CHAPTER – VIII

CAPITAL STRUCTURE AND LONG TERM FINANCIAL STRENGTH

Capital structure refers to the composition of long term sources of funds such as equity share capital, preference share capital and long term debt. The various sources of funds have different characteristics in terms of risk, cost and control.

The equity share capital is the best from the risk point of view as it is repaid only at the time of liquidation. But equity share capital is the most expensive source of fund because there is no fixed rate of dividend paid to the owners and dividend is an appropriation of profit. The issue of further equity shares affects the control of the existing shareholders.

If the dividend on preference shares is not paid for two consecutive years, then the preference shareholders have the right to participate in voting and can influence the composition of the board of directors.

Debt is a cheaper source of fund as the interest is paid at a fixed rate and interest is a tax-deductible expense. However, this source of fund is highly risky as the principal amount has
to be repaid at the end of a stipulated period and interest has also to be paid whether the company makes profit or not. “If the company borrows more than what it can service or repay, the creditors may seize the assets of the company to satisfy their claims. In that situation, the management would lose all control.”

Therefore, decisions regarding capital structure should be taken after considering all the relevant factors. Now the question is what should be the proportion of equity share capital, preference share capital and debt in the capital structure of a firm or in other words what should be an optimum capital structure. The optimum capital structure is that capital structure which maximizes the shareholders’ wealth and minimizes the cost of capital. In the words of Solomon, “Optimum leverage can be defined as that mix of debt and equity which will maximize the market value of a company. Further, the advantages of having an optimum capital structure, if such an optimum does exist, are two fold: it maximizes the value of the company and hence, the wealth of its owners; it minimizes the company’s cost of capital.
which in turn increases its ability to find new wealth-creating investment opportunities."

Features of an Optimum Capital Structure

A sound capital structure should have the following features:

- **Return**: The capital structure should be so designed that it minimizes the cost of capital and maximizes the wealth of the owners.

- **Capacity**: The proportion of debt in the capital structure should be to such extent which the company can bear i.e. the company can meet fixed obligations in the form of interest and principal repayment.

- **Flexibility**: The capital structure should be flexible, that is, the company can raise funds whenever needed.

- **Risk**: The capital structure should not be debt-ridden as excessive use of debt threatens the existence of the company.

- **Control**: The capital structure should be such that it involves minimum risk of loss of control of the company.
Capital Structure of SAIL and Tata Steel

The authorized capital of SAIL is Rs. 5000 crore (5,00,00,00,000 equity shares of Rs. 10 each) of which Rs. 4130.40 is the issued and subscribed capital as on 31st March, 2006, which is held to the extent of 85.82 percent by the Government of India and the rest 14.18 percent by the financial institutions, GDR-holders, banks, employees, individuals etc.

The firm does not have preference shares in its capital structure, thus the capital structure of SAIL consists of equity share capital and debt. Debt has been raised from several sources which include loans from Government of India, loans from Banks, loans from Steel Development Fund, Foreign Currency Loans, Public Deposits, Non-Convertible Bonds etc.

The authorized capital of Tata Steel is Rs. 850 crore of which Rs. 600 crore is the equity share capital and Rs. 250 crore is the preference share capital, the preference shares are cumulative and redeemable. The firm has not issued preference shares yet, the issued capital of the company is Rs. 554.07 crore while the subscribed capital is Rs. 553.67 crore.
as on 31st March 2006. The company has also raised funds by way of debt.

The capital structure of SAIL may be analysed by using the following ratios:

1. Debt to Total Capitalization Ratio.

2. Debt Equity Ratio

3. Retained Earnings to Total Capitalization Ratio

1. **Debt to Total Capitalization Ratio**

This ratio shows the proportion of debt in the capital structure of a firm. As a matter of fact, the debt content in the capital structure of a firm should not be high because a high proportion of debt leads to low safety margin for creditors, high fixed charges in the form of interest, low profit for owners and in adverse circumstances when profit declines may cause liquidation of the company. In the words of Foulke, “A heavy debt is like high blood pressure. As the pressure goes up, a point is finally reached where the patient cannot survive.”

\[
\text{Debt to Total Capitalization Ratio} = \frac{\text{Debt}}{\text{Debt} + \text{Shareholders' Equity}} \times 100
\]
Total Capital

Debt-Equity Ratio

Debt equity ratio is the most important ratio in capital structure analysis. This ratio shows the relationship between borrowed capital and owned capital. In other words, the ratio indicates the margin of safety to long term creditors.

A low debt equity ratio provides a larger safety margin to creditors and deprives the shareholders of the benefits of trading on equity. On the other hand, a high debt equity ratio reduces the margin of safety to the lenders, increases fixed charges, abates the profit for owners and the firm will not be able to raise additional debt easily. Thus, debt equity ratio should neither be too high nor too low.

\[
\text{Debt - Equity Ratio} = \frac{\text{Debt}}{\text{Shareholders' Equity}}
\]

Table 8.1 on the next page shows the debt ratios of SAIL and Tata Steel from 1999-00 to 2005-06.
From the table it is apparent that the proportion of debt in the capital structure of SAIL was much higher in comparison to Tata Steel in all the years of the study period.

Table 8.1
Debt Ratios of SAIL and Tata Steel from 1999-00 to 2005-06

<table>
<thead>
<tr>
<th>Years</th>
<th>SAIL</th>
<th>Tata Steel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Debt to Total Capitalization Ratio (Percentage)</td>
<td>Debt-Equity Ratio (Times)</td>
</tr>
<tr>
<td>1999-00</td>
<td>71.33</td>
<td>2.49</td>
</tr>
<tr>
<td>2000-01</td>
<td>72.93</td>
<td>2.69</td>
</tr>
<tr>
<td>2001-02</td>
<td>72.60</td>
<td>2.65</td>
</tr>
<tr>
<td>2002-03</td>
<td>70.96</td>
<td>2.44</td>
</tr>
<tr>
<td>2003-04</td>
<td>63.30</td>
<td>1.72</td>
</tr>
<tr>
<td>2004-05</td>
<td>35.89</td>
<td>0.56</td>
</tr>
<tr>
<td>2005-06</td>
<td>25.43</td>
<td>0.34</td>
</tr>
</tbody>
</table>

Source: Annual Reports of SAIL and Tata Steel from 1999-00 to 2005-06.

The debt to total capitalization ratio as well as debt equity ratio of the firm were quite higher than Tata Steel.

The SAIL did not borrow any capital during the study period, the debt to total capitalization ratio as well as debt equity ratio of the firm increased in the year 2000-01 due to the decline of networth. Tata Steel as well did not resort to
debt during the study period except in the year 2001-02 when the funds were acquired to finance capital goods.

The high debt equity ratio of SAIL during the period 1999-00 to 2003-04 indicating that even the claims of long term creditors were not fully covered against the equity of the firm. The creditors were not at so much risk in the case of Tata Steel during the same period as the debt equity ratio of the firm was considerably lower than SAIL and in the years 2000-01 and 2003-04 Tata Steel even had cushion for long term creditors.

The SAIL resorted to heavy borrowings to modernize and technologically upgrade the Rourkela Steel Plant, Bokaro Steel Plant and Durgapur Steel Plant which were established about 4 decades back. The requirement of funds of Tata Steel is mostly funded from internal generation as the firm has not incurred any loss since 1925-26, that is why the debt ratios of Tata Steel are not as high as of SAIL.

The debt content in the capital structure of SAIL has reduced from 71.33 percent to 25.43 percent and in Tata Steel it has abated from 51.84 percent to 20.50 percent in a span of seven years, this suggests that SAIL as well as Tata Steel have
significantly de-leveraged their balance sheets by repaying the loans.

3. Retained Earnings to Total Capitalization Ratio

The retained earnings to total capitalization ratio indicates the health of the capital structure. The higher the ratio, the healthier the capital structure.

\[
\text{Retained Earnings to Total Capitalization Ratio} = \frac{\text{Retained Earnings}}{\text{Total Capital}}
\]

Table 8.2
Retained Earnings to Total Capitalization Ratio of SAIL and Tata Steel from 1999-00 to 2005-06

<table>
<thead>
<tr>
<th>Years</th>
<th>SAIL</th>
<th>Tata Steel</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Retained Earnings (Rs. in crore)</td>
<td>Total Capital (Rs. in crore)</td>
</tr>
<tr>
<td>1999-00</td>
<td>1931</td>
<td>21144</td>
</tr>
<tr>
<td>2000-01</td>
<td>1160</td>
<td>19541</td>
</tr>
<tr>
<td>2001-02</td>
<td>1160</td>
<td>19310</td>
</tr>
<tr>
<td>2002-03</td>
<td>1160</td>
<td>18218</td>
</tr>
<tr>
<td>2003-04</td>
<td>907</td>
<td>13728</td>
</tr>
<tr>
<td>2004-05</td>
<td>6176</td>
<td>16077</td>
</tr>
<tr>
<td>2005-06</td>
<td>8471</td>
<td>16899</td>
</tr>
</tbody>
</table>

Source: Annual Reports of SAIL and Tata Steel from 1999-00 to 2005-06.
From table 8.2 it is clear that the capital structure of Tata Steel was quite healthier than SAIL in all the years under study as the retained earnings to total capitalization ratio of Tata Steel was much higher than SAIL during the study period.

The too low ratio of SAIL in the first five years is due to the fact that the firm incurred losses in the first four years and in the fifth year the SAIL earned profit but that was utilized for absorbing the losses of the previous years.

In the remaining years 2004-05 and 2005-06 the capital structure of SAIL was healthy but was not as healthy as Tata Steel’s capital structure was healthy in these years.

As Tata Steel has not incurred any loss since 1925-26 that is why the capital structure of the firm is full of reserves and surplus.

**FINANCIAL LEVERAGE INDEX**

When a company uses debt as a source of finance then it becomes necessary to know whether the company is successfully trading on the equity or not. Financial Leverage Index (FLI) is calculated for this purpose.
Financial Leverage Index = \( \frac{\text{Return on equity}}{\text{Return on assets}} \)

When return on equity is more than the return on assets or in other words when FLI is greater than 1, it suggests that the firm is successfully trading on the equity or the effects of financial leverage are favourable. When return on equity is equal to the return on assets or when FLI is 1, it implies neither favourable nor unfavourable effects of financial leverage. When return on equity is less than the return on assets or when FLI is less than 1, it suggests that the firm is unsuccessfully trading on the equity or the effects of financial leverage are unfavourable.

Table 8.3
Financial Leverage Index of SAIL and Tata Steel from 1999-00 to 2005-06

<table>
<thead>
<tr>
<th>Years</th>
<th>SAIL</th>
<th>Tata Steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999-00</td>
<td>-</td>
<td>1.33</td>
</tr>
<tr>
<td>2000-01</td>
<td>-</td>
<td>1.35</td>
</tr>
<tr>
<td>2001-02</td>
<td>-</td>
<td>1.27</td>
</tr>
<tr>
<td>2002-03</td>
<td>-</td>
<td>2.54</td>
</tr>
<tr>
<td>2003-04</td>
<td>2.32</td>
<td>2.15</td>
</tr>
<tr>
<td>2004-05</td>
<td>1.66</td>
<td>1.63</td>
</tr>
<tr>
<td>2005-06</td>
<td>1.36</td>
<td>1.44</td>
</tr>
</tbody>
</table>

Source: Computed from the Annual Reports of SAIL and Tata Steel from 1999-00 to 2005-06.

* Return on assets = \( \frac{\text{Net Income} + \text{Interest} \times (1 - \text{tax rate})}{\text{Assets}} \)
The SAIL incurred losses in the first four years of the study period and in the remaining three years 2003-04 to 2005-06 the firm successfully traded on the equity as the financial leverage index was higher than 1 in these years while in the case of Tata Steel the FLI of greater than 1 in all the years under study suggests that the firm employed debt beneficially during the study period.

**LONG TERM FINANCIAL STRENGTH**

The long term financial strength is concerned with the payment of interest regularly and repayment of principal in instalments or on maturity. The following ratios may be used to judge the long term solvency of SAIL.

- **Interest Coverage Ratio**

- **Cash Flow Coverage Ratio**

**Interest Coverage Ratio**

The interest coverage ratio shows the debt servicing ability of a firm. The ratio shows how many times the interest charges are covered by the profit before interest and tax. This ratio also indicates the extent to which the profit before
interest and tax may fall without affecting the firm’s ability to pay the interest charges. A high ratio indicates lesser use of debt and a low ratio may be due to either excessive use of debt or poor profitability.

\[
\text{Interest Coverage Ratio} = \frac{\text{Earnings Before Interest and Tax}}{\text{Interest Charges}}
\]

Table 8.4
Interest Coverage Ratio of SAIL and Tata Steel from 1999-00 to 2005-06
(In Times)

<table>
<thead>
<tr>
<th>Years</th>
<th>SAIL</th>
<th>Tata Steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999-00</td>
<td>0.04</td>
<td>2.32</td>
</tr>
<tr>
<td>2000-01</td>
<td>0.56</td>
<td>2.60</td>
</tr>
<tr>
<td>2001-02</td>
<td>-0.09</td>
<td>1.68</td>
</tr>
<tr>
<td>2002-03</td>
<td>0.76</td>
<td>5.14</td>
</tr>
<tr>
<td>2003-04</td>
<td>3.88</td>
<td>22.82</td>
</tr>
<tr>
<td>2004-05</td>
<td>16.43</td>
<td>29.36</td>
</tr>
<tr>
<td>2005-06</td>
<td>13.07</td>
<td>45.24</td>
</tr>
</tbody>
</table>

Source: Annual Reports of SAIL and Tata Steel from 1999-00 to 2005-06.

Table 8.4 shows that debt servicing ability of Tata Steel was far better than SAIL in all the years of the study period. From the year 1999-00 to the year 2002-03 the interest coverage ratio of SAIL was even below 1 as the profit before
interest and tax was very nominal and debt content in the capital structure of SAIL was high in these years. During the same period, Tata Steel covered interest charges 2.32 times, 2.60 times, 1.68 times and 5.14 times respectively.

In the last three years i.e. 2003-04 to 2005-06 the profitability of SAIL ameliorated and debt content in the capital structure had reduced, that is why the ratio of the firm improved and reached to 3.88 times, 16.43 times and 13.07 times respectively but was far below than Tata Steel whose coverage of interest charges was as high as 22.82 times, 29.36 times and 45.24 times respectively.

The too high ratio of Tata Steel in comparison to SAIL during the study period is due to the fact that profitability of Tata Steel was far better than SAIL and Tata Steel used lesser debt in comparison to SAIL.

**Cash Flow Coverage Ratio**

It is cash that a firm needs to pay interest as well as principal repayment obligations not accrual profit, therefore it is better to relate cash available with the firm with the fixed obligations. The cash flow coverage ratio shows the long term
financial strength of a firm comprehensively because it considers both interest as well as principal repayment obligations and relates the fixed obligations with the cash available with the firm. The ratio is computed as:

\[
\text{Cash Flow Coverage Ratio} = \frac{\text{Earnings after tax + Depreciation + Other non-cash charges + Interest charges}}{\text{Interest Charges + Repayment of Principal}}
\]

**Table 8.5**

Cash Flow Coverage Ratio of SAIL and Tata Steel from 1999-00 to 2005-06 (In Times)

<table>
<thead>
<tr>
<th>Years</th>
<th>SAIL</th>
<th>Tata Steel</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999-00</td>
<td>0.25</td>
<td>1.77</td>
</tr>
<tr>
<td>2000-01</td>
<td>0.47</td>
<td>3.12</td>
</tr>
<tr>
<td>2001-02</td>
<td>0.25</td>
<td>1.97</td>
</tr>
<tr>
<td>2002-03</td>
<td>0.53</td>
<td>4.46</td>
</tr>
<tr>
<td>2003-04</td>
<td>1.90</td>
<td>11.44</td>
</tr>
<tr>
<td>2004-05</td>
<td>3.90</td>
<td>16.98</td>
</tr>
<tr>
<td>2005-06</td>
<td>5.16</td>
<td>14.42</td>
</tr>
</tbody>
</table>

*Source:* Computed from the Annual Reports of SAIL and Tata Steel from 1999-00 to 2005-06.

From table 8.5 it is clear that the long term financial strength of Tata Steel was far better than SAIL during the entire period of study.
In the initial four years i.e. 1999-00 to 2002-03 cash flow coverage ratio of SAIL was below 1 indicating that the firm did not have sufficient cash to pay interest and principal repayment obligations while in the case of Tata Steel the ratio was above 1 in these years.

In the later years i.e. 2003-04 to 2005-06 the SAIL was able to meet fixed obligations as the cash flow coverage ratio of the firm was 1.90 times, 3.90 times and 5.16 times respectively. On the other hand, during the same period the fixed charges of Tata Steel were covered highly by 11.44 times, 16.98 times and 14.42 times respectively.

The quite high ratio of Tata Steel in comparison to SAIL in all the years of the study period is not only due to the fact that Tata Steel had lesser debt content in its capital structure but as a matter of fact the profitability of Tata Steel was also far better than SAIL.

CONCLUSION

The analysis of capital structure of SAIL and Tata Steel during the period 1999-00 to 2005-06 reveals that capital structure of SAIL was more debt ridden in comparison to Tata
Steel. SAIL had to modernize its three plants for which huge funds were required that is why the firm resorted to heavy borrowings. The percentage of debt in the capital structure of SAIL was 71.33 percent in the year 1999-00 which came down to 25.43 percent in 2005-06 and in Tata Steel too the debt content in the capital structure reduced from 51.84 percent in 1999-00 to 20.50 percent in 2005-06. Thus, the capital structure of both the firms have become conservative.

The capital structure of Tata Steel was quite healthier than SAIL during the study period as the retained earnings to total capitalization ratio of Tata Steel was much higher than SAIL in all the years under study.

As far as long term financial strength is concerned, SAIL was not in a position to pay interest and principal repayment obligations in the first four years i.e. 1999-00 to 2002-03 while in the last three years i.e. 2003-04 to 2005-06 the long term financial strength of SAIL was quite good as the cash flow coverage ratio was far above 1 in these years. On the other hand, Tata Steel did not have any problem in all the years under study in paying interest and principal repayment to long term creditors. The long term financial strength of Tata Steel was excellent during the study period.
REFERENCES

