Capital Structure Appraisal of a Public Sector Undertaking- A Case Study of Madhya Pradesh State Agro Industries Development Corporation Limited

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ABSTRACT

The present research work is undertaken to make an appraisal of the capital structure position of the agro based industry of the state of M.P. This study helps to reveal the causes of changes in capital structure made by the concern and makes a detailed analysis of the performance of the concern so that fruitful suggestion could be given to improve its performance in future. Since, financial appraisal is a tool for scientific evaluation of the profitability and financial strength of any business concern; the same has been used in the present research study. The techniques of financial statement analyses are used for the purpose of appraisal of the capital structure. In this research paper capital structure of the Madhya Pradesh State Agro Industries Development Corporation Limited has been analyzed for the purpose of research through important and selected ratios.

Key words: *Debt –Equity, Solvency, Capitalization, Net Worth, Financial Leverage, Interest coverage.*

INTRODUCTION

A capital structure is the mix of a company's financing which is used to fund its day-to-day operations. This source of funds can originate from equity, debt and hybrid securities. The equity will come in the form of common and preferred stocks. The debt is broken out into long-term and short-term debts. Lastly hybrid securities are a group of securities that are a combination of debt and equity. There should be an adequate proportion of different sources of capital in the capital structure of a company because each type of source has its own merits and demerits. Too much induction of any one type of source in the capital structure of a company may prove unprofitable or subsequently risky. Capital structure means the financial plan of a company in which the various sources of capital are mixed in such a proportion that they provide a distinct capital set-up most suited to the requirements of that particular company. Capital structure refers to the 'make-up' of long term funds as represented by equity share capital, preference share capital and long term debt. Capital structure has to be determined initially at the time a company is promoted. The initial capital structure should be designed very carefully. The management of the company should set a target capital structure and the subsequent financing decisions should be made with a view to achieve the target capital structure. The financial manger has also to deal with an existing capital structure. The company needs funds to finance its activities continuously. Every time funds have to be procured, the

financial manager weighs the pros and cons of various sources of finance and selects most advantageous sources keeping in view the target capital structure. A number of factors influence the determination of capital structure. The impact of each factor has to be assessed with regard to various considerations such as income, risk, control and cost. The task of arriving at a proper mix by balancing a number of conflicting interests and considerations is indeed a formidable one.

Justification of the study

The development of agro based industries can help to realize the various linkages or inter-relationships between industry and agriculture. If the agro based industries are developed it will be possible to reduce regional imbalances and it will also help to realize the essential goal of rural development. Generating employment opportunities on a large scale for the weaker sections of the rural society are also to be attained. Hence, appraisal of capital structure is indispensable for such agro based industries so that one can check whether the organization is having a optimum capital structure or not.

Scope of the study

The study highlights "Capital Structure Appraisal of a Public Sector Undertaking- A Case Study of Madhya Pradesh State Agro Industries Development Corporation Limited". And it covers those organizations which are engaged in promotion of agro processing industries in M.P. This study is helpful for public sector undertakings and as well as private agencies engaged in providing complete services for project promotion of Agro based industries. On the basis of this study both the sectors, which are engaged in providing assistance to Agro based industries, can easily analyze their financial soundness as well as the extent of services and facilities provided by them to all Agro based industries in M.P.

Review of Literature

Profitable capital investment leads to the growth and prosperity of an economy. If profitability is low, investment will shrink. The investor needs tools to predict the profitability of proposed investments (Remer and Nieto, 1995a). Over the last four decades, the academic community has been proposing several methods that can improve the capital investment decision making process of companies (Farragher et al., 2001).There are many methods and techniques available to help the investor to make wise economic decisions. In Johnstone's(2002) opinion: "The method of capital structure appraisal enables an organization to discount the cost of future cash flows by its cost of capital and make a direct allowance for risk. However, since the result is expressed as an absolute figure it is not necessarily an ideal tool for selecting between competing projects.

Objectives of the Study

- To analyze the concept of Debt and Equity.
- To examine Debt- Equity position of corporation.
- To study how far financial cost affects the profitability position of the corporation.

Hypothesis of the Study

There is no significant difference in the Debt- Equity capital position of the M.P. State Agro industries Development Corporation Ltd.

Methodology

For the study, statistical data has been collected from various reports published periodically by the M.P. State Agro industries Development Corporation Ltd., offices of the registered Agro based industries, central offices of the Agro Processing industries, Govt. of India in Madhya Pradesh Development Corporation Ltd. The statistical techniques like percentage, averages, coefficient of correlation, coefficient of variation, T-test have also been applied. For proper analysis and evaluation of operational performance and financial strength, the individual items of profit and loss accounts and balance sheet have also been regrouped.

Limitations

The data used in the present study is completely based on secondary data collected from published financial and cost statement obtained from the offices of the M.P. State Agro industries Development Corporation Ltd. for the year from 2000-2011. Data have also been collected from various publications of the Agro based industries in M.P, websites of MPSAIDL and other institutes engaged in the field. Thus, the study unavoidably contains such limitations which are inherited in secondary data. Moreover, non availability of sufficient literature and information, form a major limitation of the study. Some of the limitations are also inevitable due to the fact that the data are grouped and sub grouped as per the requirements of the study.

Appraisal of Capital Structure

Debt Equity Ratio

The debt-equity ratio is calculated to measure the extent to which debt financing has been used in a business. The objective of computing this ratio is to measure the relative proportion of debt and equity in financing the assets of the firm. The ratio indicates the proportionate claims of owners and the outsiders against the firm's assets. The purpose is to get an idea of the cushion available to outsiders on the liquidation of the firm. This ratio indicates the relationship between the external equities or the outsiders' funds and the internal equities or the shareholders' funds. thus :

$$\textit{Debt Equity Ratio} = \frac{\textit{Outsiders Funds}}{\textit{Shareholder's Funds}}$$

The two basic components of the ratio are outsiders' funds, *i.e.*, external equities and shareholders' funds, *i.e.*, internal equities. The outsiders' funds include all debts/liabilities to outsiders, whether long-term or short-term or whether in the

form of debentures bonds, mortgages or bills. The shareholders' funds representing accumulated profits and surpluses like reserve for contingencies, sinking funds, etc. Traditionally, a debt-equity ratio of 2:1 is considered to be satisfactory. As a general rule, there should be an appropriate mix of owners' funds and outsiders' funds in financing the firm's assets.

Table: - 1 Statement Showing Debt Equity Ratio

(₹in lakhs)

Year	Debt(₹)	Equity(₹)	Debt Equity Ratio
2000	1072.62	382.88	2.8
2001	857.09	379.52	2.26
2002	1308.9	389.33	3.36
2003	2442.36	385	6.34
2004	794.47	380.9	2.09
2005	664.91	376.79	1.76
2006	683.81	372.69	1.83
2007	702.71	386.59	1.82
2008	721.61	439.89	1.64
2009	740.51	450.58	1.64
2010	759.41	502.53	1.51
2011	778.31	2608.42	0.30
	960.56	**587.93**	**2.28**
σ	**481.11**	**610.39**	**1.41**
C.O.V	**50.09%**	**103.82%**	**62.02%**
Growth	**-27.44%**	**581.26%**	**-89.34%**

Source: Compiled from annual reports of The Madhya Pradesh State Agro Industries Development Corporation Ltd. (From 2000 - 2011)

Interpretation:

As per the above table the Debt Equity Ratio of the company ranges from 1.64:1 to 6.34:1. It was highest in the year 2002-2003 when it was 6.34:1 which came down to 1.64:1 during the years 2007-2008 and 2008-2009 and was least in the 2010-2011 when it was 0.30. The overall average of Debt Equity Ratio was 2.55:1. The standard deviation of the Debt-Equity ratio was 1.41 with coefficient of variation as 62.02%. A low ratio implies the use of more equity than debt which means a larger safety margin for creditors since owners equity is considered to be margin of safety by creditors and vice versa. Debt Equity Ratio was 2.80:1 in the year 2000 which decreased to 2.26:1 in 2001 and again increased to 3.36:1 in 2002, 6.34:1 in 2003 and then decreased simultaneously by 2.09:1 in 2004, 1.76:1 in 2005 and then increased by 1.83:1 in 2006 and decreased simultaneously after that, by 1.82:1 in 2007, 1.64:1 in 2008 and unaffected by 1.64:1 in 2009.

Debt Ratio

This ratio indicates the percentage of organization assets that is financed by outsiders. This ratio is a supplementary to debt equity ratio. It is also interpreted in the same way. The significance of this ratio is that it indicates the proportion of assets that are financed by the external debt during a particular period.

$$\textbf{Debt Ratio} = \frac{\textbf{Total Debts}}{\textbf{Total Assets}}$$

Table: - 2 Statement Showing Debt Ratio

(₹in lakhs)

Year	Total Debts(₹)	Total assets(₹)	Debt Ratio
2000	1072.62	9076.68	0.12
2001	857.09	9430.83	0.09
2002	1308.9	8997.75	0.15
2003	2442.36	9704.61	0.25
2004	794.47	7125.56	0.11
2005	664.91	8292.47	0.08
2006	683.81	8082.28	0.08
2007	702.71	20293.36	0.03
2008	721.61	18466.39	0.04
2009	740.51	29982.13	0.02
2010	759.41	24943.56	0.03
2011	778.31	41853.93	0.02
	960.56	**16354.13**	**0.09**
σ	**481.11**	**10596.88**	**0.06**
C.O.V	**50.09%**	**64.80%**	**74.42%**
Growth	**-27.44%**	**361.11%**	**-84.26%**

Source: Compiled from annual reports of The Madhya Pradesh State Agro Industries Development Corporation Ltd. (From 2000 - 2011)

Interpretation:

As we can see from the above table that the Debt Ratio has been fluctuating throughout the period of study. Year 2002-2003 showed the highest Debt Ratio when it was 0.25 while the year 2008-2009 showed the lowest of Debt Ratio that is 0.049. The Ratio showed a Continues fall from the year 2002-2003 till year 2008-2009 the overall average Debt Ratio from year 2000-2009 was 0.11. The standard deviation of the Debt ratio was 0.06 with coefficient of variation as 74.42%. The debt Ratio was 0.12 in 2000 which decreased by 0.09 in 2001. It then increased for the next two years by 0.15 in 2002 and 0.25 in 2003. It then decreased simultaneously for the next preceding years by 0.11 in 2006, 0.07 in 2007. Then a small increase of 0.08 in 2008 and at last a decrease of 0.05 in 2009.

Net Worth to Total Assets Ratio/ Proprietary Ratio

Net worth to total assets is a corollary to debt ratio. This ratio shows the shareholders interest that has been utilized for total assets. A higher ratio of net worth to total assets indicates the dependence of company on its own funds. Further a high ratio is suggests a sound financial structure of the organization because of greater margin of safety for the creditor.

$$\text{Net Worth to Total Assets Ratio} = \frac{\text{Net Worth}}{\text{Total Assets}}$$

Shareholders' fund includes preference and equity share capital plus all reserves and surplus items. Total assets include all assets including goodwill.

This ratio throws light on the general financial strength of the company. It has come to be regarded as a test of the soundness of the capital structure. It is of great importance to the creditors since it enables then to find out the proportion of shareholders funds in the total assets used in the business. While a high proprietary ratio indicates a relatively secure position to the creditors in the event of liquidation, a low proprietary ratio will include greater risk to the creditors.

Table: - 3 Statement Showing Net Worth to Total Assets

(₹in lakhs)

Year	Net Worth(₹)	Total assets(₹)	Net Worth to Total Assets
2000	382.88	9076.68	0.04
2001	379.52	9430.83	0.04
2002	389.33	8997.75	0.04
2003	385	9704.61	0.04
2004	380.9	7125.56	0.05
2005	376.79	8292.47	0.05
2006	372.69	8082.28	0.05
2007	386.59	20293.36	0.02
2008	439.89	18466.39	0.02
2009	450.58	29982.13	0.02
2010	502.53	24943.56	0.02
2011	2608.42	41853.93	0.06
	587.93	**16354.13**	**0.04**
σ	**610.39**	**10596.88**	**0.01**
C.O.V	**103.82%**	**64.80%**	**37.72%**
Growth	**581.26%**	**361.11%**	**47.74%**

Source: Compiled from annual reports of The Madhya Pradesh State Agro Industries Development Corporation Ltd. (From 2000 - 2011)

Interpretation:

As we can see from the above table that the Net Worth to Total Assets Ratio has showed an increase till the years2003-2004 with some meager fluctuations while in the later period of study it has been decreasing with some fluctuations, i.e. it increase in the year 2007-2008 but fell to its lowest of 0.03 in the year 2008-2009. The Ratio was highest in the year 2010-2011 when it was 0.06. The overall average from 2000-2009 was 0.04. The standard deviation of the Net worth to total assets ratio was 0.01 with coefficient of variation as 37.72%.The net Worth to total assets was same in the first 4 preceding years which was 0.04 in 2000, 2001, 2002 and 2003. It was again same in the next 3 years which was 0.05 in 2004, 2005, and 2006. It then decreased to 0.04 in 2007, then increase to 0.05 in 2008 and again decreases to 0.03 in 2009.

Current Liabilities to Net worth Ratio

The ratio of Current Liabilities to Net worth establishes the relationship between Current Liabilities to Proprietary Funds and indicates the amount of long term funds raised by the proprietors as against short term borrowings.

$$\text{Current Liabilities to Net worth Ratio} = \frac{\text{Current Liabilities}}{\text{Net worth}}$$

Thus, the ratio of current liabilities to net worth compares current liabilities to proprietary funds. This ratio is an index for measuring the amount of funds supplied by proprietors as against those supplied by short term creditors in the financing of the company. This ratio also helps in throwing light to a certain extent on the financial strength of the company.

Table: - 4 Statement Showing Current Liabilities to Net Worth

(₹in lakhs)

Year	Current Liabilities(₹)	Net Worth (₹)	Current Liability to Net Worth
2000	7621.18	382.88	19.90
2001	8194.22	379.52	21.59
2002	7299.52	389.33	18.75
2003	6877.25	385	17.86
2004	5950.2	380.9	15.62
2005	7250.77	376.79	19.24
2006	7025.78	372.69	18.85
2007	9281.17	386.59	24.01
2008	8289.44	439.89	18.84
2009	14010.21	450.58	31.09
2010	23977.26	502.53	47.71
2011	38467.19	2608.42	14.75
	12020.35	**587.93**	**22.35**
σ	**9287.34**	**610.39**	**8.66**
C.O.V	**77.26%**	**103.82%**	**38.73%**
Growth	**404.74%**	**581.26%**	**-25.91%**

Source: Compiled from annual reports of The Madhya Pradesh State Agro Industries Development Corporation Ltd. (From 2000 - 2011)

Interpretation:

From the above table it is clear that the Current Liabilities to Net worth was highest in the year 2009-2010 when it was 47.71 and was lowest in the year 2003-2004 when it was 15.62. The average Current liabilities to Net Worth were 22.35. The standard deviation of the Current Liabilities to Net worth ratio was 8.66 with coefficient of variation as 38.73%. The ratio

showed a decreasing trend from 2001-2002 to 2003-2004 when it came down from 18.75 to 15.62. In the year 2004-2005 it showed slit increase when it reached 19.24 but again came down to 18.85 in the year 2005-2006. Year 2006-2007 witnessed high increase in the ratio when it reached 24.01 but it again came down in the very next year when it reached 18.84. Finally it reached its highest in the year 2009-2010 when it was 47.71.The current Liability to net Worth was 19.90 in 2000. Which increase to 21.59 in 2001 and then decrease to 18.75 in 2002 and again decrease to 17.86 in 2003 also 15.62 in 2004. Then it increase for 3 consecutive years by 19.24 in 2005, 18.85 in 2006 and 24.01 in 2007 and then decreased by 18.84 in 2008.

Financial Leverage Ratio

Financial Leverage refers to the use of long term fixed interest bearing debt and preference share capital along with equity share capital. Therefore, the financial leverage refers to the presence of a fixed charge in the income statement of the firm. This fixed charge is fixed in amount and does not vary with the changes in the EBIT, whereas the return available to the equity shareholders which is a residual balance is affected by the changes in EBIT. However, Financial Leverage can be adverse also if the rate of interest on long term loans is more than the expected rate of earnings of the firm.

$$\textit{Financial Leverage Ratio} = \frac{EBIT}{EBT}$$

Table: - 5 Statement Showing Financial Leverage Ratio

(₹in lakhs)

Year	EBIT(₹)	EBT(₹)	Financial Leverage Ratio
2000	143.53	120.15	1.19
2001	-23.74	-45.5	0.52
2002	90.73	67.98	1.33
2003	-60.11	-89.27	0.67
2004	-80.99	-125.98	0.64
2005	-278.29	-299.26	0.93
2006	-317.6	-336.5	0.94
2007	-41.23	-66.73	0.62
2008	150.58	131.68	1.14
2009	137.23	118.33	1.16
2010	783.86	764.96	1.02
2011	2945.39	2926.49	1.01
	287.45	**263.86**	**0.93**
σ	**844.56**	**846.44**	**0.25**
C.O.V	**293.81%**	**320.79%**	**26.97%**
Growth	**1952.11%**	**2335.70%**	**-15.75%**

Source: Compiled from annual reports of The Madhya Pradesh State Agro Industries Development Corporation Ltd. (From 2000 - 2011)

Financial strategy is primarily concerned with the interplay of debt and equity capital of a firm. Financial leverage is an empirical measure of the financial strategy. Financial leverage or trading on equity refers to the use of such sources of funds like debt and preference capital, which have fixed charges, along with the owner's equity, in the capital structure. The primary motive of a firm for employing financial leverage is to maximize the shareholders' earnings under favorable economic conditions. The measures of financial leverage enables to understand the risk involved in the capital structure and the degree of the financial leverage helps financial planners to design capital structure in such a way so as to achieve the objective functions effectively.

Interpretation:

From the above table it is clear that the Financial Leverage ratio was highest in the year 2001-2002 when it was 1.33 and was lowest in the year 2000-2001 when it was 0.52. The average Financial Leverage was 0.92. The Financial Leverage ratio showed fluctuating trend throughout the period of study. The standard deviation of the Financial Leverage ratio was 0.25 with coefficient of variation as 26.97%. The Financial leverage Ratio was 1.19 in 2000 which decreased to 0.52 in 2001. It again rose to 1.33 in 2002 and then it decreased to 0.67 in 2003, 0.64 in 2004 0.93 in 2005, 0.94 in 2006, 0.62 in 2007. Then it increased to 1.14 in 2008, 1.16 in 2009.

Interest Coverage Ratio

Interest coverage ratio indicates the number of time interest is covered by the profits available to pay the interest charges. Long-term creditors of a firm are interested in knowing the firms' ability to pay interest on their long-term borrowing. Generally, higher the ratio, safer is the long-term creditors because even if earnings of the firm fall, the firm shall be able to meet its commitment of fixed interest charges. But a too high interest coverage ratio may not be good for the firm because it may imply that firm is not using debt as a source of finance so as to increase the earnings per share. The interest coverage ratio does not take into consideration other fixed obligations like payment of preference dividend and repayment of loan installments.

$$\textit{Interest Coverage Ratio} = \frac{EBIT\ (\textit{Net Profit Before Interest and Tax})}{\textit{Interest on Fixed Interest Bearting Charges}}$$

The interest coverage ratio is very important from the lenders' point of view. It gives an idea of the number of times the fixed interest charges are covered by earnings. It is an index of financial strength of an enterprise and indicates the margin of safety of the long-term creditors. The standard for this ratio for an industrial company is that the interest charges should be covered by six to seven times. A high ratio assures the lender a regular and periodical interest income. But the weakness of the ratio may create some problems to the financial manager in raising funds from debt sources.

Table: - 6 Statement Showing Interest Coverage Ratio

(₹in lakhs)

Year	EBIT(₹)	Interest(₹)	Interest Coverage Ratio
2000	143.53	23.38	6.14
2001	-23.74	21.76	-1.09
2002	90.73	22.75	3.99
2003	-60.11	29.16	-2.06
2004	-80.99	44.99	-1.80
2005	-278.29	20.97	-13.27
2006	-317.6	18.9	-16.80
2007	-41.23	25.5	-1.62
2008	150.58	18.9	7.97
2009	137.23	18.9	7.26
2010	783.86	18.9	41.47
2011	2945.39	18.9	155.84
	287.45	**23.58**	**15.50**
σ	**844.56**	**7.15**	**44.50**
C.O.V	**293.81%**	**30.32%**	**287.05%**
Growth	**1952.11%**	**-19.16%**	**2438.53%**

Source: Compiled from annual reports of The Madhya Pradesh State Agro Industries Development Corporation Ltd. (From 2000 - 2011)

Interpretation:

The Interest Coverage Ratio shows a considerable fluctuating trend since it became negative in most of the periods of study. As we can see from the above table that the ratio was lowest with -16.805 in the year 2005-2006 and it was highest in the year 2010-2011 when it was 155.84. Since the Interest Coverage Ratio has negative figures therefore the overall average over the period of study was 15.50. The standard deviation of the Interest coverage ratio was 44.50 with coefficient of variation as 287.05.The Interest Coverage Ratio was 6.14 in 2000 which decreased to -1.09 in 2001 and then increased to 3.99 in 2002. After it decreased to -2.06 in 2003, -1.80 in 2004, -13.27 in 2005, -16.80 in 2006, -1.62 in 2007. It then increased to 7.97 in 2008 and 7.26 in 2009.

Total Investment to Long Term Liabilities

The total investment to long term liabilities Ratio establishes relationship between total investment and long term liabilities. This ratio is calculated by dividing the total investment by long term liabilities. As a general rule the proportion of long term liabilities should not be very high.

$$\textit{Total Investment to Long Term Liabilities} = \frac{\textit{Total Investment}}{\textit{Long Terms Liabilities}}$$

The ratio of total investment to long term liabilities compares share capital to loan capital. Generally a higher proportion of long term liabilities is risky to any company, which, this ratio enables one to find out. Thus, the ratio of total investment to long term liabilities would also throw light to a certain extent on the financial strength of the company.

Table:7 Statement Showing Total Investment to Long term Liabilities

(₹in lakhs)

Year	Total Investment(₹)	Long Term Liabilities(₹)	Total Investment to Long term Liabilities
2000	1455.5	1072.62	1.36
2001	1236.62	857.09	1.44
2002	1698.23	1308.9	1.30
2003	2827.36	2442.36	1.16
2004	1175.36	794.47	1.48
2005	1041.7	664.91	1.57
2006	1056.5	683.81	1.55
2007	1089.3	702.71	1.55
2008	1161.5	721.61	1.61
2009	1191.09	740.51	1.61
2010	1261.94	759.41	1.66
2011	3386.74	778.31	4.35
	1548.49	**960.56**	**1.72**
σ	**727.53**	**481.11**	**0.81**
C.O.V	**46.98%**	**50.09%**	**46.89%**
Growth	**132.69%**	**-27.44%**	**220.67%**

Source: Compiled from annual reports of The Madhya Pradesh State Agro Industries Development Corporation Ltd. (From 2000 - 2011)

Interpretation:

The total investment to long term liabilities ratio was almost consistent since it range from 1.16 - 1.6. The fluctuations are meager especially in the later period of study which showed a continues increasing trend from the year 2002-2003 till 2010-2011. The Ratio was highest, that is 4.35 in the year 2010-2011 while it was lowest that is 1.16 in the year 2002-2003 the overall average Ratio was 1.72 for the whole period of study. The standard deviation of the Total Investment to long term Liabilities ratio was 0.81 with coefficient of variation as 46.89%. Throughout the period of study the amount of long term liabilities was lesser than the amount of total investment. Total Investment to Long Term Liabilities was 1.36 in 2000 which increased by 1.4 in 2001 and then decreased to 1.30 in 2002 and 1.16 in 2003 and again an increase of 1.48 in 2004 and 1.57 in 2005. The next two years it remains constant with 1.55 in 2006 and 2007 and 1.61 in 2008 and 2009.

Reserve to Equity Capital

The reserve to equity capital ratio establishes relationship between reserves and equity share capital. The ratio indicates that how much profits are generally retained by the firm for

future growth. Higher the ratio, generally, better is the position of the firm and vice versa.

$$\textbf{Reserve to Equity Capital} = \frac{\textbf{Reserve}}{\textbf{Equity Capital}}$$

This ratio compares reserve to equity capital and therefore it reveals the companies policy with regard to growth and distribution of dividends. It also indicates the effect of ploughing back of profits on share value.

Table: - 8 Statement Showing Reserve to Equity Capital

(₹in lakhs)

Year	Reserve(₹)	Equity Capital(₹)	Reserve To Equity Capital
2000	53.38	329.5	0.16
2001	50.02	329.5	0.15
2002	59.83	329.5	0.18
2003	55.5	329.5	0.17
2004	51.4	329.5	0.16
2005	47.29	329.5	0.14
2006	43.19	329.5	0.13
2007	57.09	329.5	0.17
2008	110.4	329.5	0.34
2009	121.08	329.5	0.37
2010	173.02	329.5	0.53
2011	167.21	329.5	0.51
	82.45	**329.50**	**0.25**
σ	**45.81**	**0.00**	**0.14**
C.O.V	**55.56%**	**0.00%**	**55.56%**
Growth	**213.24%**	**0.00%**	**213.24%**

Source: Compiled from annual reports of The Madhya Pradesh State Agro Industries Development Corporation Ltd. (From 2000 - 2011)

Interpretation:

As per the above table we can see that the reserve to equity capital shows major fluctuations in the later period of study while it is almost consistent in the initial period of study .The Ratio was lowest that is 13.11 in the year 2005-2006 while it is highest in the year 2009-2010 when it was 53.75. The overall average was 0.25 during the period of study. The standard deviation of the reserve to equity capital ratio was 0.14 and its coefficient of variation was 55.56%. The Reserve to Equity Capital was 16.20 in 2000 which decrease with 15.18 in 2001 it again increase with 18.16 in 2002 and decreased to 16.84 in 2003, 15.60 in 2004, 14.35 in 2005, 13.11in 2006. It later on increased to 17.33 in 2007, 33.50 in 2008, 36.75 in 2009

Capital Gearing Ratio

The term "capital gearing" is used to describe the relationship between various long – term loan of financing such as debentures, equity share capital and preferential share capital including reserve and surplus. Financing the firm's asset is very crucial problem in every business and as a general rule there should be a proper mix of debt, equity capital in financing the firm. Leverages or capital structure ratios are calculated to test the long term financial position of the firm

$$\textbf{Capital Gearting Ratio} = \frac{\textbf{Equity}}{\textbf{Long Terms Debts}}$$

This ratio reveals the suitability of order of company's capitalization. It is important not only to the company, but also to the prospective investors. It must be carefully planned since it affects the company's capacity to maintain an even distribution policy during difficult trading periods. Furthermore, its immediate effects may be to enable a company to pay higher equity dividends, when there is only narrow margin of profit. But its long-term effect on the efficiency of the company is far-reaching. Distribution policies and the building up off the results as well as an even dividend policy are also affected by the company's gearing ratio.

Table: - 9 Statement Showing Capital Gearing Ratio

(₹in lakhs)

Year	Equity(₹)	Long Term Debts(₹)	Capital Gearing Ratio
2000	382.88	1072.62	0.36
2001	379.52	857.09	0.44
2002	389.33	1308.9	0.30
2003	385	2442.36	0.16
2004	380.9	794.47	0.48
2005	376.79	664.91	0.57
2006	372.69	683.81	0.55
2007	386.59	702.71	0.55
2008	439.89	721.61	0.61
2009	450.58	740.51	0.61
2010	502.53	759.41	0.66
2011	2608.42	778.31	3.35
	587.93	**960.56**	**0.72**
σ	**610.39**	**481.11**	**0.81**
C.O.V	**103.82%**	**50.09%**	**112.12%**
Growth	**581.26%**	**-27.44%**	**838.88%**

Source: Compiled from annual reports of The Madhya Pradesh State Agro Industries Development Corporation Ltd. (From 2000 - 2011)

Interpretation:

Yet another important ratio the Capital Gearing Ratio shows continuous increasing trend for the major period of study it has been increasing from 2002-2003 till the year 2008-2009. The ratio was lowest that is 0.16 in the year 2002-2003 while

highest that is 3.35 in the year 2010-2011. It has been fluctuating only in the initial three years of study but later it showed continuous increase till the end. The overall average over the period of study was 0.72. The standard deviation of the Capital Gearing Ratio was0.81 with coefficient of variation as 112.12%. The Capital Gearing Ratio was 0.36 in 2000 then it increasing to 0.44 in 2001. And then it decreased to 0.30 in 2002 and 0.16 in 2003. After that it increased to 0.48 in 2004 and 0.57 in 2005. In the next two years it remained constant with 0.55 in 2006 and 2007. In the next two years it remained constant with 0.61 in 2008 and 2009.

Solvency Ratio

This ratio is a small variant of equity ratio. This ratio indicates the relationship between the total liabilities to outsiders and the total assets of a firm. Generally lower the ratio of total liabilities to total assets more satisfactory or stable is the long – term solvency position of the firm.

$$Solvency\ Ratio = \frac{Total\ Liabilities\ to\ Outsider}{Total\ Assets}$$

Table: - 10 Statement Showing Solvency Ratio

(₹ in lakhs)

Year	Total Liabilities To Outsiders(₹)	Total assets(₹)	Solvency Ratio
2000	8693.8	9076.68	0.96
2001	9051.31	9430.83	0.96
2002	8608.42	8997.75	0.96
2003	9319.61	9704.61	0.96
2004	6744.66	7125.56	0.95
2005	7915.68	8292.47	0.95
2006	7709.59	8082.28	0.95
2007	9983.88	20293.36	0.49
2008	9011.05	18466.39	0.49
2009	14750.72	29982.13	0.49
2010	24736.67	24943.56	0.99
2011	39245.5	41853.93	0.94
	12980.91	**16354.13**	**0.84**
σ	**9195.02**	**10596.88**	**0.20**
C.O.V	**70.83%**	**64.80%**	**24.09%**
Growth	**351.42%**	**361.11%**	**-2.10%**

Source: Compiled from annual reports of The Madhya Pradesh State Agro Industries Development Corporation Ltd. (From 2000 - 2011)

Interpretation:

As it is quite clear from the above table that, the Solvency Ratio was very consistent throughout the period of study from 2000-2001 to 2008-2009. The ratio was lowest in the year 2007-2008 when it was 0.49 while it was highest i.e. 0.99 in the year 2009-2010. The overall average of Solvency Ratio for the whole period of study was 0.84. The standard deviation of the Solvency Ratio was 0.20 with coefficient of variation as 24.09%. Throughout the period of study the ratio was bit higher so the company needs to reduce its total liabilities to outsiders and should try to make a balance between its total assets and total liabilities to outsiders. The Solvency Ratio seems to be constant for the first four years with 0.96 in 2000, 2001, 2002 and 2003 and with a decrease it remained constant for the next 3 years with 0.95 in 2004, 2005, and 2006 and then it increased to 0.96 in 2007. After that it decreased to 0.95 in 2008 and then rose to its highest with 0.97 in 2009.

Funded Debt to Total Capitalization

This ratio establishes a link between long term funds raised from outsiders and total long – term funds available in the business. A funded debt includes debentures, mortgage loans, bonds and other long – term loans. Total capitalization includes equity share capital, preferential share capital, reserve and surplus, other distributed revenue

$$Funded\ Debt\ to\ Total\ Capitalization = \frac{Funded\ Debt}{Total\ Capitalization}$$

Table: 11 Statement Showing Funded Debt to Total Capitalization

(₹in lakhs)

Year	Funded Debt(₹)	Total Capitalization(₹)	Funded Debt To Total Capitalization
2000	1072.62	1455.5	0.74
2001	857.09	1236.62	0.69
2002	1308.9	1698.23	0.77
2003	2442.36	2827.36	0.86
2004	794.47	1175.36	0.68
2005	664.91	1041.7	0.64
2006	683.81	1056.5	0.65
2007	702.71	1089.3	0.65
2008	721.61	1161.5	0.62
2009	740.51	1191.09	0.62
2010	759.41	1261.94	0.60
2011	778.31	3386.74	0.23
	960.56	**1548.49**	**0.65**
σ	**481.11**	**727.53**	**0.14**
C.O.V	**50.09%**	**46.98%**	**22.40%**
Growth	**-27.44%**	**132.69%**	**-68.82%**

Source: Compiled from annual reports of The Madhya Pradesh State Agro Industries Development Corporation Ltd. (From 2000 - 2011)

Interpretation:

The Funded Debt to Total Capitalization Ratio showed continues fall after reaching its highest that is 86.38 in the

year 2002-2003. It was at its lowest that is 0.23 in the year 2010-2011. The ratio showed a fluctuating trend in the initial years of study i.e. from 2000–2003 when it first decreased and increased in alternative years. The overall average for the whole period of study from 2000-2009 was 69.14 with standard deviation as 0.14 and coefficient of variation as 22.40%. The Funded Debt to Total Capitalization was 73.69 in the year 2000 which decreased to 69.31 in 2001 and then increased for the next 2 consecutive years by 77.07 in 2002 and 86.38 in 2003. And then it goes on decreasing for the next years by 67.59 in 2004, 63.83 in 2005, 64.72 in 2006, 64.72 in 2007, 62.13 in 2008 and 62.17 in 2009.

CONCLUSION

The capital structure of the Madhya Pradesh State Agro Industries Development Corporation Limited understudy has been analyzed in terms of Long Term and Short Term Funds, Capital Gearing and Total Assets. The overall average of debt equity ratio of the Madhya Pradesh State Agro Industries Development Corporation Limited was 2.56 during the period of the study which is not satisfactory. But it was highest in the year 2002-2003 when it was 6.34 which was not at all good for the company. The net worth to total assets ratio of the company shows an alarming situation. Net worth constitutes only about 4% of the total assets of the company. Since the proprietary ratio is too less, it renders high risk to outsiders. The interest coverage ratio of the company is extremely poor. The overall average of interest coverage ratio was -1.13 showing the difficulty of the company to meet its commitment of financial obligations. The company needs to restructure its capital structure since financial cost, like interest are very high and the debt capital position is not at all commendable. The company should redeem its debt capital which can be done through issue of shares of the company. This is so because the rate of return should justify the cost of capital. In other words, the cost of capital should always be less than the rate of return. The overall average of solvency ratio is 0.96 which is extremely high and is not at all good for the long term solvency of the company.

Null Hypothesis (Ho).

There is no significant difference in the Debt- Equity position of the M.P. State Agro industries Development Corporation Ltd.

Interpretation of t-test

$t = -0.41$ & $t_{0.05} = 1.81$

$t < t_{0.05}$

When degree of freedom (df) is 10 and level of significance is 5%, the critical value is 1.81. Since the calculated value of t is -0.41 which is less than the table value, we conclude that there is no significant difference in Debt- Equity position of M.P. State Agro industries Development Corporation Ltd., during the study period (2000-2011). Hence null hypothesis is accepted.

SUGGESTIONS

1 The corporation should try to maintain fair capital structure in the business.

2 Although it is a public sector undertaking department its main motto is not to earn profit but it should earn at least marginal profit for the payment of financial obligations and its day to day expenditures, etc.

3 The corporation should try to reduce their financial cost i.e., interest on borrowed debt capital by reducing the amount of inherited funds from outside sources.

4 It should issue further share capital since borrowed capital should be used or is worthwhile only when the company's earnings are greater than its cost of capital.

5 Borrowed capital must be utilized in productive work and the corporation should try to avoid investment in non-productive work.

6 Financial risk can be avoided by fair investment in debt and equity capital.

7 Profitability should be increased by reducing amount of interest on borrowed capital.

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