CHAPTER VI

Findings, Suggestions and Conclusion

The corporate sector is the backbone of the Indian economy, so for as it provides a vital, effective and organized system for the growth of industrial as well as non-industrial sectors of the economy. The contribution of the corporate sector towards the balanced development of various areas of an organized economic activity can easily be seen in the combined efforts of various companies in achieving the goal of industrialization and increased production. Corporate sectors have short-term goals such as improving annual profits as well as long-term goals in terms of contribution to national wealth, creation of more employment, building up infrastructural facilities, building up a healthy capital structure, in the operation of essential services, creating export potential and thus participating actively in the overall economic growth of a country and improving the standard of living of its people. A company’s reasonable proportional use of debt and equity to support its assets is a key indicator of balance sheet strength. Healthy capital structure that reflects a low level of debt and a corresponding high level of equity is a very positive sign of investing quality. Thus, there is a need to study the industries’ capital structure pattern which ultimately shall determine the financial and operational efficiency and its impact on profitability of industries in future. Thus, the present study is a small endeavour to update the knowledge in this aspect.

The study, in general, aims at examining the pattern of capital structure and analysis of profitability of Indian paper industry. The primary purpose of this study, is to obtain a true insight into the design of capital structure of Indian paper industry, the pattern of capital structure, the profitability of firms and its effect on capital structure, the impact of capital structure with special reference to size and growth of firms, the empirical relationship between the capital structure and the cost of capital and the determinants of corporate capital structure of selected large scale companies in Indian paper industry.

This study covers ten companies of the Indian large scale paper industry, viz., Andhra Pradesh Paper Mills Limited, Ballarpur Industries Limited, Hindustan
Paper Corporation Limited, Hindustan Newsprint Limited, JK Paper Mills Limited, Mysore Paper Mills Limited, Rama Newsprint and Papers Limited, Seshasayee Paper and Boards Limited, Tamil Nadu Newsprint and Papers Limited and West Coast Paper Mills Limited. The period covered under the study extends over thirteen years from 1997-98 to 2009-10. The data required for the study have been obtained from secondary sources. The major sources of data were collected from “PROWESS” database, which is the most reliable and the empowered corporate database of Centre for Monitoring Indian Economy (CMIE).

This chapter, being the concluding part of the study, is an endeavour to present a summarized version of the findings and conclusion of the present study. The summary of the major findings are given below.

**Pattern of capital structure**

It is observed that all the selected companies reveal a fluctuating trend of the capitalization during the study period. Further, all the selected companies increased their capitalization during the study period. Among the selected companies Ballarpur Industries Limited recorded the highest mean capitalization (Rs.2243.77 crores) and Hindustan Newsprint Limited registered the lowest mean capitalization (Rs.227.92 crores) during the study period. The capitalisation of all the selected companies except Hindustan Newsprint Limited, Mysore Papers Limited and Rama Newsprint and Papers Limited erratically fluctuated during the study period. The ANOVA result also confirms that there is a significant difference in the capitalization of the selected companies during the study period. The compound annual growth rate of capitalisation was positive in all the selected companies during the study period. Thus, the analysis concludes that the capitalization of the all the selected companies has been increased during the study period.

**Analysis of debt and net worth proportion**

It is observed that all the selected companies reveal a fluctuating trend of debt proportion during the study period. The debt proportion of Ballarpur Industries Limited registered the highest mean value and Hindustan News Print
Limited registered the lowest mean value during the study period. The debt proportion focuses on the fluctuating trend in Ballarpur Industries Limited and Mysore Papers Limited, whereas the proportion of debt in the capital structure highly fluctuated in Hindustan Paper Corporation Limited, Rama Newsprint Limited and Tamil Nadu Newsprint and Papers Limited. The debt proportion also shows an erratical fluctuation in all the remaining companies due to increased usage of the proportion of debt in their capitalization during the study period. The debt proportion of capital structure of all the selected companies registered positive growth except Ballarpur Industries Limited, Hindustan Paper Corporation Limited and Rama Newsprint Limited during the study period. This shows that most of the selected companies have increased their debt proportion in their capitalisation.

The proportion of net worth in the capital structure also registered a fluctuating trend during the study period. Ballarpur Industries Limited has registered the highest mean value of net worth (Rs.1127.64 crores) during the study period. The analysis also shows that there was a greater variability of net worth in seven out of ten companies. The greater variability is an evidence of increased proportion of net worth in the total capitalization of respective companies during the study period. The compound annual growth rate of net worth proportion in the capital structure of all the selected companies reflects a positive growth except Mysore Papers Limited. Thus, the overall analysis of debt and net worth proportion confirms that debt fund is more in five out ten companies and five out of ten companies have more net worth. This shows that an additional fund was mobilized by the selected companies for expansion and also for modernisation of paper mills during the reference period.

**Proportion between short-term and long-term debt**

The analysis of the proportion between short-term and long-term debt reveals that the short-term debt of Ballarpur Industries Limited exposed the highest mean value (Rs.254.39 crores) and it was the lowest in Hindustan Paper Corporation Limited (Rs.1.45 crores) during the study period. The analysis proclaimed that the short-term debt proportions of most of the selected companies erratically fluctuated except Ballarpur Industries Limited. The compound annual growth
rate of short-term debt proportion shows that all the selected companies exhibit a positive growth except Ballarpur Industries Limited, Hindustan Paper Corporation Limited and Hindustan Newsprint Limited during the study period.

The long-term debt proportion in the capital structure also showed a fluctuating trend during the study period. Ballarpur Industries Limited recorded the highest proportion of long-term debt (Rs.861.73 crores) when compared with all the other companies. The analysis also explained that all the selected companies have increased their long-term debt proportion except Hindustan Paper Corporation Limited and Rama News Print and Papers Limited during the study period. The result also confirms that there is a significant difference in the short-term and long-term debt proportion of the selected companies during the study period.

**Proportion between share capital and reserves and surplus**

It is observed that all the selected companies reveal a fluctuating trend of share capital during the study period. The mean value of share capital was the highest in Hindustan Paper Corporation Limited (Rs.692.31 crores) and it was the lowest in Seshasayee Paper and Boards Limited (Rs.11.25 crores). The Hindustan Paper Corporation Limited, Mysore Papers Limited, Seshasayee Paper and Boards Limited and Tamil Nadu Newsprint and Papers Limited have registered a consistent proportion of share capital, while the remaining companies registered high fluctuations in their share capital proportion, due to additional issue of equity share capital by most of the selected companies during the study period.

In case of the proportion of reserves and surplus, Ballarpur Industries Limited (Rs.987.56 crores) recorded the highest mean during the study period. The Hindustan Paper Corporation Limited, Hindustan Newsprint Limited and Mysore Papers Limited have recorded a consistent trend of reserves and surplus over the years. On the other hand, the remaining companies have registered very high fluctuation due to accumulation of reserves and surplus in the study period. However, the proportion of reserves and surplus of most of the selected companies ends up with the positive growth in the study period. Thus, the result reveals that
the reserves and surplus of the selected companies has grown moderately during the study period, which symbolizes the growth of internal funds in the capital structure.

Analysis of debt equity ratio

Debt equity ratio is perhaps the most important ratio when it comes to check the credit worthiness of the company. The mean value of debt equity ratio of selected companies reveals that Mysore Papers Limited marked the highest ratio of 2.25 and it was the lowest in Hindustan News Print Limited (0.10). It was inferred that the debt equity ratio of JK Paper Mills Limited and Mysore Papers Limited was above 2:1. The analysis confirms that, debt equity ratio of five out of ten companies were below 1:1. The debt equity ratio of all the companies marked greater variability except Tamil Nadu Newsprint and Papers Limited and West Coast Paper Mills Limited during the study period. The CAGR shows that the debt equity ratio of the industry was positive, whereas, it was negative in the selected large scale sector of the paper industry during the study period. The debt equity ratio signifies a positive growth in five out of ten companies during the study period. Thus, the analysis evidences that majority of the selected companies adopted a conventional financial policy of capital structure design.

The overall analysis of the pattern of capital structure of selected companies in Indian paper industry during the period under review highlighted a considerable variation in the capital structure pattern of the selected companies during the period under investigation. However, as per the present trend, it is gratifying to note that dependence on debt has proportionately decreased over the years when compared to equity. A sustained economic slowdown and companies policies to retire debt to shore-up the bottom lines may perhaps be conceived as the major reason for the less proportion of debt in the capital structure.

Analysis of profitability

The profitability of Indian paper industry under review has been studied by computing various ratios relating to profitability. The profitability ratio can be determined on the basis of sales and investment. The operating profit margin of all
the selected companies except Hindustan News Print Limited, Mysore Papers Limited and Rama Newsprint and Papers Limited were satisfactory because its average operating profit margin was higher than the industry average. The analysis of operating profit margin ratio exposed that Hindustan Paper Corporation Limited ranks high in the operating profit. However, the operating profit margin ratio of all the selected companies registered a high fluctuating trend except Andhra Pradesh Paper Mills Limited and West Coast Paper Mills Limited during the study period. The overall fluctuating trend of this ratio can be attributed to the factors like high operating expenses and volatility in the selling prices of paper. The overall analysis of operating profit margin ratio reveals that most of the companies have the ability to withstand in the competition and also in the adverse conditions during the study period. The CAGR reveals that the industry and the large scale sector registered negative operating profit margin ratio. In case of individual companies all the selected companies showed a positive growth of net profit margin except Hindustan Paper Corporation Limited and JK Paper Mills Limited. This indicates that majority of the selected companies have been increased their operating profit margin during the study period.

The analysis of net profit margin ratio reveals that the paper industry registered an average net profit margin of 1.98 per cent during the study period. The average net profit margin varied from company to company, it was the highest in West Coast Paper Mills Limited (7.85 per cent). The performance of all the selected companies except Andhra Pradesh Paper Mills Limited, JK Paper Mills Limited, Seshasayee Paper and Boards Limited, Mysore Paper Mills Limited and Rama News Print and Papers Limited was comparatively good because their average net profit margin ratio has been better than the industry average during the study period. It is also observed that all the selected companies experienced erratically fluctuating variations in the net profit rate in the years concerned. The overall fluctuating trend of this ratio can be attributed to the factors like high production cost followed by high operating expenses. The net profit margin of the large scale sector as well as Andhra Pradesh Paper Mills Limited, JK Paper Mills Limited and Seshasayee Paper and Boards Limited was negative which reveals the poor performance of these companies during the study period.
The overall analysis of return on capital employed ratio shows that this ratio has decreased significantly during the study period which was on account of considerable decrease in profit margin as well as high cost of equity. The mean percentage of return on capital employed of West Coast Paper Mills Limited was the highest (19.67 per cent) and it was the lowest in Rama News Print and Papers Limited (0.88 per cent) during the study period. The return on capital employed of Ballarpur Industries Limited, Hindustan Paper Corporation Limited, JK Paper Mills Limited, Rama Newsprint and Papers Limited, Seshasayee Paper and Boards Limited and West Coast Paper Mills Limited was negative which indicates the inefficient utilization of resources during the study period.

The analysis of return on net worth also reveals that all the selected companies except Hindustan News Print Limited, Mysore Paper Mills Limited and Rama News Print and Papers Limited recorded better performance because their mean return on shareholders’ fund was more than the industry average (16.28 per cent) during the study period. Seshasayee Paper and Boards Limited showed better performance (39.11 per cent) when compared with other selected companies. Further, six out of ten companies return on net worth has decreased over the years. The overall fluctuating trend of this ratio reflects that owners’ equity was not effectively utilized by the majority of the selected companies (six out of ten selected companies) during the study period.

The analysis of earnings per share shows that Andhra Pradesh Paper Mills Limited (Rs.61.63) has the highest mean earnings per share during the study period. It was understood that the earnings per share of all the selected companies registered very high fluctuation during the study period. The analysis also reveals that majority of the selected companies had registered negative growth in their earnings per share during the study period. The analysis proved that there were significant differences in earnings per share among the companies and the years. The overall fluctuating trend of this ratio can be attributed to the factors like high cost of equity followed by varying profitability position during the study period. It is significant to note that the earnings per share showed poor performance from the view point of shareholders.
It is found that the market price per share of all the selected companies except Mysore Papers Limited increased during the study period. The market price of share was the highest in Ballarpur Industries Limited and it was the lowest in Hindustan Newsprint Limited during the study period. The co-efficient of variation concludes that the market price per share of all the selected companies registered very high fluctuation except Hindustan Newsprint Limited during the study period. The analysis also reveals that the market price per share of all the selected companies has increased over the years except Mysore Papers Limited and Tamil Nadu Newsprint and Papers Limited during the study period. This indicates that though there is an economic slowdown in India, most of the selected large scale companies in Indian paper industry have improved their market price over the periods under examination.

**Size and Capital Structure**

It is assumed that size plays a major role in raising debt and equity. Hence, it was hypothesized that there is a direct relationship between the capital structure of companies and its size. The size of a company was measured in terms of the size of total assets and fixed assets. The size of the fixed assets represents the earning capacity of the business concern. It is found that the value of fixed assets increased steadily throughout the study period except in the year 2009-10. The position of fixed assets represents the solvency position of the companies. It is also noticed that the year wise debt equity ratio is consistent, whereas the value of both fixed assets and total assets have recorded a fluctuating trend over the years. However, the annual growth rate of fixed assets and total assets have recorded positive trend during the study period. Thus, it is concluded that the year wise overall debt equity ratio is moderate i.e. it is not too high and not too low and the consistent increase in the size of both fixed assets and total assets also exhibits the effectiveness of the financial planning and soundness of the financial position of the selected large scale companies in Indian paper industry.

For the purpose of studying the impact of size of the firms on the capital structure during the reference period, simple regression technique has been used by taking debt equity ratio as dependent variable and fixed assets as independent
variable. The regression analysis showed a positive relationship between the size of the fixed assets and debt equity of the whole Indian paper industry, but in case of large scale sector, it was negative (-0.01) during the study period. The relationship between fixed assets and capital structure is negative (six out of ten companies) but statistically significant in all the selected companies at five per cent level of significance. This shows that majority of the selected companies proved a negative relationship between size of the firms and capital structure, because a very low or high debt proportion in the capital structure is the cause for the negative relationship between capital structure and size of firms.

The regression analysis reveals that the total asset of Indian paper industry explains a negative relationship between the capital structure and size of the firms, however, it exhibits a positive relationship with the large scale sector of the Indian paper industry during the study period. The analysis also reveals that the beta co-efficient of total assets were positive in four out of ten companies, but statistically significant in all the selected companies. Thus, the result of regression model of debt equity with fixed assets and total assets has proved a negative relationship between capital structure and size of the majority of the selected companies in Indian paper industry during the study period.

**Growth and capital structure**

Growth is a pre-requisite for the long-term survival of the firm in an uncertain and constantly changing environment. The growing companies require an additional dose of capital for expansion. Therefore, growth can be one of the significant variables of capital structure. To find the relationship between capital structure and growth, debt equity ratio and sales was taken as variables. The analysis reveals a positive and significant relationship between debt equity and size of most of the selected companies in Indian paper industry during the study period. The relationship between capital structure and growth of firms was very strong in Hindustan Paper Corporation Limited (0.75) when compared with other selected companies during the study period.
**Cost of Debt**

It is found that all the selected companies have registered a stable rate of cost of debt during the study period. Seshasayee Paper and Boards Limited experienced the highest cost of debt (10.94 per cent) during the study period. The co-efficient of variation showed that the cost of debt of all the selected companies including industry and the sector had registered a consistent trend during the study period except Andhra Pradesh Paper Mills Limited, Ballarpur Industries Limited, Hindustan Newsprint Limited and West Coast Paper Mills Limited, which explains highly fluctuating trend. The annual growth rate of cost of debt was positive in JK Paper Mills Limited, Mysore Paper Mills Limited, Seshasayee Paper and Boards Limited, Rama Newsprint and Papers Limited, while it was negative in the remaining companies. Thus, it is concluded that, the decreased cost of debt in most of the selected companies is a good sign for reduced interest burden of the respective companies during the study period.

**Cost of equity capital**

The Capital Asset Pricing Model (CAPM) was applied to calculate the cost of equity. The average cost of equity of the sector was recorded as 20.31 per cent during the study period. Rama News Print and Papers Limited have registered the highest cost of equity of 29.54 per cent and Andhra Pradesh Paper Mills Limited recorded the lowest average cost of equity of 17.41 per cent during the study period. The cost of equity of all the selected companies had increased and showed a very wide variation during the study period. Poor economic conditions coupled with unplanned capital structure and the impact of financial crises over the capital market all over the world, which increased the cost of equity capital to a great extent.

**Weighted average cost of capital**

The overall cost of capital, which is calculated by taking into account the cost of various components of capital structure of a company. The mean weighted average cost of capital of the selected companies was 14.89 per cent during the study period. The Rama News Print and Papers Limited have the highest cost of
27.47 per cent and Seshasayee Paper and Boards Limited have recorded the lowest average cost during the study period. However, the average cost of capital was less than sector average in eight out of ten companies. The result also concludes that there was a significant difference in the weighted average cost of capital between the years and between the companies during the study period. The main reason for this is due to the increased cost of equity coupled with high fluctuations in the capital market prices during the study period.

**Impact of capital structure on cost of capital**

Simple regression analysis is used to examine the relationship between debt equity and weighted average cost of capital of the selected companies during the study period. The weighted average cost of capital exposed a negative relationship in seven out of ten companies. The result of correlation analysis also disclosed a negative relationship between capital structure and cost of capital of majority (seven out of ten) of the selected large scale companies in the Indian paper industry. Many firms during the period under study have experienced a very high cost of equity capital. These companies have been found to have very low earnings per share. Low earnings depict that either the companies are not capable of utilizing their resources efficiently to increase the profits or they are not able to use them effectively and efficiently due to their obsolete technology. It has been found that in spite of low profit, the companies are using retained earnings to fund their additional capital requirements. The companies with lower profits found it very difficult to raise equity capital in the market. In the absence of a well developed secondary market, the companies found it easy to use retained earnings or raises debt by giving investors higher rate offers. This ultimately got reflected in higher cost of capital.

**Analysis of relationship between capital structure and profitability**

The impact of profitability on capital structure of Indian paper industry was examined using the technique of linear regression models. The result reveals a statistically positive and significant relationship between operating profit and capital structure of all the selected companies except JK Paper Mills Limited and
Rama Newsprint Limited. Thus, operating profit as measured by profit before interest and taxes was a significant factor that affects the capital structure of the selected companies. Normally it is the operating capability of the companies, which determine the success or failure of the business. So, operating profit is the main factor which must be considered while planning capital structure of companies.

Profit after tax was another variant of profitability used in this study. It was found that profit after tax was a significant factor affecting the capital structure of the companies. The regression beta co-efficient of profitability of both the industry and the large scale sector of the paper industry are negative but it is statistically significant during the study period. The analysis also confirms that there was a direct relationship between net profit and capital structure of most of the selected companies. The analysis of ‘t’ test rejects the set hypothesis and thereby proves that there exists a significant relationship between capital structure and net profit in eight out of ten companies. This observation seems to be very practical because those companies which have higher profit at their disposal tend to get the benefit of cheaper source of fund, i.e. debt can increase their profitability still further.

The regression analysis reflects a negative impact of return on capital employed on capital structure of the Indian paper industry. It is also inferred that the return on capital employed is positive in five out of ten companies, but statistically significant in all the selected companies except Seshasayee Paper and Boards Limited during the study period. Thus, return on capital employed is a significant factor, which affects the capital structure of most of the selected companies in Indian paper industry.

The regression analysis of the return on net worth with debt equity of the selected companies reveals a negative relationship in both the Indian paper industry and the large scale sector of the paper industry during the study period. All the selected large scale companies in Indian paper industry showed an inverse relationship between return on net worth and capital structure except Mysore Papers Limited during the study period.
It is found from the analysis that all the selected companies registered a negative relationship between earnings per share and capital structure except West Coast Paper Mills Limited during the study period. The empirical result of regression analysis of market price per share with debt equity disclosed a positive and statistically significant relationship in majority of the selected large scale companies in Indian paper industry.

Thus, the overall analysis of impact of profitability on capital structure reveals that operating profit margin, net profit margin and market price per share disclosed a positive and significant relationship with capital structure of majority of the selected companies during the study period. However, return on capital employed, return on net worth and earnings per share predicts a negative but statistically significant relationship with capital structure of majority of the selected companies during the study period.

**Impact of leverage on profitability**

The capital structure decision is an important decision because of the need to maximize returns to various organizational constituencies and also because of the impact of such a decision on firm’s ability to deal with its competitive environment. Regression analysis was used to investigate the relationship between capital structure and profitability. Variables used for the multiple regression analysis include profitability and leverage ratios. Profitability is operationalized using a commonly used accounting based measure: the ratio of return on equity. The leverage ratios used in this model are; Short-term debt to the total capital; Long-term debt to total capital; and total debt to total capital. The result declares that the leverage measured by short-term debt to total capital has registered a positive and significant relationship with the return on equity (profitability) of both the Indian paper industry and the large scale sector of the Indian paper industry at 5 per cent level of significance. The result reveals that among the individual companies the leverage of Hindustan Paper Corporation Limited shows better relationship with the profitability. The analysis also reveals that the beta co-efficient of leverage is negative in eight out of ten companies but statistically significant in all the selected companies. Thus, it is concluded that there was an
inverse relationship between short-term debt to total capital and return on equity of most of the selected companies during the study period.

The result of beta co-efficient of long-term debt to total capital indicates a significantly negative association with return on equity of Indian paper industry and large scale sector. In case of individual companies the regression analysis reveals a negative relationship in seven out of ten companies but it is also noticed that it is statistically significant in all the selected companies. Among the selected companies strong relationship between leverage and profitability was found in Ballarpur Industries Limited. The result shows a significantly negative impact between capital structure and profitability of majority of the selected companies during the study period. This implies that a decrease in the return on equity is associated with increase in long-term debt to total capital position. This is explained by the fact that long-term debts are relatively expensive and therefore employing high proportions of them would lead to less profitability.

The empirical analysis reveals that there is a positive and significant impact of leverage measured in terms of total debt to total capital with the return on equity of both the Indian paper industry and the large scale sector. Seven out of ten companies showed a positive relationship between leverage and return on equity and this relationship is negative in the remaining companies, but the result confirms statistically significant impact between these variables in all the selected companies during the study period. These findings are consistent with the results of Hadlock and James (2002), Peterson and Rajan (1994), Sudhansu (2005) and Joshua Abor (2005) who found a positive relationship between leverage and return on equity.

Thus, the overall analysis proves that there was a positive and statistically significant relationship between leverage measured in terms of total debt to total capital and return on equity of most of the selected companies during the study period. The study also disclosed a negative and statistically significant relationship between leverage measured in terms of short-term debt to total capital and long-term debt to total capital with return on equity of the most of the selected companies during the study period.
Determinants of capital structure

The determinants of capital structure in Indian paper industry during the study period are analysed using the technique of multiple regression models. The analysis reveals that asset tangibility is the strongest determinant of capital structure of the Indian paper industry, Hindustan Paper Mills Limited and West Coast Paper Mills Limited. The results of the multiple regressions also reveals that corporate size is the strongest determinant of capital structure of Andhra Pradesh Paper Mills Limited, Hindustan News Print Limited, Rama News Print and Papers Limited and Tamil Nadu News Print and Papers Limited during the study period. Profitability is the strongest determinant of capital structure of Mysore Papers Limited and JK Paper Mills Limited. For Tamil Nadu Newsprint and Papers Limited, liquidity is the strongest determinant of capital structure. Business risk is the strongest determinant of capital structure of Ballarpur Industries Limited. For Seshasayee Paper and Boards Limited non-debt tax shield is the strongest determinant of capital structure.

The overall analysis of determinants of capital structure reveals that asset tangibility, corporate size, growth rate and non-debt tax shields had a positive and statistically significant relationship with the capital structure of the selected companies during the study period. Among the selected variables profitability, liquidity, business risk and debt service capacity found negative relationship with the capital structure decisions of majority of the selected companies during the period under investigation.

Policy implication and recommendations

Keeping in view of the above observation relating to the study, the following measures are suggested which would go a long way to improve the capital structure and profitability position of Indian paper industry.

1. It is observed that the debt equity ratio of five out of ten 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 management may restructure its capital structure by raising the proportion of debt particularly
the institutional borrowing and debentures to enjoy the fruits of trading on equity.

2. Wide variations in the pattern of capital structure of the selected companies during the period under study do raise the question as to ‘why’, ‘how’ and ‘what’ explanations could justify these variations. 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.

3. Majority of the selected companies strongly depend on their retained earnings to finance their needs. It is suggested that, while using internal fund for their investment due consideration has also be given to tax burden. Thus, to get the benefit of flexible capital structure, the companies should redesign proper mix of debt equity proportion to get the benefit of tax and to reduce the overall cost of capital. Proper mix of debt equity also helps to increase the earnings of shareholders.

4. It is suggested that the selected companies should take effort to reduce the operating cost through restructuring of the debts and the interest payments, improved asset utilisation and other strategic measures to improve the profitability. Further, the selected companies should lay emphasis on cost cutting measures through enhanced production.

5. In case of capacity utilization of paper industry, it is disheartening to know that some of the plants have not fully utilised their production capacity due to scarce raw materials, unskilled labour and outdated technology. It is also suggested that the industry has to go for plantation programmes for self sufficiency in raw materials. The government should encourage the growth of large scale plantations of eucalyptus plants. Hence, it is suggested that a good replenishment technique should be practised at the time of material handling and due care should be taken by employing highly skilled labour. With these support the Indian paper mills can utilize its optimum production
capacity, thereby they can reduce the operating cost and increase their profitability position.

6. It is suggested that the selected companies can also increase the profitability by improving the operating efficiency through producing quality papers. In the era of tech-savvy and global competition quality products can alone survive in the market. In order to provide world class quality, it is suggested that the existing technology should be changed to modern technology to meet the huge demand in the world market.

7. The profitability trend of the selected large scale companies in Indian paper industry experienced a strong tendency in profitability to fluctuate over the study period. Therefore, it is suggested that all the selected companies should maintain a sound inventory management system. In this regard, further, availing of various state incentives like sales tax exemption, power tariff exemption and steps to control operating expenses are the measures suggested for the improvement of profitability trend.

8. In examining the determinants of capital structure, the study found lack of association between leverage and profitability, business risk and liquidity. In other words the firms are taking capital structure decisions without any strategic focus. Hence, it is recommended that the financial managers need to focus on issues like changes in tangible assets, growth prospects and tax advantage while taking decision on financial leverage. The government should pursue sectoral allocations of credit in favour of firms in India. This will enable firms to take advantage of the tax benefits for debt financing.

9. A systematic, prompt and regular flow of information and its analysis is important for improving sales and profitability. A suitable management information system needs to be evolved which will take care of the data requirement of administrative offices as well as other units like factory etc., for internal management and control. Appropriate organizational arrangements should be made for the successful implementation of
management information system in the Indian paper industry, which will definitely be helpful for the companies to reduce its operating expenses.

10. It is suggested that the Indian Paper Board should practise dog-watching of neighbouring countries progress especially China and Korea: their pricing strategies and quality of paper supplied by them. Accordingly the Indian paper mills may improve its profitability by implementing timely strategies for protecting themselves from shortage of raw materials and marketing of paper and paper products in the world market.

11. Processing of industrial wastes in the paper industry should be given due consideration. The government shall support the paper companies to establish waste effluent plants and strictly watch the system of removal of waste. Therefore, processing of industrial wastes may be encouraged and incentives may be given to the plants using such technologies. These steps should help India to conserve forestation and has a potential to minimize the adverse impact of global warming by reducing green house gases emission.

12. It is recommended that the government should take urgent steps to ensure enhanced and regular supply of raw materials to the paper industries. In order to restore the confidence of the investors, it is imperative that 80 per cent or more raw materials of the total requirement should be provided through linkage plantation programes. The problem of unauthorized cutting of trees for raw materials may also be reduced through modernization of paper mills. Thus, while undertaking modernization programmes, Indian paper companies should give due consideration for capital structure decisions at the earliest.

**Practical utility**

Various components of capital structure and profitability have been discussed in this study. Further, it gives an idea of capital structure pattern of Indian paper industry. Hence, Indian manufacturing sectors can use the findings of this study for a better financial management while framing their financial policies in general and capital structure decision in particular. The government and the financial institutions can also use the findings of the study in designing and
promulgating industrial and investment policies for a better industrial climate of
the country. The sick units in the corporate sector can use these findings as a
guideline for improving their financial as well as profitability performance in
future. Hence, the developing countries can make the best use of the findings of the
study while formulating their financial and investment policies.

Scope for further research

The present study on the whole is a fact finding research on the capital
structure and profitability analysis of Indian paper industry from 1997-98 to
2009-10. Any research study can explore only a limited filed of knowledge. There
are many aspects which need to be researched further. In the present case also there
is a considerable scope for further research. In spite of attempts to make this study
more intensive, there are quite many fields which remain unexplored owing to
constraints of time and resources. Financial study, specially, has numerous
dimensions. Each component of the capital structure has got scope for an extensive
study. An analysis of the social profitability of the paper industry with the help of
value added and the other techniques can provide ample scope for further research.
A scope for further research also exists in the area of technological trends,
ecological consideration, global competitiveness, merger and acquisitions,
takeovers, diversification etc. Another interesting theme would be to identify sick
and healthy units separately in the paper industry and find out the discriminating
characteristic of each group with respect to performance. A study can also be
undertaken in the area of capital structure and profitability by comparing the
private sector units and public sector units and small scale firms and large scale
firms.

A rigorous study of the capital structure from macro-economic perspective
is also expected. Since the capital structure is one of the most controversial issues
in corporate finance, there is room for study from different perspectives. Even,
researchers may develop their own methodological approaches to study the various
aspects of the pattern of capital structure. It is observed that many executives and
practitioners do not pay attention to their capital structure decision. Especially
during the periods of poor economic conditions the financial manager has to plan
the capital structure accordingly to maximize the profitability of the firms. A study similar to this should be conducted from time to time. The long-term stability of firms needs to be reviewed from time to time. Also, the determinants of capital structure may vary from one period to another period, from one firm to another firm and from one industry to another industry. Hence, a study of capital structure determinants in individual firms and in particular industry should be conducted regularly.

The findings of the study may not have universal applicability since the study is confined to a definite period and to a definite scheme of corporate sector in India. Hence, to arrive at any general conclusion, the hypothesis needs further testing by way of additional research in the same filed for different periods and even in different fields for the same period. One can also make a comparative study of corporate capital structure in the pre-liberalization and the post-liberalization period. Therefore, research work in the above mentioned area would be of great practical significance and would throw more light on the operation of the paper industry in India.

Conclusion

The dynamics of the Indian paper industry is undergoing a gradual shift. From an outdated technology to rapid modernization, Indian paper industry has started using advanced machines and technologies that enable to retain consistent demand and production of high quality of paper. While tracing out the growth of the industry in different policy regimes, it is observed that the industry has matured with the help of all indicators of performance such as size, capacity utilization, production, consumption and exports after globalisation. Paper Industry in India will flourish certainly and touch the new heights in future with the support of the government and the competitive financial market offering funds at very competitive interest rates and also by overcoming the present financial and non-financial problems adopting some of the recommendations of the study. The findings of the study reflect the relative pattern of capital structure and profitability position of the sample companies and also the overall picture of the industry. Out of the ten sample companies, West Coast Paper Mills Limited, Seshasayee Paper
and Boards Limited and Rama News Print and Papers Limited followed proper mix of debt equity in their capital structure. The performance of West Coast Paper Mills Limited scored the highest in the group getting the top most ranking in its net profit margin mainly because of its consistent capital structure pattern. It can be hoped that the study would be helpful to the companies in framing competitive financial, investment and dividend policies. The companies that do not plan their capital structure may prosper in the short run, but ultimately face serious problems in floating funds to finance their activities in the long run. Capital structure decision will have an impact on cost of capital, profitability, earnings per share and ultimately on the market price of shares. It will also be useful to the management, consumers and investors to judge the competitive performance of these companies from the point of view of financial planning, product quality, profitability and investment. To infer, the capital structure plays a vital role in enhancing the profitability by attracting and diverting investments in the corporate field.