# FINANCIAL PERFORMANCE APPRAISAL OF INDIAN RAILWAYS IN PRE & POST TURNAROUND PERIOD

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## **ABSTRACT**

One of the remarkable landmarks in the process of civilization is the building development of railways and roadways. Industrial Revolution was benefited by railway line routes construction. Indian Railways is the lifeline of our country. Railways are fully owned by government for social benefits to citizen by connecting geographical boundaries and easy enabling trade and commerce. Railways service with the concept of benefitting the people of its nation be they be rich middle class or poor people of society. It enhances the regional development of states through connecting rail routes. But in spite being such an important part of economy is several past years there has been under investment in this sector. As a result the infrastructural development is ignored, advance technology needs to be implemented with high amount of investment both in terms of monetary and research wise. Investment in safety has to be ensured as well in order to increase the service delivery and quality and generate desirable national income. It is one of the pillars of the nation. In the year 2004 under the regime of Mr. Lalu Prasad Yadav, the then railway minister of Indian railways had earned an unexpected profits. The period is termed as a "Turnaround" of our Indian railways. Mr. Lalu Prasad Yadav is known as one of the best Central railway minister our nation has witnessed till date. He achieved tremendous success and became perhaps the best railway minister so far, breaking the record of 1994-96 and bringing down the Operating Ratio (OR) to the tune of 78 per cent in the year 2006-07 and 76 per cent in 2007-08 with in four years.

Keywords: Financial Performance, New Economic Policy, Turnaround in Indian Railways.

## Introduction

The development of railroads is one of the greatest landmarks in the process of civilization. Railways enabled to realize the potential of the Industrial Revolution in the form of a reliable, low cost, high volume system of land transportation. The second half of the nineteenth century saw the rail road reach maturity and become a worldwide, technical, social and economic phenomenon. The impact of early railroads amounted to a social and economic revolution. Indian Railways is the lifeline of the nation. It traverses the length and breadth of the country providing the required connectivity and integration for balanced regional development. The system never rests; it has been up and working unceasingly for the last several decades. It is an integral part of every Indian's being. It is one of the pillars of the nation.

The Indian Railways is among the world's largest railway networks and has strongly emerged as the main vehicle for the country's socio economic development. It caters to the transportation needs of the country, while also bringing together the diverse geographies and assisting in promoting national integration. Furthermore, the railway network is also ideal for long-distance travel and movement of bulk commodities, apart from being an energy efficient and economic mode of conveyance and transport. The 64,600-km network is spread across 7,146 stations, with 19,000 trains operating the routes daily.

## **Review of Literature**

A good number of descriptive studies have been conducted by researchers, various institutions and agencies, but they all deal with the issues at the broader level only. An attempt is made to review the available literature on the subject under study for the past thirty years. Most of the studies conducted in the area are in the form of case studies and had ignored a detailed and simultaneous analysis of financial performance, service dimensions. The literature has been reviewed under different heads, viz. turnaround in IR.

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## **Objectives of Study**

The main objectives of the research study are:

- To examine the economics of Indian Railway operations.
- To identifies the strategies initiated by Indian Railway to achieve its turnaround and to trace out the reasons for turnaround.
- To analyze the financial performance of Indian Railway during pre and post turnaround period.

## Research & Methodology

Research is a moment from known to unknown. The process to research requires lots of attention on doing the survey and obtaining the result. It is a careful investigation or inquiry about searching new facts in any branch or area. The main objective of this research is to find hidden truth. Research process starts with the defining problem or opportunity and ending with the preparation of research report.

## **Data Collection Methods**

There are two types of data which will be used for the study. It includes

#### **Primary Data Collection**

It is the original fact or data collected by the researcher through observation, inquiry, Questionnaire etc. Usually primary data is more reliable and it is time consuming process.

## **Secondary Data Collection**

The data which is collected by others and if we are only using such data then it is called secondary data. In this research paper I have used secondary data for getting an idea about financial performance appraisal of Indian Railways in pre & post turnaround period.

## **Indian Railways**

Indian Railways have a hybrid character. It is a commercial enterprise managed and operated as a Government department. The functioning of Indian Railways as a business undertaking is severely constrained as the government runs the railway as a department rather than as an enterprise. As a result, Indian railway is unable to undergo changes necessary for meeting the growing challenges of its falling share of traffic, customer dissatisfaction and above all it is forced to finance heavy investments through cost market borrowings.

The Indian Railways has the reputation of being a strong and stable organization. It works on a solid base and within an ideology that does not allow fluctuations in decision making. This art of management was developed through the last 155 years. Management is a joint venture of wisdom and craft, business and technology, profitability and service this model has transformed the Indian Railways into a legend, an organization commanding great respect and honour.

Inc	Indian Railways		
भारतीय रेल			
INDIAN ALLWAY			
"Lifeli	ine to the Nation"		
Type	Government Agency		
Industry	Rail Transport		
Founded	8 May 1845 (175 years ago)		
Headquarters	New Delhi, India		
Area served	India		
Key people Piyush Goyal (Minister of Railways)			
Services	Passenger railways, Freight services, Parcel carrier, Catering and Tourism services Parking lot operations Other related services.		

Revenue	₹.197,214 Crore (US\$28 billion) (2018–19)
Net income	₹.6,014 Crore (US\$840 million) (2018–19)
Owner	Government of India (100%)
Number of employees	12.3 lakh (1.23 million) (2019)
Parent	Ministry of Railways
Divisions	18 Railway Zones
Website	www.indianrailways.gov.in

Source: https://en.wikipedia.org/title=Indian Railways

#### Vision

To be a leading organization in the field of development, redevelopment, operation and maintenance of railway stations with passenger amenities of international standards

## Mission

To develop self-sustainable railway stations in the country with high standards of safety, comfort, Indian Railways friendly passenger amenities, value added service and efficiency by adopting the best technological practices, sound financial strategy and optimum utilization of resources.

## New Economic Reforms and Beyond (1991 onwards)

A wave of new economic reforms tried to engulf those sectors of the economy and individual undertakings which were run as public units or controlled by the government. In its simple form, the economic reform process was to provide freedom from bureaucratic influence and to deregulate business and be brought directly under market forces. Therefore, it was decided to end the 'license and permit raj'. Privatization was begun by shrinking the base of the public sector and a new industrial policy resolution was adopted to ensure that very few industries were run by the government. Of the six major categories, the railway was controlled and run by the government. Arms and ammunitions, atomic energy, and hazardous industries were retained as public undertakings. Within the policy framework, drastic changes were taking place and new location policy, environmental control and free access to foreign capital in the shape of FDI (Foreign Direct Investment) and FII (Foreign Institutional Investment) were made the norm, to work out the liberalization of the economy. After the economic reforms, the railways were regarded as the lifeline of Indian economy, an integrating force of the nation and a prestigious sector to be controlled by the government for the benefit of the common man.

The railways had shown inner strength in managing a turnaround during the most difficult times, even as they were being declared 'a time bomb waiting to explode'. Critics were highly vocal, dangerous, damaging, and suffering from the Winston Churchill syndrome.

The railways had shown a potential to change according to need, circumstances, and environment. So it comes as no surprise that the railways of today are totally different from the one in the past with regard to the operational process, technology, services, and management. With economic reforms, its challenge was to change with the changing paradigms, while still being organized within the framework of a centrally controlled system. Economic reforms involved the process of deregulation as well as abolishing hindrances which obstruct the progress of the economy or the undertaking.

## **Turnaround of Indian Railways**

Indian Railways which was declared to be heading towards bankruptcy in 2001 became one of the largest profits making public sector undertaking thereafter. The situation changed rather rapidly and surprisingly, as a result of efforts by the Ministry of Railways. The railways focused on market orientation of its activities, with consumer as the kingpin. For this, it emphasized on capacity generation through optimization of the existing infrastructure and assets and distinguished approach to the social and commercial segments of the traffic. There was a dramatic reinvention of the business of IR and it was one of the most impressive unparalleled expansions in the history of railways. It was observed that no single factor corresponded to this turnaround but a group of factors and strategies were responsible for the changing scenario of IR. The major strategies responsible for the turnaround of IR were: Downsizing and Retrenchment, Improving Revenue Generating Capacity, Repositioning of Indian Railways through Change in Organization and Decentralization, Increasing Competitiveness of Railways, Reorganization of Zones of Indian Railways in 2003, Reduction in the Railways' Market Share of Traffic, Burden of Social service Obligation, Poor Safety Measures, Reduced Share of Funding to the Railways, Less Private Sector Participation.

## Scenario before Turnaround in IR

In the early days of company owned railways, profit making was the ultimate aim. However, after independence, profit making was done along with social obligation. To look into the scenario before the turnaround and after nationalization, the efficiency indices of operation of all tractions from the plan period till the operational crisis in 1980 are given in table 1.

Table 1: Efficiency Indices of Operation from 1951 to 1981(₹ in millions)

Efficiency Index	1950-51	1960-61	1970-71	1980-81
Passengers Earnings	978	1316	2955	8275
Goods Earning	1430	2861	6182	15509
Working Expenses	2157	3726	8622	25760
Net Revenue Receipts	476	879	1447	1275
Operation Ratio (%)	80	78.8	84.1	96.1

Source: Annual Reports of IR for various years.

Both Goods earnings from ₹ 1430 to ₹ 15509 million and Passenger earnings from ₹ 978 to ₹ 8275 million multiplied manifold during the period. During the period, the working expenses increased from ₹ 2157 million to ₹ 25760 million. This indicates the necessity for cost reduction/ improvements in revenue for its survival. Operating ratio of 80 per cent in 1950 peaked to 96.1 per cent in 1980 shows a negative growth when compared with revenues and expenses. All these resulted in operational crisis of 1980.

## **Turnaround- A Myth or Fact**

IR, from the verge of bankruptcy in 2001, has made a U-turn to produce a cash surplus of ₹. 25,000 crore in a very short period of four years under the leadership of Mr. Lalu Prasad Yadav as Central Railway Minister. Before going in detail regarding the turnaround strategies, the researcher attempts to look into whether a turnaround happened in IR or not? A study on the financial indicators after the crisis in 2000-01 shows symptoms of a turnaround in IR. The important financial indicators are analyzed from 2000-01 to 2007-08. Though the period of study is from 2000-01 to 2009-10, for the purpose of analysis to identify the turnaround, the years 2008-09 and 2009-10 are excluded because the financial indicators during these two years show a reversal of turnaround. This may be due to change in the political leadership and resulted change in policies coupled with the steep escalation of fuel cost and staff cost. The scale of financial transformation of IR measured on key financial indicators is exhibited in table.

Table 2: Financial Indicators for the Period 2000 to 2008

Financial Indicators	2000-01	2007-08	Change
Cash surplus before dividend (in crore)	4790	25006	5 times increase
Operating ratio (%)	98.3	75.8	22% decrease
Ratio of Net Revenue to Capital (%)	2.5	20.7	18% increase

Source: Finance (Budget) Directorate, Ministry of Railways.

During the eight year period under computation, a considerable improvement is seen in Cash surplus, Operating ratio and Ratio of net Revenue to capital. A five time's increase in Surplus and 18 per cent increase in Net Revenue with a 22 per cent reduction in Operating ratio are the manifestation of turnaround in IR revealed by Table 2. However, to pinpoint the period at which it has taken place, yearwise analysis is required. In this regard, the performance indicators are analyzed from 2001 to 2008, segregating into two period's viz. 2001-04 and 2005-08. This segregation is done as major policy changes were initiated under the leadership of Mr. Lalu Prasad Yadav in 2004-05 and financial improvement coincided with the change for a significant turnaround in IR. Table 3 shows the comparative performance during the said two periods.

Table 3: Performance Indicators of IR from 2000 to 2008(₹ in Crore)

Pre-Period Pre-Period					Post- P	eriod				
Item	2000-01	2001-02	2002-03	2003-04	% Change	2004-05	2005-06	2006-07	2007-08	% Change
Goods Revenue	23305	24845	26505	27618	18.51	30778	36287	41716	47435	54.12
Passenger Revenue	10515	11196	12575	13298	26.47	14113	15126	17225	19844	40.61
Total Revenue	35288	37858	41148	42842	21.41	47038	54404	62371	71645	52.31
Total Working Expences	34667	36293	38026	39483	13.89	42759	45574	49047	54462	27.37
Operating Ratio (%)	98.3	96	92.3	92.1		91	83.2	78.8	75.8	

Source: Statistics and Economics Directorate Ministry of Railways 2001-2008

From the year 2001 to 2004, Goods revenue registered a growth of 18.51 per cent and Passenger revenue with a growth rate of 26.47 per cent. However, during the period 2005 to 2008, Goods revenue rose to 54.12 per cent and Passenger revenue to 40.61 per cent. These changes resulted in an increase of total revenue from 21.41 per cent to 52.31 per cent during the relevant period. When Total Revenue in 2005-06 registered an increase of ₹. 7344 crore (15.66%) compared to 2004-05, the Total Working expenses increased only by ₹. 2815 crore (6.58%). With the result, Net Revenue increased and the Operating ratio declined from 91 per cent to 83.2 per cent.

The efficiency improvement is evident from the diminishing operating ratio, which was 98.3 per cent in 2000-01, improved to 92.1 per cent in 2004-05 and reached 75.8 per cent in 2007-08. Operating ratio shows the relationship between total revenue and total working expenses or it indicates the cost incurred to earn one rupee of revenue. Hence, the performance indicators also indicate that a turnaround has taken place during 2005-08.

The total Working expenses also increased from 13.89 per cent to 27.37 per cent during the period. However, the increase in working expenses is relatively less than the increase in revenue compared to the previous period. Along with financial and performance indicators, different elements of working expenses are also to be analyzed to find out the extent of cost control. Hence the same is attempted. The Compounded Annual Growth (CAG) table compares the growth in earnings and expenses over the nineties that led to the financial crisis in 2001 and the transformation after 2001.

Table 4: Compounded Annual Growth Rate of Expenses and Earnings

Expensed/Fornings	1991	2001	2008	1991-2001	2001-2008
Expenses/ Earnings	2006	2006	CAGR (%)	CAGR (%)	
Total working expenses	11,554	34,667	54,462	12. 01	6.67
Gross traffic receipts	12,096	34,880	71,280	11.17	10.85
Passenger earnings	3148	10,481	19,784	12.82	9.5
Goods earnings	8408	23,045	46,429	10.7	10.69
Other coaching earnings	336	764	1800	8.56	13.02
Sundry earnings	242	703	2565	11.25	20.31

Source: Statistics and Economics Directorate, Ministry of Railways.

After 1991, the Railway's expenses (12.01%) grew one percent faster than its earnings (11.17) leading it towards bankruptcy. However, between 2001 and 2008, the Railways have become solvent by inverting this relationship i.e., earnings (10.85%) grow four percent faster than expenses (6.67%). Earnings have grown on account growth in freight volume, differential price hikes etc. and working expenses grew at a lower rate due to low inflation and relatively inelastic cost structure in relation to volume transported. To evaluate the efficiency of improvement in operating performance, Operating ratio and net revenue to capital was analyzed and is shown in table 5.

Table 5: Operating Ratio and Ratio of Net Revenue to Capital

Year	Operating Ratio (%)	Ratio of Net Revenue to Capital (%)
2000-01	98.28	2.5
2001-02	96.01	5
2002-03	92.31	7.5
2003-04	92.16	8
2004-05	91.02	8.9
2005-06	83.72	15.4
2006-07	78.68	19
2007-08	75.94	20.7
2008-09	90.46	8.8
2009-10	95.28	5.3

Source: Explanatory Memorandum of Railway budget, 2009-10

The efficiency improvement can be evidenced from the diminishing Operating ratio, which was 98.28 per cent in 2000-01, brought down to 75.94 per cent by 2007-08. Change in Operating ratio is also influenced by change in accounting practice. The reduction in operating ratio is achieved through reduction in operating expenses and improvement in gross revenue receipts. Expenditure reduction is achieved through improvement in technical efficiency, better labour productivity, vacancy freezing and better utilization of existing capacity. Obviously, there occurred a turnaround and had a dominant role in the effective utilization of assets. In 2005-06, the momentum of turnaround was noticed in railways. All

these indicate that a turnaround in IR started taking place during 2005-06 and lasted till 2007-08. Therefore, turnaround was a fact and not a myth. However, there has been a reversal of the performance from the year 2008-09.

## **Effective Utilization of Assets**

The main assets of IR consist of track, bridges and rolling stock. The effective utilization of assets is made to enhance the revenue and also to minimize cost, which is within the control of the system. Revenue enhancement is done by effective utilization of available assets like, locomotives, wagons, coaches, brake van, parcel vans and railway land. Asset utilization indices are wagon utilization, track utilization and engine utilization indices. Effective Utilization of Assets were: Goods traffic Earnings, Passenger Earnings, Strategy of Outsourcing of Non-Core Activities, Strategy of Discovering New Source of Revenue, Strategy of Plugging Leakage of Revenue, Strategy of Change in Accounting Practices, Environmental Factors, Sustainability of Turnaround. Turnaround means sudden or surprise change and is not only due to significant growth in economy but it coincides with Mr. Lalu Prasad Yadav Central Minister of Indian Railways presence and railway officials called it as 'turn around'. Three accounting policy changes made by IR increased its surplus by ₹. 2689.97 crore in 2006-07.

# **Present Financial Performance Appraisal of Indian Railways**

As performance appraisal has many aspects, financial performance appraisal is a major parameter of an organization's performance. When in any organization there are different zone, it is but natural that management wants to ascertain the profitability of the Indian Railways to know about the financial performance Indian Railways. As the study is related with the 'Financial Performance Appraisal the researcher is suppose to have a detailed and comparative analysis of the Financial Performance of Indian Railways. For the measurement of Financial Performance there are many tools. Here the researcher has used two major parameters the first being Comparative Income Statement and second Ratio Analysis, under Ratio Analysis different ratios has been computed for the measurement of financial performance and decision making.

#### **Comparative Income Statement Year wise**

A comparative view of Revenue and Expenditure and balance sheet shows the detail analysis of total revenue and expenditure and financial position of Indian Railways during the period 2017-18. Total revenue includes gross traffic receipts which content receipts form goods traffic, Passenger traffic, sundry earning, other coaching earning and suspense revenue. Total working expenses includes expenditure on general superintendence and service, repair and maintenance, operating expenses, expenditure on staff welfare and amenities, miscellaneous working expenses, appropriation to pension fund, appropriation to DRF, provident fund – pension fund, and other retirement benefits, and suspense expenditure. A detail analysis of Comparative Income Statement is as follows:

Table 6: Comparative Income Statement for the year ended 31st March 2018

Particulars	2016-17	2017-18	Variation (₹ in Crore)	Variation (in %)
Passenger Earnings	46280.46	48643.14	2362.68	5.11
Other Coaching Earnings	4,312.00	4,314.43	2.43	0.06
Goods Earnings	1,04,338.54	1,17,055.40	12,716.86	12.19
Sundry Earnings	10,368.04	8,688.18	-1,679.86	-16.20
Gross Earnings	1,65,299.04	1,78,701.15	13,402.11	8.11
Suspense	-6.84	24.16	31.00	-453.22
Gross Traffic Receipts	1,65,292.20	1,78,725.31	13,433.11	8.13
Ordinary Working Expenses	1,18,829.61	1,28,496.51	9,666.90	8.14
Appropriation to Depreciation Reserve Fund	5,200.00	1,540.00	-3,660.00	-70.38
Appropriation to Pension Fund	35,000.00	45,797.71	10,797.71	30.85
Total Working Expenses	1,59,029.61	1,75,834.22	16,804.61	10.57
Net Traffic Receipts	6,262.59	2,891.09	-3,371.50	-53.84
Miscellaneous Transactions	-1,349.59	-1,225.48	124.11	-9.20
Net Revenue Receipts	4,913.00	1,665.61	-3,247.39	-66.10
Dividend payable to Gen.	0	0	0.00	0
Revenues	0	0	0.00	0
Excess (+)/Shortfall (-)	4,913.00	1,665.61	-3,247.39	-66.10

Percentage of Net Revenue to Capital-at-charge including investment from Capital Fund	1.62	0.51	-1.11	-68.52
Operating Ratio (%)	96.5	98.44	1.94	2.01
Capital-at-charge (including investment from Capital Fund) per NTKM (in paise)	431	418	-13.00	-3.02

Source: Railways year book 2017-18.

#### Results for 2017-18

• Gross Traffic Receipts - Gross Traffic Receipts of the Railways went up from ₹ 1,65,292.20 crore in 2016-17 to ₹ 1,78,725.31 crore in 2017-18. Total Working Expenses increased from ₹ 1,59,029.61 crore in 2016-17 to ₹ 1,75,834.22 crore in 2017-18. After taking into account the miscellaneous transactions, the Net Revenue Receipts were ₹ - 3,247.39 crore (-66.10%) over the previous year.

## **Operating Ratio of Indian Railways**

Reforms had started with liberalization, when new changes were taken up in the country in 1991 and it was said that the railways had seen some improvements between 1994-96 in both operating (OR) and Return-on-Capital Ratio (RCR) respectively. But, this situation could not be sustained for long and immediately after 1996, OR started increasing and RCR decreasing, which created a severe situation, reaching its worst in 2000-01. However, after the worst period (2000-01) when Nitish Kumar (and for a very short period Mamatha Banerjee) held charge, and the Rakesh Mohan Committee was constituted and presented its reports, there came the regime of Lalu Prasad who took charge of the railways in 2004-05. Lalu Prasad Yadav inherited a troubled Organization and he had no option but to manage it. It was the worst and the best of times for Lalu Prasad. He achieved tremendous success and became perhaps the best railway minister so far, breaking the record of 1994-96 and bringing down the OR to the tune of 78 per cent in the year 2006-07 and 76 per cent in 2007-08 with in four years. The year 2004-05 was the turning point and the railways entered the turnaround process proclaiming profits regularly during his regime for all four-five years. The achievement of the railways can be seen in three ways: physical, financial and mixed. However, for the purpose of analysis, we have to confine ourselves only to the financial aspect, which is closely connected with operating ratio. The performance of maintaining costs (or Maximizing Profits) is also a measure of assessing economic success.

Table 7 Operating Ratio of Indian Railways (₹ in Crore)

Years	Total Working Expenses	Gross Earnings	Ratio (%)
2003-04	2322	2524	92
2004-05	2515	2786	90
2005-06	2681	3205	84
2006-07	2885	3690	78
2007-08	3204	4219	76
2008-09	4226	4698	90
2009-10	4877	5116	95
2010-11	5263	5561	95
2011-12	5804	6124	95
2012-13	6563	7278	90
2013-14	7666	8209	93
2014-15	8412	9218	91
2015-16	8696	9667	90
2016-17	9355	9723	96
2017-18	10343	10513	98
Average	5654	6169	90

Source: Railways year book 2017-18.

The data furnished in Table 7 gives a comprehensive idea of the behavior of total working expenses of Indian Railways. A study of the total working expenses of the Indian Railways shows that the average operating ratio is 90 per cent. This ratio had shown a declining trend from 92 per cent 2003-04 to 76 per cent in 2007-08 and thereafter an uptrend reaching 98 percent 2017-18 and continued at the

same level. The operating ratio of Indian Railways is within the stipulated norm of 80 to 90 percent up to 2007-2008, implying better operating performance. But for the following three years, the ratio is reported at 98 per cent indicating poor operating efficiency of Indian Railways. The working expenses which were controlled efficiently up to 2007-08 went on increasing thereafter. Therefore, the management of Indian Railways has to initiate a two way action. The first being effective control of working expenses and the second improving the gross earnings to justify the working expenses incurred.

#### Conclusion

The financial performance of Indian Railways is severely affected by several problems. With changing times, the financial arrangement between the Railways and the General Revenues (Central Government) has under gone several reviews and modifications. The railways maintain accounts according to their own accounting standards and procedures. The railway projects of capital nature do not require clearance from the public investment board, as in the case with other Ministries. The financial performance of railways has been negative, in terms of operating ratio. However, the total working expenses have also been increasing immensely since the 1990s. This is an indication of the expanding activities of the railways in terms of physical infrastructure and financial matters.

Management of finance always remains key issue for the sustenance of any organization. Proper analysis of Revenue & Expenditure patterns of an organization helps to study the trends of growth and development of an organization and further leads towards effective decision making for its better future prospects. It also helps understanding the positivity strategies adopted the management of the organization. When it comes to the bigger organization like the one as Indian Railways it becomes more important because it concludes huge amount of sums. If the total revenue and expenditure of Indian Railways are studies.

Last not least one must not forget that Indian Railways acts as a major catalyst for our economy, industries, polity, society and nation at large. The real strength of Indian Railways is its employees, assets and operations.

## **Suggestions & Recommendations**

The foregoing findings explained above and after taking a cue from railways past, observing the current scenario and with an eye on future changes, the following suggestions are made in order to facilitate better operational and financial performance of Indian Railways.

If railways have to cope with the challenges of the twenty first century, they would require a qualitative switch from the existing conceptual framework in which they operate today. The first bottleneck to be tackled is attitudinal. The real challenge for getting out of the vicious cycle is to bring about a change in the thought-process of the authorities involved – the political leadership, the top management and the rest of the bureaucracy, railway labour leadership as also the railways.

# References

- 1. Indian Railways Year Book 2009-10, 2010-11, 2011-12, 2012-13, 2013-14, 2014-15, 2015-16, 2016-17 and 2017-18; Government of India (Railway Board: Ministry of Indian Railways).
- 2. Asthana B. N. Financial Management of Indian Railways. Jaipur: Ramesh Book Depot, 1974.
- 3. Verma K. B. Readings in Indian Railway Finance. New Delhi: Mittal Publication House, 1989.
- 4. Annual Reports and Accounts of Indian Railways, Government of India (Ministry of Railways).
- Reports from Planning Commission of India.

# Websites

- 1. http://www.indianrail.gov.in
- 2. http://www.indianrailways.gov.in/
- 3. http://www.planningcommission.nic.in
- 4. https://en.wikipedia.org/wiki/adra
- 5. https://en.wikipedia.org/wiki/ranchi\_Junction\_railway\_station
- 6. https://en.wikipedia.org/wiki/south\_eastern\_Railway\_zone

