 | 108 | | | |
| Source: Computed by the Researcher from the CMIE Database | | | | | | |



As the value of p is greater than 0.05, the null hypothesis is accepted and inferred that there is no significant difference in WACC among various sectors of the Textile industry during the study period.

Effect of cost of capital on capital structure

In this part, an attempt has been made to empirically study the impact of weighted average cost of capital on capital structure of the selected large scale companies in Indian Textile industry through a regression analysis of the capital structure with weighted average cost of capital of the selected companies during the study period. The linear regression model fitted to test debt equity with WACC is as follows.

$$D/E = + (WACC) + e$$

Where,

D/E - Debt equity ratio,

, - Parameters to be estimated (intercept and co-efficient) and

e - Error term.

| Table: 11 Sector wise Regression analysis for D/E Ratio on weighted a | verage cost of capital |
|---|------------------------|
|---|------------------------|

| Sector | Beta | R | R-square | Adj. R-square | Std.Error of Estimate | Significance |
|----------------------------|--------|-------|----------|------------------|--------------------------|--------------|
| Readymade apparel | 0.005 | 0.166 | 0.028 | -0.053 | 1.784 | 0.570 |
| Spinning Cotton Blended | -0.021 | 0.117 | 0.014 | -0.48 | 1.248 | 0.883 |
| Cotton yarn 100% | 0.296 | 0.549 | 0.302 | 0.185 | 1.635 | 0.49 |
| Cotton yarn open ended | -0.28 | 0.11 | 0.012 | -0.235 | 0.879 | 0.835 |
| Hosiery knitwear | 0.029 | 0.094 | 0.009 | -0.239 | 1.231 | 0.86 |
| Jute yarn | -0.146 | 0.95 | 0.903 | 0.806 | 0.765 | 0.202 |
| Man made ppfy | 0.081 | 0.665 | 0.443 | 0.164 | 0.744 | 0.335 |
| Processing | -0.179 | 0.527 | 0.278 | 0.175 | 0.897 | 0.144 |
| Rayon | 0.075 | - | - | - | - | 0 |
| Silk | - | - | - | - | - | - |
| Socks | 0.042 | 0.252 | 0.064 | -0.872 | 1.471 | 0.838 |
| Spinning Synthetic Blended | -0.403 | 0.909 | 0.827 | 0.769 | 0.347 | 0.032* |
| Textile Machinery | -0.016 | 0.583 | 0.34 | 0.23 | 0.226 | 0.129 |
| Texturising | 0.026 | 0.155 | 0.024 | -0.037 | 1.03 | 0.54 |
| Weaving | -0.005 | 0.07 | 0.005 | -0.057 | 0.832 | 0.782 |

 $r-Correlation \ co-efficient$

* - Significant at 0.05 level

Source: Computed by the Researcher from the CMIE Database

The result of the relationship between capital structure and weighted average cost of capital reveal that the linear model of debt equity with WACC has not proved to be a good fit of the model. The empirical result also communicates that the 't' value communicates that the Spinning synthetic blended sector alone is observed to be statistically significant in explaining the relationship between capital structure and cost of capital at five per cent level of significance. All the other (12) sector are not statistically significant in explaining the relationship between capital structure and cost of capital is not a significant factor in explaining the relationship between capital structures of majority of companies in the Indian Textile industry.

Thus, it is concluded that debt is a cheaper source of fund than equity, but a company cannot go on minimizing its overall cost of capital by employing more debt in its capital structure. A point is reached beyond which debt becomes more expensive, because of increased risk of excessive debt to creditors as well as to the shareholders and it will adversely affect the earnings per share and market price of shares. Thus, the findings of the study support the traditional approach of capital structure.

Findings

• Debt equity ratios of the textile sectors covered in the study lie within the range of 0.24 to 3.54. The low debt equity ratio (0.24) observed in the case of Textile Machinery sector and the highest in Cotton yarn 100% (3.54) sector.



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- On capital employed, 83.49% of the sample companies are employing more than Rs 300 Cr. Out of 109 companies, 91 companies employ their capital under the range of Rs300 Crores.
- Out of 15 Sectors in textile industry, the highest cost of debt is observed in weaving sector and lowest cost of debt is observed in Cotton yarn open ended spinning sector of about 3.89.
- Out of 109 selected companies, of the sample companies have the cost of equity in Textile sector, 45 companies are able to generate the rate of return between 10-20%, 35 companies less than 10%, 27 companies in range 20-40% and 2 company's falls above 40%.
- The result of the relationship between capital structure and weighted average cost of capital the Spinning synthetic blended sector alone is observed to be statistically significant in explaining the relationship between capital structure and cost of capital at five per cent level of significance. All the other (12) sector are not statistically significant in explaining the relationship between capital structure and cost of capital.

Suggestions

- It is observed that the debt equity ratio of 47 (43.12%) companies were well below 1:1. There is much scope to increase the debt finance in the capital structure of these companies. Thus, it is suggested that the managements may restructure their capital structure by raising the proportion of debt particularly the institutional borrowing and debentures to enjoy the fruits of trading on equity.
- As there is a wide variation in the pattern of capital structure of the selected companies during the period under study it is suggested that the financial managers should look into the future prospects of the companies while designing the capital structure policies, because it affects the return on equity market price of its shares for longer periods.

Conclusion

Capital structure is the most important determinant of a company's performance. Companies can adopt different strategies and composition of capital required for them in order to enhance their performance. It reflect the relative pattern of capital structure of the sample companies and also the overall picture of the textile industry. The study would be helpful to the companies in framing competitive financial, investment and dividend policies.