Chapter 1

Introduction, Design and Execution of the Study
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INTRODUCTION, DESIGN AND EXECUTION OF THE STUDY

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CHAPTER - I
INTRODUCTION, DESIGN AND EXECUTION OF THE STUDY

1.1 INTRODUCTION

"Money is of no value on its own. It cannot spend itself. All depends on the skill of the spender".
- Ralph Waldo Emerson

Rapid economic development of a country depends upon the availability of ingredients like finance, labour, technology, entrepreneurship and managerial skills. Among these, availability of finance is considered to be the most vital, because, availability of adequate finance at the disposal of a firm will enable it to acquire other ingredients. From the management point of view, effective utilisation of finance is also as important as its availability. The finance manager, in order to maximise the wealth of the firm, faces the real challenge of obtaining the required funds from the right source and ensuring their right use. Here lies the skill of the finance executive. The Sanskrit saying "arthah sachivah", which means 'finance reigns supreme' also speaks about the significance of the finance function of an organisation. "The financing decision is an intricate and highly complex process and it requires choice of sources of finance to be made with great care".

This is more so with regard to fixed assets financing as against current assets financing due to involvement of considerable amount of long-term sources, which are irreversible once invested in fixed assets. A firm needs funds for both long-term and short-term to meet its total capital requirements. Long-term funds are required not only to set up a new enterprise and to keep it going, but also for its expansion, diversification and modernisation programmes. The composition of long-term funds in the total
The financial structure of a firm is known as capital structure - a decision most complex to be taken. The choice between debt and equity capital is the basic financial decision facing the firms. Firms choose their financing with cost and risk in mind but, can be influenced by control and disclosure considerations as well. Given the market conditions and preference of owners, firms are likely to choose a capital structure that best serves their interest.

Now, as far as India is concerned, radical changes have taken place in the country's economic and industrial scenario. Pai observed that not only had there been growth and diversification in the industrial complex, but also the structure of industrial production had become more balanced. India's economic liberalisation story was unfolded in the early 1990s in response to the global changes and domestic economic pressures. Major liberalisation measures were launched in the regulatory and financial sectors. With the introduction of reforms covering practically every aspect of the business environment including licensing policies, import and export laws, technology imports and foreign direct investments, the Indian business scenario had undergone a dramatic metamorphosis. Investment opportunities have expanded, competition (both domestic and international) has heightened, financing options have widened and above all, dependence on capital market has increased.

A survey of 56 years of economic activity after India won freedom on August 15, 1947, clearly indicated that after remaining in deep slumber with occasional bouts of sleeping sickness and nostalgic dreams of a wonderful past, India has finally started coming to its own. All the economic parameters indicate that the country has successfully transited from an agrarian mould to a manufacturing and service oriented economy.
**TABLE 1.1**

SELECT ECONOMIC INDICATORS DURING 1991-92 to 2001-02

<table>
<thead>
<tr>
<th>Year</th>
<th>Real GDP growth rate (%)</th>
<th>Growth rate of agriculture (%)</th>
<th>Industrial output (%)</th>
<th>Rate of inflation (%)</th>
<th>Forex assets ($ billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991-1992</td>
<td>3.4</td>
<td>2.9</td>
<td>0.6</td>
<td>12.8</td>
<td>-</td>
</tr>
<tr>
<td>1992-1993</td>
<td>5.1</td>
<td>4.1</td>
<td>2.3</td>
<td>7.0</td>
<td>6.4</td>
</tr>
<tr>
<td>1993-1994</td>
<td>5.9</td>
<td>3.8</td>
<td>6.0</td>
<td>10.8</td>
<td>15.1</td>
</tr>
<tr>
<td>1994-1995</td>
<td>7.3</td>
<td>4.9</td>
<td>8.4</td>
<td>10.4</td>
<td>20.1</td>
</tr>
<tr>
<td>1995-1996</td>
<td>7.3</td>
<td>-2.4</td>
<td>12.7</td>
<td>5.0</td>
<td>17.0</td>
</tr>
<tr>
<td>1996-1997</td>
<td>7.8</td>
<td>9.3</td>
<td>6.1</td>
<td>5.4</td>
<td>22.4</td>
</tr>
<tr>
<td>1997-1998</td>
<td>4.8</td>
<td>-5.7</td>
<td>6.6</td>
<td>4.5</td>
<td>26.0</td>
</tr>
<tr>
<td>1998-1999</td>
<td>6.5</td>
<td>7.9</td>
<td>4.1</td>
<td>5.3</td>
<td>29.5</td>
</tr>
<tr>
<td>1999-2000</td>
<td>6.1</td>
<td>-0.7</td>
<td>6.7</td>
<td>6.5</td>
<td>35.1</td>
</tr>
<tr>
<td>2000-2001</td>
<td>4.4</td>
<td>-6.5</td>
<td>5.0</td>
<td>4.9</td>
<td>39.6</td>
</tr>
<tr>
<td>2001-2002</td>
<td>5.6</td>
<td>5.8</td>
<td>2.7</td>
<td>1.6</td>
<td>51.1</td>
</tr>
</tbody>
</table>

Source: Compiled from various Issues of Economic Survey.

India is all set to enter the road which, if traversed successfully, can take the country to the league of economic super powers of the world.

Prior to 1991, Indian companies operated in an overly regulated and protected system of government patronage rooted in the early developmental models of import substitution and state intervention. The Government relied on the private sector to help meet industrial growth targets detailed in its five year plans. In return, industry was rewarded with high barriers to entry and competition through a complex licensing system, protectionist trade policies and controlled price regime. According to the World Bank, prior to 1991, the effective rate of protection in the capital goods sector was almost 600 per cent. Capital for investment projects was made readily available through government-owned financial institutions and banks. With resources thus largely allocated under planned framework, investors were guaranteed returns regardless of improvements in efficiency. Family-run corporate
groups benefited the most, building up portfolios of businesses based on their ability to accumulate licenses, rather than on the attractiveness of prospective returns. Productive efficiencies and cost effectiveness were largely ignored concepts.

Given the emerging scenario, no participant in the industrial development can afford to be inward looking. Corporates had to adopt multipronged strategies to fight for survival in the liberalised environment. Strategies of cost cutting, leveraging core competencies, improving production efficiencies and distribution channels, scaling up of volumes and size of operations, quality enhancement, etc., became critical and transformed themselves as the order of the day. Only corporates which were fundamentally strong have stood up to these demands and those which were financially or technologically weak were left with no option but to close or, be taken over by larger and stronger entities. The multinationals entry and the foreign capital inflow into this country have changed the scenario further. Hence the present study assumes further significance under the current scenario of Indian business.

While so much effort has been taken to tune various aspects of business to the changing environment, the finance manager aims to have an optimum capital structure for his firm to provide the crucial financial flexibility to steer through turbulent times and to enhance returns to stakeholders, which is the ultimate objective of any commercial activity.

Financial sector reforms introduced since 1991 have resulted in the emergence of new pattern of domestic financing of firms by revitalising capital markets. Owing to this, India's industrial finance which was traditionally equated with state banks and development finance institutions with an emphasis on projects rather than corporate finance, has undergone substantial transformation. At the margin, there is a shift away from bank sources of finance to direct use of the capital market. In India, the use of capital markets, as a source of external financing has soared since 1991 and
this made it possible for the firms to dynamically change the capital structure on an on-going basis.

It is also essential to understand the Indian capital market and the changes it had undergone in the past, to study its implications on the capital structure of Indian corporates over a period of 11 years from 1991-92 to 2001-02.

1.2 INDIAN CAPITAL MARKET

The financial sector in the Indian economy has undergone a transformation and has become one which is vibrant, competitive and diversified, with a multiplicity of financial institutions with different risk profiles intermediating with various segments of the market spectrum.

Growth of corporate sector and capital markets is an important indicator of the sophistication and growth of an economy. The growth in the nineties has been spectacular following the liberalisation. The corporate sector, which for a long time has been relying heavily on external borrowings and depreciation provisions for its capital formation, has started mobilising large funds for investments through the capital markets.

Based on the recommendations of several committees headed by Dave, Verma, Nadkarni and Narasimhan, a series of reforms have been carried out in the capital markets. The reforms led to the abolition of the office of controller of capital issues, establishment of SEBI (Securities Exchange Board of India) as a statutory body, establishment of credit rating agencies for awarding credit rating to the money market instruments, debt instruments, deposits and equity shares, establishment of OTCEI (Over The Counter Exchange of India) and National Stock Exchange; introduction of 100 per cent book building route for IPOs (Indian Public Offers), e-trading, etc.

While the debate on the benefits of the reform process initiated a decade ago still continues, there is no disputing the fact that the economic
environment of India has undergone a radical change. The Indian capital market has been at the forefront of this process and a snapshot of the activity during the last 12 years provides interesting insights into the evolution of our capital markets.

The Indian primary market has witnessed tremendous upheaval and has today metamorphosed into systematic, transparent and efficient market. During the last 12 years, the average equity funds raised per annum was Rs.47 billion, with a peak amount of Rs.133 billion during 1994 - 95, which amply demonstrates the ability of markets to mobilise significant funds. However, from the financial year 1996 - 97 onwards the funds raised through debt have out numbered equity (Figure 1.1). The SEBI has played a proactive role during this period and introduced a series of measures that have significantly transformed the primary markets landscape.

1.2.1 Reforms in the Secondary Market

The changes in the primary market environment are part of the on-going reforms across the capital markets. The secondary markets have experienced tremendous upheavals and the wide sweeping changes witnessed over the recent past have transformed the market structure. Indian capital markets today have a striking resemblance to market in developed countries. The developments that have lent an international character to the Indian capital market include:

- Compulsory dematerialisation of stocks for trading.
- Imposition of rolling settlement in all leading stocks and shortening the period of settlement from T + 3 days to T + 1 day
- Ban on carry forward deferral products.
- Introduction of trading derivatives namely index futures and index and stock based options.
- Introduction of code relating to corporate governance.
FIGURE 1.1

FUNDS RAISED THROUGH PRIMARY MARKETS (1992-2002)

Number of Issues

Rs. in Billion

Debt
Equity and Hybrid

Year


1600 1400 1200 1000 800 600 400 200 0
♦ Increase in limits on investments by Foreign Institutional Investors (FIIs) from 24 per cent to 30 per cent of total equity of a company, with an option to raise it to 49 per cent upon approval by shareholders.

♦ Permission to mutual funds to invest in American Depository Receipts (ADRs) / Global Depository Receipts (GDRs) upto 10 per cent of net assets managed.

♦ Two-way fungibility in ADRs / GDRs.

The stringent disclosure norms stipulated by SBEI have transformed the prospectus of yesteryears into a very comprehensive, transparent and detailed document that serves as a useful reference to investors. Other related initiatives included extension of uniform price, auction of selected dated government securities, introduction of floating rate government bonds and retailing in government securities through stock exchanges.

A whole basket of reforms covering the capital market created an environment and structure of enhanced transparency in the market process and enabled transaction efficiencies and security to all sections of investors. The capital market, as a result, became a more vibrant entity and combined with the entry of foreign institutional investors (post liberalisation), a whole new breed of professionally managed mutual funds, corporate broking and investment funds, etc., the stage was set for wider access to varied capital market products and services for corporates who were prepared to play by the new ground rules of efficiency and transparency. While the secondary markets witnessed the boom period followed by slump, there have been many ups and downs in the new issues market. The market observed an exploding growth from 86 new issues amounting to Rs.522.73 crores during 1990 to a whopping 1080 issues amounting to Rs.15121.80 crores during 1995. Thereafter, the market turned bearish due to poor international economic scenario and the fund mobilisation through IPOs has almost dried up, as the decade approached its end. The one saving grace is the absence of the fly-by-night kind of IPOs that dominated the market between 1992 - 1996.
This is equally attributable to the tighter security framework as to the general investor apathy since 1996 for IPOs of any kind after the bitter experiences of 1992 - 1995.

The markets are also prone to fluctuations depending on various domestic and international factors. The adverse sentiments in the secondary market in the recent past owing to subdued international economy, border tensions, etc., have also affected the mobilisation of resources from the primary market.

### TABLE 1.2

#### AMOUNT OF CAPITAL ISSUED BY NON - GOVERNMENT PUBLIC LIMITED COMPANIES DURING 1991 - 92 TO 2001 - 02

(Rs. in crores)

<table>
<thead>
<tr>
<th>Year</th>
<th>Equity</th>
<th>Preference</th>
<th>Debt Securities</th>
<th></th>
<th></th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Convertible</td>
<td>Non-convertible</td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1991 - 1992</td>
<td>1729.50</td>
<td>1.50</td>
<td>3489.20</td>
<td>530.60</td>
<td>4019.80</td>
<td></td>
<td>5750.80</td>
</tr>
<tr>
<td>1992 - 1993</td>
<td>9981.00</td>
<td>0.50</td>
<td>7864.90</td>
<td>1979.20</td>
<td>9844.10</td>
<td></td>
<td>19825.60</td>
</tr>
<tr>
<td>1993 - 1994</td>
<td>10113.20</td>
<td>63.40</td>
<td>8106.90</td>
<td>1218.00</td>
<td>9324.90</td>
<td></td>
<td>19501.50</td>
</tr>
<tr>
<td>1994 - 1995</td>
<td>17453.90</td>
<td>131.30</td>
<td>7643.00</td>
<td>1228.00</td>
<td>8871.00</td>
<td></td>
<td>26456.20</td>
</tr>
<tr>
<td>1995 - 1996</td>
<td>12052.10</td>
<td>150.10</td>
<td>3438.40</td>
<td>531.70</td>
<td>3970.10</td>
<td></td>
<td>16172.30</td>
</tr>
<tr>
<td>1996 - 1997</td>
<td>6152.10</td>
<td>71.90</td>
<td>527.40</td>
<td>3705.80</td>
<td>4233.20</td>
<td></td>
<td>10457.50</td>
</tr>
<tr>
<td>1997 - 1998</td>
<td>1162.40</td>
<td>4.30</td>
<td>1471.60</td>
<td>500.00</td>
<td>1971.60</td>
<td></td>
<td>3138.30</td>
</tr>
<tr>
<td>1998 - 1999</td>
<td>2562.70</td>
<td>59.70</td>
<td>190.70</td>
<td>2200.00</td>
<td>2390.70</td>
<td></td>
<td>5013.10</td>
</tr>
<tr>
<td>1999 - 2000</td>
<td>2752.50</td>
<td>-</td>
<td>50.80</td>
<td>2350.00</td>
<td>2400.80</td>
<td></td>
<td>5153.30</td>
</tr>
<tr>
<td>2000 - 2001</td>
<td>2607.60</td>
<td>142.20</td>
<td>36.20</td>
<td>2104.00</td>
<td>2140.20</td>
<td></td>
<td>4890.00</td>
</tr>
<tr>
<td>2001 - 2002</td>
<td>860.20</td>
<td>-</td>
<td>518.10</td>
<td>4313.90</td>
<td>4832.00</td>
<td></td>
<td>5692.20</td>
</tr>
</tbody>
</table>


Table 1.2 reveals that, in the new issues market, equity capital had registered a steady upward trend from Rs.1729.50 crores in 1991 - 92 to Rs.17453.90 crores in 1994 - 95 and thereafter had registered a sharp decline to Rs.6152.10 crores in 1996 - 97 and further to Rs.1162.40 crores in
1997-98 on account of the collapse of the primary market. Resource mobilisation through equity was Rs.860.20 crores, accounting for only 15.12 per cent of the total resource mobilisation, while debt was around Rs.4832.00 crores, accounting for 84.89 per cent in 2001-02. Preference shares had more or less lost their significance (Figure 1.2). Debentures had also registered a decline after 1994-95 and non-convertible debentures came into prominence because of private placement.

The low level of total resource mobilisation noticed in the later part of the study period could also be attributed to the prevailing economic slowdown. This had lead to the preference for private placement of debt. The level of equity in the capital structure of industries was higher in the early nineties. Moreover, this period was the regime of high interest rates due to which the level of debt in the capital structure of the corporations was actually limited. The corporates had also taken advantage of the falling interest rates over the last 3 years of the study period (1999-2000 to 2001-02). They were opting for debt rather than own funds to finance new projects taking advantage of the availability of low-cost funds.

1.3 CAPITAL STRUCTURE

Generally the term 'capital structure' represents the proportionate relationship between the different forms of financing. However, sometimes a distinction is drawn between 'financial structure' and 'capital structure'. The term 'financial structure' is used to refer to the manner in which the assets of a firm are financed. Thus it represents the entire capital and liability side of the balance sheet. On the other hand, the term 'capital structure' is used in a restrictive sense. It refers to the composition of long-term sources of finance, such as preference capital, debentures, long-term debts and equity capital including reserves and surpluses and excludes short-term debts. Thus, used in this sense, capital structure is a part of the financial structure. From a practical point of view, the distinction is not very rigid. In practice, short-term debts, in many cases, are used as a substitute of long-term debts for
FIGURE 1.2
SHARE OF FUNDS RAISED AND FUNDS THROUGH IPOs DURING 1997-2002

Equity 10.1
Preference shares 1.9
Mutual funds 7.7
Debt 80.3
These short-term debts also provide leverage benefits to the shareholders and involve cost and risk like the long-term debts. Hence the terms - financial structure and capital structure - may be used interchangeably. In the present analysis, short-term loans (excluding current liabilities and provision) also form part of the debt-equity structure.

When a firm has a high level of business risk, it usually seeks to balance this risk with a lower level of financial risk by employing lower levels of debt in its capital structure. The question of determining an optimal capital structure - one that will maximise the value of the firm - is important in financial management.

1.3.1 Capital Structure Planning

It is realized at every stage of a company's growth that it should plan its capital structure to maximise the utility of available funds and to acclimatize very easily with the varying situations. The objective of any capital structure planning is to minimise the cost of capital and to maximise the value of the share or, in other words, the optimum capital structure is obtained when the market value per share is maximum and the average cost of capital is minimum. But, in practice, the extent of time and attention of the corporate financial executive and the board of directors in the choice of security type varies from one company to another and within a single company from time to time. Judgement plays a crucial role. Two similar companies can have different capital structures, if the financial executives differ in their judgement on the significance of various factors. A theoretical model capital structure cannot handle adequately all those factors. As the capital markets are not perfect, these factors are highly psychological, complex and qualitative and do not always follow an accepted theory.

The capital structure decision is a continuous one. Initially, the capital structure should be designed carefully. The company management has to set a target capital structure and all the subsequent financing decisions should be
made in order to achieve such a target capital structure. Designing suitable capital structure in the case of private corporate units is essentially an exercise of determining optimum debt-equity mix, which involves due consideration to the factors such as leverage effect on earnings per share, cost of capital, cash flow ability of the company, control, flexibility, size of the firm and floatation costs. Consistent with the objective of wealth maximisation, the company should adopt that capital structure which maximises the value of the firm.

One of the various aspects of planning a capital structure is the use of fixed charges securities in the total capitalisation. Financial leverage, the mix of long-term debt and equity, is a major dimension of financial structure. It refers to the use of fixed charge securities in the total capitalisation of the company. The primary motive of financial leverage is to magnify the shareholders' return under favourable economic conditions. The key objective is to balance risks on debt in lean years and to get higher returns on owned funds in the years of prosperity. Financial leverage, otherwise called trading on equity, is a double-edged sword. It has got tremendous acceleration or deceleration effect on Earnings Before Interest and Taxes (EBIT), as well as, Earnings Per Share (EPS). It also results in financial risk to the shareholders. Financial risk is the additional risk placed on the common stock holders as a result of the decision to finance with debt. Financial risk is an avoidable risk if the firm decides to use only equity funds.

With economic uncertainty, volatility in sales and profits and intensifying performance pressures all around, firms are compelled to implement plans for maximising the earnings of shareholders. Maximisation of shareholders' earnings reflects on the company in terms of its quicker access to funds during periods of adverse economic conditions. Optimising the firms' capital structure or debt-equity mix from time to time in tune with the changing business environment enhances the operating performance and improves investors' confidence in the company.
1.3.2 MIX OF DEBT AND EQUITY - IMPLICATIONS

The problem of using a package of sources of finance converges on devising a capital structure that contains a level of leverage at which the cost of capital would be minimised. The debate here is not merely around the existence, or otherwise, of an optimal capital structure but it also centres on the concept and measurement of cost of capital. Thus, widely divergent views have been expressed with regard to the functional relationship of several versions of cost of capital with the existing capital structure and also with the form of new financing to be used for the capital budget namely, the proportion of retained earnings, additional debt and / or new issues of equity capital. Distinguished scholars including Durand, Solomon, Modigliani, Miller and Donaldson have worked on the capital structure theories and the work is still continuing.

The mix of debt and equity capital has many implications. First, the use of debt capital turns out to reduce the overall cost of capital and increase the wealth of the shareholders due to tax deductibility of the interest paid on debt. This is what is referred to as trading on equity. Secondly, raising debt is relatively cheaper than equity in terms of issuance costs as also interest costs.

Thirdly the use of debt financing does not result in a dilution of control over the enterprises of the existing shareholders.

Thus, while it is advantageous to use more of the debt in the capital structure, there are certain inherent risks associated with the same. The higher use of debt increases the financial risk of the company in the form of fixed interest and principal payments. It is estimated by Robert Hamada that 21 to 24 per cent of non-diversifiable risk (price volatility) of common stocks can be explained by the added financial risk, a company takes on by issuing debt and preferred stock. Further, the use of debt will not automatically improve the overall return to the enterprise and instead, lowers it if the company's rate of return on assets is lower than the cost of debt. As a general rule, only those companies whose earnings are reasonably stable and high
enough to cover fixed interest charges on borrowings can afford the luxury of financial leverage. The corporate finance manager has to make a risk-return trade off between these two sources of finance - debt and equity in such a way that it is of the maximum benefit to the company.

1.4 NEED FOR THE STUDY

The Indian financial scenario has undergone dramatic and momentous changes during the decade of late eighties and nineties. The financial market assumed a structural change, a change both in terms of institutions, instruments and market namely money market and the capital market. Prior to the eighties, there were only a few industrial units operating mostly under the small and medium scale industries, easily meeting their financial requirements by borrowings from financial institutions and banks. However, with the increase in the number as well as size of these companies, the financial institutions found it difficult to meet the financial requirements of all companies in general and of the large public limited companies in particular, thus forcing them to look into alternative sources of finance. Moreover, changes in the government policy towards industrialisation, the changes in the economic policy with increasing emphasis on liberalisation and open market system, transformation of the domestic market from sellers to buyers, increasing incentives for global investments, establishment of Securities and Exchange Board of India and its growing dominating role in the capital market, emergence of new financial means and instruments like Global Depository Receipts, Euro-Issues, Foreign Direct Investments, Mutual Funds, Certificate of Deposits, Commercial Papers, Derivatives, facility of buy back of shares, and so on transformed the Indian financial market more vibrant, ever expanding and transparent.

The change in the financial market in response to liberalisation has an impact on the financing pattern of corporate units. A need at the present juncture is therefore felt to study the impact of such changes on the composition of capital structure of large public limited companies of select
industries and the consequent change in the financial leverage of corporate entities. It is true that a number of research studies have already been conducted on Indian corporate financing and capital structure; no continuous effort has been made to examine the changes that might have occurred in the capital structure of Indian corporate units, especially the large units, due to changes in the financial market and changes in the government policy on account of economic liberalisation. The study provides sufficient insight into the trend and composition of capital structure of large public limited companies in India. It strives to determine the factors which significantly influence the corporate debt usage. As such, the study will be useful to corporate management, investors and government at large, to take valuable decisions at their own end.

1.5 STATEMENT OF THE PROBLEM

Finance is the most important critical factor, the so called life blood of a business enterprise. The need for capital is continuous and also boundless. The corporate sector of an economy is the major contributor to the process of economic development. As the corporate sector grows over time due to expansion, diversification and modernization, the demand for fund also increases. The process of economic reforms introduced since 1991 has resulted in the emergence of new financial intermediaries and new sources of industrial finance both short-term and long-term.

The corporate management, in order to maximise the wealth of the equity holders, faces the real challenge in obtaining the required funds from the right source and seeing their right use. These are the days when corporates have really to fight it out for their survival. In the race for survival the prime factor to be monitored is capital structure. In the absence of a perfect market and in a world of taxes, capital structure does affect the profitability of a company. It is concerned with capital gearing or financial leverage, which consists of proportion of debt and equity in the total funds requirements of the corporation. Capital structure is aimed at producing a
higher rate of return on capital at a lower average cost of capital. There has been an alarming shift in the debt-equity compositions of Indian corporates. While the role of equity capital as a source of long-term finance declined over the years, dependence on debt as a source of long-term finance has increased substantially, with the result that capital formation is characterised by high capital gearing leading to greater financial risk. The Anglo-Saxon theory states that debt should not exceed about one third of the total capital structure of a corporation, because, interest on loan has to be paid irrespective of the financial soundness of the enterprise.

Companies with high debt to capital ratios typically have a high cost than do their less leveraged counterparts, as witnessed in debt rating services such as Standard and Poor’s and Moody’s. In fact, at extremely high leverage, debt investors face a remarkably similar set of investment risks as equity investors. The crucial problem now facing companies while raising funds is, whether to raise debt or equity. Neither theory nor research has been able to provide satisfactory agreement as to what factors affect the capital structure decision.

The present study attempts to answer the following questions:

1. What is the trend and composition of capital structure of select industries of the Indian corporate sector since 1991?
2. What is the extent of financial leverage and resultant financial risk present in the select industries?
3. What are the factors that determine the capital structure choice / use of debt?
4. Does capital structure choice influence the return on equity and market price of share?
1.6 OBJECTIVES OF THE STUDY

To study the above stated problems, the following objectives have been framed:

- To analyse the debt-equity structure of large Indian private manufacturing firms in the select industries.
- To study the extent of financial leverage and the resultant financial risk of the corporates.
- To identify the factors determining the corporate debt.
- To study the impact of debt-equity choice on return on equity and market price of the shares.

1.7 METHODOLOGY

The study was based on the following methodology.

1.7.1 Period of Study

The study covered a period of 11 years from 1991-92 to 2001-02, the post-liberalisation era of the Indian economy. Selection of this 11-year period is not based on any specific purpose such as, to include specific episodes or to exclude others, but on the availability of relevant data.

1.7.2 Data and Sources of Data

The study was based on secondary data. The financial data needed for the study were collected from the Official Directory of the Bombay Stock Exchange and Capital Line 2000 - Corporate Database of the Capital Market.

1.7.3 Selection of Sample

The sample has been drawn from companies listed on the Bombay Stock Exchange; only quoted public limited companies were considered for the study. Companies were selected from twelve different major industries namely, Automobile, Cement, Chemical and Fertilizer, Diversified sector,
Electrical and Electronics, Engineering, Food and Beverages, Paint, Paper, Pharmaceutical, Steel and Textile. The following parameters were used to identify the sample:

i. Companies with a turnover of more than or equal to Rs. 100 crores (2001 - 02)
ii. Companies which were non-financial
iii. Companies which had positive networth (as 31st March 2002).
iv. Companies having continuous data for all the 11 years from 1991-92 to 2001-02.

A sample of 271 companies, satisfying all the above criteria, was selected for the study. Using judgement sampling, they were classified as under (Table 1.3).

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Industry</th>
<th>Number of firms selected</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Automobile</td>
<td>35</td>
</tr>
<tr>
<td>2.</td>
<td>Cement</td>
<td>27</td>
</tr>
<tr>
<td>3.</td>
<td>Chemical and Fertilizer</td>
<td>23</td>
</tr>
<tr>
<td>4.</td>
<td>Diversified Sector</td>
<td>37</td>
</tr>
<tr>
<td>5.</td>
<td>Electrical and Electronics</td>
<td>18</td>
</tr>
<tr>
<td>6.</td>
<td>Engineering</td>
<td>21</td>
</tr>
<tr>
<td>7.</td>
<td>Food and Beverages</td>
<td>19</td>
</tr>
<tr>
<td>8.</td>
<td>Paint</td>
<td>7</td>
</tr>
<tr>
<td>9.</td>
<td>Paper</td>
<td>12</td>
</tr>
<tr>
<td>10.</td>
<td>Pharmaceutical</td>
<td>25</td>
</tr>
<tr>
<td>11.</td>
<td>Steel</td>
<td>20</td>
</tr>
<tr>
<td>12.</td>
<td>Textile</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>271</strong></td>
</tr>
</tbody>
</table>
1.7.4 Frame Work of Analysis

The analysis of data has been carried out in the following three stages.

a. Analysis of Input Data

To study industry-wise debt-equity structure, multi period variables, on the basis of data for each year in the 11-year time span, were calculated and analysed.

b. Generation of Output Data

Leverage ratios, ratios of profitability market price of shares and variables used in this study namely, effective tax rate, non-debt tax shield, corporate size, business risk, growth rate, earnings rate, divided payout ratio, interest coverage ratio, capital intensity and collateral value of assets, were calculated on the basis of the average values of the 11-year period.

c. Analysis of Output Data

i) In order to study the variations in debt-equity structure of each industry, summary statistics, namely, mean, standard deviation, co-efficient of variation, measures of skewness and kurtosis were used.

ii) Correlation analysis was carried out to study the degree of association between various select institutional variables. The 't' test and 'F' test were applied at 0.05 per cent level of significance to test the confidence or reliability of correlation of results.

iii) Multiple regression was used to identify the determinants of corporate debt and to study the impact of debt on return on equity, earnings per share and market price per share.

Regression is a functional relationship between the dependent and independent variables. The multiple regression analysis has been used to express the functional relationship between the dependent and independent
variables. In this analysis, multiple correlation coefficient (R) has also been used to determine the strength of relationship between dependent and independent variables. Further, the coefficient of determination ($R^2$) has been used to determine the extent of influence, each independent variable exerts on the dependent variable. The coefficient of determination, which is the square of coefficient of multiple correlation (R), measures the proportion of change in dependent variable explained by the change in explanatory or independent variables. Generally, the higher is the value of $R^2$, the better is the fit. If the value of $R^2$ is nearer to one, the amount the independent variable explains with regard to the dependent variable, is nearly 100 per cent and no other variable is considered for the model. In the present study, the incremental value in $R^2$ has been used to determine the amount the particular independent variable explains with regard to the dependent variable. Among the variables considered, the variable which has maximum incremental value influences the most on the dependent variable.

iv) Analysis of variance (ANOVA) has been used to study the inter-industry variations in debt-equity structure of the select industries.

1.8 SCOPE OF THE STUDY

The scope of the study is mainly related to the trends in the debt-equity mix and its determinants in the select manufacturing industries of the Indian private corporate sector, for a period of 11 years from 1991-92 to 2001-02. The study excludes all government companies, whether owned by state or central government, banking and other financial institutions and service industries. Private limited companies, too, fall beyond the scope of this study. The study, further, does not consider qualitative factors which may affect the financing policy of the select industries. The study will help the finance executives in appraising the genuine financial needs of their companies and in deciding an appropriate debt-equity mix to maximise the returns to all stakeholders. The investors, too, can take a rational judgement
about the degree of financial risk and decide about their investment strategy, which will yield maximum return.

1.9 LIMITATIONS OF THE STUDY

The present study suffers from the following limitations:

- Use of secondary data with all its inherent drawbacks is the primary limitation of the study.
- The study was based on the analysis of quantitative financial data. The qualitative aspects which have a bearing on capital structure have not been considered.
- The scope of the study was restricted to non-government and non-financial companies, having a turnover of more than or equal to Rs.100 crores, falling under specified industries. The findings so obtained from the study cannot be applied universally.
- Due to constraints of time, cost and non-availability of data, the study was restricted to a 11-year period.
- Details of market capitalisation of companies were not accessible.

1.10 ORGANISATION OF THE STUDY

The study has been organised into seven chapters.

Chapter I deals with introduction, design and execution of the study, covering a brief review of Indian capital market and capital structure. Need for the study, scope of the study, statement of the problem, objectives of the study and methodology adopted were also discussed. The chapter also contains the limitations of the study and chapter scheme.

Chapter II has been devoted to a brief review of the theories of capital structure and reviews of the other empirical literature pertaining to the present study. It concludes with a brief outline of the present study.
Chapter III analyses the debt-equity structure of the select industries.

Chapter IV is concerned with the extent of financial leverage and financial risk.

Chapter V focuses on the factors determining the employment of debt in the select industries.

Chapter VI discusses the influence of debt on return on equity and market price of the equity shares of the select industries.

Chapter VII recapitulates the key findings of the study and brings out the policy implications. The chapter concludes with the suggestions for further research.
REFERENCES


12. Ibid, 15.


