

Structure of Funds in Indian Railways – A Study



Commerce

KEYWORDS : Indian Railways (IRS), Debt-Equity Ratio, LTD only, LTD+STD

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ABSTRACT

In this paper, an attempt has been made to study the “STRUCTURE OF FUNDS IN INDIAN RAILWAYS”. An analysis of Quantum and Structure of Funds, Adequacy of Funds, Assessment of Long term Solvency and Debt-Equity Ratio for the period of nine years (2003-04 to 2011-12) through the application of ratio analysis and trend analysis has been undertaken. From the study, it is found that Long term forms the major source of financing Indian Railways. Indian Railways mobilized both debt and equity components heavily as it runs mainly on loan capital mobilized from and financed by the Government of India (Exchequer).

1.0 INTRODUCTION

Transport is an important constituent of infrastructure and enhances the economic efficiency. Transport is a major service industry in both developed and developing countries. The rail and road together contribute 95 per cent of the transport earnings and, among the two rail transport affords a number of advantages over the road transport. Indian railways are now over 150 years old and have come a long way since it made its maiden run on April 16, 1853. After Independence, the railways embarked on a journey of modernization and became an instrument of social change. Railways continue to be the principal mode of transport in India. The Indian railways network is the largest in Asia and stands fourth in the world.

The railway finances come under the direct control of the Finance Commissioner. The Department of Accounts, thus, developed its own separate identity and has nothing to do with the government’s Auditor General. A new Indian Railways Accounts Service was constituted to manage financial activities. In preparing a separate structure of financial administration and control, other subordinate offices were set up and they were entrusted the duties regarding the compilation of financial accounts. Within the framework of this financial system and administration, the railways started working on expert financial advice and guidance. Financial performance was to be judged on the lines of exercising financial propriety, canons of financial system, steps pertaining to profitability and maintaining accounting books, statistical data and preparing report analysis. At present, the Railways has a team of financial experts whose expertise cannot be challenged. They are amongst the best in India. Financial fluctuations are a part of any business enterprise and the railways are not immune to it. These fluctuations do not reflect the incompetence of the administrative setup, or a faulty capital structure of; it only means that it has to be periodically

adjusted. Rise and fall, boom and depression, have to be handled properly, and historically the railways has never failed to accept a challenge or created any crisis or chaos that it has been unable to solve. The railways has always been a strong institution with a solid base of financial health and vigour, except on one or two occasions when it faltered, but recovered soon.¹

2.0 SOURCES OF FUNDS FOR INDIAN RAILWAYS (IRS)

The railways had classified three types of rail construction activities – remunerative, semi-remunerative, and non-remunerative. There were three financial alternatives too: revenue surpluses, borrowed money, and reserve resources, respectively. Non-remunerative work was to be done through revenue surpluses. The rest would find fund resources through short, medium, and long-term loans with an affordable rate of interest, affordable corresponding with the emergency of the project. Since the government funding process continued for a long period during the Raj and other systems were not finally terminated, a new form of financial system for the interim period was also experimented, known as modified guarantee returns with 3 to 4 per cent rate of return and sharing the balance of net earning between the company and the government in an 1:4 ratio. It was more favourable to the government than the old guarantee system and it continued for some time, but could not survive due to some other unattractive terms.²

3.0 OBJECTIVES

The overall financial structure of the railways has been studied keeping in view the following objectives;

- to examine the quantum and structure of long term and short term funds;
- to evaluate the adequacy of long term funds;
- to examine the long-term solvency; and
- to ascertain the extent and the justification for the use of debt.

4.0 Quantum and Structure of Long Term and Short Term Funds of Indian Railways

Table N o. 1

Quantum and Structure of Long Term and Short Term Funds of Indian Railways																				
(Rupees in Crores)																				
Particulars	2003-04		2004-05		2005-06		2006-07		2007-08		2008-09		2009-10		2010-11		2011-12		AVERAGE	
	Rs	%																		
Net Worth (Investments Financed from various funds and Reserves and Surplus	47,034	43	55,430	44	68,370	47	84,817	51	105,098	53	114,898	52	114,568	48	120,344	45	129,136	44	93,299	48

Borrowed Funds (Loan Advanced by General Exchequer and Deposites)	59,826	54	66,718	53	73,281	51	80,435	48	89,206	45	101,316	46	121,160	51	142,470	53	162,774	55	99,687	51
LONG TERM FUNDS - I	106,860	97	122,148	98	141,651	98	165,252	99	194,304	99	216,214	99	235,728	99	262,814	99	291,910	99	192,986	98
Current Liabilities and Provisions																				
Undischarged (Demands Payable)	3,156	3	2,706	2	966	1	1,032	1	1,110	1	1,699	1	1,832	1	2,124	1	2,428	1	1,895	1
Outstanding Dues Payable to Other Government Departments	-	-	-		1,832	1	1,453	1	1,601	1	1,378	1	1,355	1	1,496	1	1,513	1	1,181	1
SHORT TERM FUNDS - II	3,156	3	2,706	2	2,798	2	2,485	1	2,711	1	3,077	1	3,187	1	3,620	1	3,941	1	3,076	2
TOTAL FUNDS I + II	110,016	100	124,854	100	144,449	100	167,737	100	197,015	100	219,291	100	238,915	100	266,434	100	295,851	100	196,062	100

Source: Appendix - II

An analysis of the contents of Table - 1 reveals that the long term funds on an average constituted 98 per cent ranging from the lowest of 97 per cent to the highest of 99 per cent during the study period. The major contribution comes from borrowed funds i.e., loans advanced by Government exchequer and deposits which averaged at 51 per cent. Net worth consisting of investments financed from various funds and reserves and surplus constituted 48 per cent. Excepting 2006-07, 2007-08 and 2008-09, the borrowed funds exceeded the net worth. Implying loans advanced by Government exchequer is the dominant component of long term funds.

Of the total funds, short term funds constituted meagre by ranging from the lowest of one per cent to the highest of three per cent averaging at two per cent. Among the various components of short term funds, undischarged (demands payable) and outstanding dues payable to other Government departments contributed one per cent each respectively.

It is evident from the analysis that the Indian Railways which is a public sector undertaking whose services are rendered purely on cash basis depended heavily on long term funds in financing both long term and short term capital needs of the Indian railways. Further, it may be pointed out that the long term funds are both from the internal sources of IR, and loans advanced by the Government exchequer.

5.0 Average Quantum and Structure of Long Term and Short Term Funds of Indian Railways

Table - 2		
Average Quantum and Structure of Long Term and Short Term Funds of Indian Railways		
For the period from 2003-04 to 2011-12		
(Rupees in Crores)		
Particulars	Rs.	%
Net Worth	93299	48
Borrowed Funds	99687	51
Long Term Funds - I	192986	98

Undischarged (Demands Payable)	1895	1
Outstanding Dues Payable to Other Government Departments	1181	1
Short Term Funds - II	3076	2
Total Funds (I + II)	196062	100

An examination of the contents of Table - 2 reveals that the long term funds are the major source of funds for Indian railways. Among the long term funds, the dominant portion is loan advanced by Government exchequer. The involvement of short term funds in Indian railways is very negligible because major transactions are carried on cash basis. Hence, long term funds forms the major source of financing Indian railways.

6.0 Quantum of Long Term Funds, Fixed Assets and Current Assets as a Percentage of Total Assets in Indian Railways

Table - 3			
Quantum of Long Term Funds, Fixed Assets and Current Assets as a Percentage of Total Assets in Indian Railways			
Year	Long Term Funds	Fixed Assets	Current Assets
2003-04	97	98	2
2004-05	98	98	2
2005-06	98	98	2
2006-07	99	99	1
2007-08	99	99	1
2008-09	99	99	1
2009-10	99	99	1
2010-11	99	99	1
2011-12	99	99	1
Average	98	99	1
Source: Appendix - II			

A glance at Table - 3 indicates that the proportion of long term funds employed is equal to the proportion of fixed assets in all the years of study period except in 2003-04 ranging from 97 per cent to 99 per cent. From the year 2006-07 to 2011-12, both long term funds and fixed assets constantly stood at 99 per cent. Therefore, the long term funds were sufficient to finance fixed assets requirement only and the current assets needs invariably would have been met from short term funds only. The cash nature of services of IRs made possible to operate the business with least quantum of current assets and that most of the investment is in the form of fixed assets. The IRs therefore, need not keep much of its long term funds in current assets.

7.0 Average Long Term Funds, Fixed Assets and Current Assets as a Percentage of Total Assets in Indian Railways

Table - 4			
Average Long Term Funds, Fixed Assets and Current Assets as a Percentage of Total Assets in Indian Railways			
Long Term Funds	Fixed Assets	Ratio (In Times)	Current Assets
98	99	1	1

The Ideal ratio of long term funds to fixed assets for any industry is considered to be 1.50:1³. Being a public sector enterprise this cannot be applied for Indian railways. It reflects that railways depend more on long term funds to acquire fixed assets. Hence, it is concluded that Indian railway has provided sufficient long term funds to acquire fixed assets.

8.0 Debt (LTD) -Equity Raito of Indian Railways

Table - 5			
Debt (LTD) -Equity Raito of Indian Railways			
(Rupees in Crores)			
Year	Debt	Equity	Ratio (In Times)
2003-04	59,826	47,034	1.27 : 1
2004-05	66,718	55,430	1.20 : 1
2005-06	73,281	68,370	1.07 : 1
2006-07	80,435	84,817	0.95 : 1
2007-08	89,206	105,098	0.85 : 1
2008-09	101,316	114,898	0.88 : 1
2009-10	121,160	114,568	1.06 : 1
2010-11	142,470	120,344	1.18 : 1
2011-12	162,774	129,136	1.26 : 1

Source: Appendix -II

Note: Debt (LTD) referes to long term debt only

Table - 5 discloses debt-equity ratio of Indian railways for the study period 2003-04 to 2011-12. The debt-equity ratio has declined from 1.27 to 0.85 times from 2003-04 to 2007-08, which thereafter steadily rose to 1.26 times in 2011-12. The equity though was marginally less than the debt up to 2005-06, tended to decline consistently up to 2008-09. It implies that the rate of improvement in equity was higher than the spurt in debt components of IRs. Further, to meet the expanding needs, the IRs mobilised both the debt and equity components heavily. But, the debt mobilized has exceeded the equity component from 2009-10. As a service enterprise, the debt- equity mix of IRs is on sound financial lines.

9.0 Statistical analysis of Debt (LTD) - Equity Ratio of Indian Railways

Table - 6 Statistical Analysis of Debt (LTD) – Equity Ratio of Indian Railways

Year	Ratio
2003-04	1.27
2004-05	1.20
2005-06	1.07
2006-07	0.95
2007-08	0.85
2008-09	0.88
2009-10	1.06
2010-11	1.18
2011-12	1.26
Mean	1.08
Standard Deviation	0.16
C. V.	14.81

The debt-equity ratio is a financial ratio indicating the relative proportion of debt and shareholders’ equity used to finance the company’s assets. The two components are often taken from the firm’s balance sheet or statement of financial position. A high debt-equity ratio generally, means that a company has been aggressive in financing its growth with debt. This can result in volatile earnings as a result of the additional interest expense. A low debt equity ratio usually means that a company has been friendly in financing its growth with debt and more aggressive in financing its growth with equity. Indian railways have relatively employed more debt to finance its growth in all the years except 2007-08 and 2008-09. The co-efficient of variation of debt equity ratio is 14.81 which is more consitent. Lower variability in the debt-equity ratio in Indian railways indicate stable management of debt-equity.

10.0 Debt [LTD+ STD] -Equity Ratio

Another method to express the debt equity ratio is to relate the total debt i.e., lont term and short term borrowed funds to the shareholders’ equity. This can be expressed as :

$$\text{Debt equity Ratio} = \frac{\text{Total Debt}}{\text{Shareholders' Equity}}$$

11.0 Debt (LTD+STD)-Equity Ratio of Indian Railways

Table - 7 Debt (LTD+STD) -Equity Raito of Indian Railways (Rupees in Crores)

Year	Debt	Equity	Ratio (In Times)
2003-04	62,982	47,034	1.34 : 1
2004-05	69,424	55,430	1.25 : 1
2005-06	76,079	68,370	1.11 : 1
2006-07	82,920	84,817	0.98 : 1
2007-08	91,917	105,098	0.87 : 1
2008-09	104,393	114,898	0.91 : 1
2009-10	124,347	114,568	1.09 : 1
2010-11	146,090	120,344	1.21 : 1
2011-12	166,715	129,136	1.29 : 1

Source: Appendix – II

Note: STD refers to short term debt

The debt-equity ratio shown in Table 7 is above unity in all years, excepting 2006-07, 2007-08 and 2008-09. Excepting these three years, the proportion of debt was more than the proportion of equity. Since, IR is a public sector undertaking where, majority of the funds are procured from the Government of India, the role of equity finance would be very little. As it can be seen from the table, this ratio on an average has ranged from the lowest of 0.87 times to the highest of 1.34 times during the period of study. But, employment of too heavy debt may seriously threaten the long term solvency. But, this is not applicable to IRs because it runs mainly on loan capital mobilized from and financed by the Government of India (exchequer).

12 Statistical Analysis of Debt (LTD+STD)- Equity Ratio of Indian Railways

Table – 8 Statistical Analysis of Debt (LTD + STD) - Equity Ratio of Indian Railways	
Year	Ratio
2003-04	1.34
2004-05	1.25
2005-06	1.11
2006-07	0.98
2007-08	0.87
2008-09	0.91
2009-10	1.09
2010-11	1.22
2011-12	1.29
Mean	1.12
Standard Deviation	0.17
C. V.	15.18

The debt-equity ratio (LTD+STD) is a financial ratio indicating the relative proportion of debt and shareholder's equity used to finance a company's assets. A high debt equity ratio generally means that the company has been aggressive in financing its growth with debt. A low debt equity ratio usually means that a company has been friendly in financing its growth debt and more aggressive in financing its growth with equity. The average debt (LTD+STD)-equity ratio is recorded at 1.12 times respectively. A high debt-equity ratio is observed in the year 2003-04 and almost in all the years this ratio is above unity except in the years 2006-07, 2007-08 and 2008-09 which means that IR is more aggressive in financing its growth with debt. The CV of debt-equity ratio is 15.18 per cent which confirms consistency of Indian Railways in employing debt in its capital structure. Lower variability of 0.17 in the debt equity ratio indicates proper or efficient management of debt-equity.

13 SUMMING UP

Indian Railways preferred to rely purely upon loan capital which is procured from the Government of India exchequer for its expansion and growth activities. For a public sector undertaking, service is the main objective and not the maximization of profit. Therefore, the internally generated funds are meager. IR depended heavily on long term funds in financing both long term and short term capital needs. The involvement of short term funds in Indian railways is very negligible because major transactions are carried on cash basis. Hence, long term funds forms the major source of financing Indian railways. The cash nature of services of IRs made possible to operate the business with least quantum of current assets and that most of the investment is in the form of fixed assets. The IRs therefore, need not keep much of its long term funds in current assets. Indian railway has provided sufficient long term funds to acquire fixed assets. The rate of improvement in equity was higher than the spurt in debt component of IRs. To meet the expanding needs, the IRs mobilized both the debt and equity components heavily. The employment of too heavy debt may seriously threaten the long term solvency. But, this is not applicable to IRs, because it runs mainly on loan capital mobilized from and financed by the Government of India (exchequer).