

FINANCIAL STABILITY OF INDIAN RAILWAYS

A Dissertation submitted to Ravenshaw University in partial fulfilment of the requirement for the award of the Degree of Bachelor in Science in Economics

Submitted By

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CERTIFICATE

This is to certify that the dissertation titled **“Financial stability of Indian Railways”** submitted by ADISHREE PATRA, ROLL NO: 17DSE002 to Ravenshaw University, Cuttack, for the award of the degree of Bachelors of Economics is a record of bonafide research work carried out by her under my supervision and guidance. Her dissertation, in my opinion has reached the standard of fulfilling the requirements for the award of the Degree of Bachelors of Economics in accordance with the regulation of the university. The work has not been submitted for award of any degree, diploma or prize elsewhere.

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DECLARATION

I do hereby declare that the dissertation entitled **“Financial stability of Indian Railways”** submitted to Ravenshaw University, Cuttack, in partial fulfilment of the Degree of Bachelors in Economics, is an original research work done by me and the same has not been submitted either in part or full for the award of degree to any other university or sent for publication to any journal or book.

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CHAPTER 1

1. INTRODUCTION

1.1 INTRODUCTION OF THE STUDY

Indian Railways has been aptly called the 'Nation's lifeline' simply because it has played a crucial role in social, political and economic life of the country. The impact of its influence manifested in growth of trade and commerce, development of industries, urbanisation, employment generation, help in spread of education, stabilizing factor in price control, contribution to country's exchequer as well as bringing together people from all walks of life.

This vast network has not only integrated markets but also transported men and materials in large numbers at short notice in times of war or natural calamities. It is because of the commendable services provided by the Railways, INDIAN RAILWAYS (IR) has emerged as one of the foremost institutions of the country throughout these years.

It is but obvious that when the growth of a country's economy accelerates, the supply of all transportation services will also have to accelerate accordingly. It is very well said that a country's real economic progress takes place when its infrastructural set up is shaped accordingly. India being a large continental economy, the role of Indian Railways, which spreads from the length and breadth of the country to provide a fillip towards solution of India's infrastructural development is vital.

Thus, transportation being the nervous system of a country and Indian Railways being the gigantic transport network of our country, it has ideally been functioning as a Government owned commercial department of the Central Government since its inception. As is followed in all Central Government departments, funds for day-to-day operations and maintenance as well as investment in IR has been controlled through the central planning process and financed through budgetary support from the Government, internal generation and market borrowings. But over the passage of time, it has been observed that budgetary support is in the declining trend compared to Railway's vast expenditure. The internal generation of funds has come under severe pressure after implementation of successive pay commissions and substantial increase in non-plan expenditure of Railways like defence expenditure, interest payments etc. The process of market borrowings is also not so easy in yielding adequate returns.

In the backdrop of the above scenario, there is a large backlog of investment that IR needs in order to finance major modernisation and capacity expansion requirements. Not to speak of running luxurious trains, the IR finds itself in a tricky financial situation even in the area of regular operation and maintenance of its largest network.

1.2 IMPORTANCE OF STUDY

The present study assumes its importance due to the following:

1. Railways' market share in freight and passenger business has been steadily declining to other modes of transport. There is a 59% decline in the share of Railways in total freight traffic during the period from 1950-51 to 2011-12,
2. The low capability to generate operational surplus is indicated by the fact that Railways' operating ratio has been consistently above 90% for the past several years, and
3. Railways' expenditure has been gradually increasing over the years. To state it the other way, in the last few years, Railways has been struggling to generate its own revenue.

CHAPTER 2

2. REVIEW OF LITERATURE

2.1 KEY LITERATURE

Previous studies on this subject of Railway Finance have been undertaken by various researchers, committees and institutes to study the trends, patterns and financial health of Indian Railways. In some cases, the studies have been limited to particular zonal railways while others have covered entire Indian Railways as an organization. Some of them are outlined below with their findings:

Santosh ku. Dash and Sitakanta Panda (2018): the duo focused their studies on the reasons for the bad financial health of Indian Railways, taking the operating ratio as a base index for 3 years (2015-16 to 2017-18). They analyzed that Indian Railways needs to invest a humongous amount of money to meet expenditures on new tracks, track renewal, creating rolling stock, station redevelopment and dedicated freight corridors. Thus, the high operating ratio hardly leaves any money for the Indian Railways to invest on its own, in the face of stiff competition in the arena of multi modal transport system.

They impressed upon developing a method of optimal fare pricing for raising Railway revenues.

Based on their studies they suggested the following measures to improve the financial health of IR:

1. As introduced in Delhi metro, space selling for advertisement purpose,
2. selling surplus and potentially unusable land,
3. by developing commercial zones/ shopping malls near the station areas, and
4. by raising rail fares based on surveys like willingness to pay (WTP) on the passengers.

Dan Bogart and Latika Chaudhary (2009): the duo emphasized their studies on the role of public private partnership i.e., PPP model in Indian Railways. They mainly dwelt upon virtues of state ownership vis a vis public-private-partnership. Based on their studies they suggested that the novel idea of PPP can work well:

1. when efficient operation is ensured,
2. when all the stakeholders have mutual trust and make all-out effort to achieve the ultimate objective i.e., hassle free service to the customers with reasonable price and to be cost effective,
3. when right initiative to incentivize the stakeholder i.e., right incentives to improve all round performance is ensured.

A Bharat Bhusan (2013): he attempted to study the Railway financial system with the broader concept that transport and communication are considered as nervous system of the economy which helps the circulation of men and materials. He defined transport as a service utility which facilitates physical transfer of goods and persons from one place to another. In his studies he focused on financial performances of South-Central Railway with a broader perspective of Indian Railway finances as a whole. Based on his studies, he concluded that capital at charge is in the increasing trend and for the obvious reasons i.e., modernization of signal system, track upgradation, undertaking of uniguage policy and infrastructural improvements. On the backdrop of his analysis, the following suggestions were made to improve overall financial position:

- 1.improvements of assets as well as ensuring their optimum capacity utilization,
- 2.electrification of all the railway lines to curb the operating expenses as well as to make it eco-friendly,
- 3.augmentation of earnings of both passenger as well as freight earnings by rationalizing the fare structure so as to meet the minimum cost and down size the operating ratio.

G. Raghuram and Rachna Gangwar (2008): they made an attempt on Indian Railways over the past twenty year's issues, performance and challenges. In their study, they found that nearly 70% of Indian Railways' revenues come from the freight operations. Coal is the most significant and therefore, alone it comprises for about half of the bulk traffic carried. Passenger business generated less than 30% of the total revenues even though in terms of train kilometers, it covers about 60% of Indian Railways' total transport effort. Though suburban services account for 57% of the originating passengers, it could only contribute 8% for the passenger revenue.

Sharma and Manimala (2008): their study tried to analyze the turnaround in a relevant theoretical perspective and make reasonable assessment as to the sustainability of the turnaround of Indian Railways. As indicated from their study, operational inefficiency, lack of resource for growth and lack of market orientation contribute to a major financial downturn of Indian Railways.

Desh Gupta and Milind Sathye (2007): they have made a study entitled “Financial Turnaround of the Indian Railways - Good Luck or Good Management”. Their studies focused on the factors responsible for the turnaround from a low performing organization to a high performing organization of Indian Railways. The environmental factors which contributed in a significant way to the success of Indian Railways were indicated by the study.

Rohit Bharill and Narayan Rangaraj (2007): in their research paper on “Revenue management in Railway operations: A study of the Rajdhani Express, Indian Railways”, an attempt has been made to derive elasticity estimates between the key mode choices internal to the railways. They concluded by stating that revenue management through differential pricing can be considered as a measure to increase revenue on an average.

Nanjundappa (1998): he made a study to analyze the Indian Railway’s finances and pricing. The study states that Indian Railway’s finances need to be restructured so that it can suit the requirement of the commercial organization. Considering the overall financial situation of the country, further negligence in the efficiency of financial management of Railways and the continuance of indiscreet subsidies can result into destabilization and destruction of one of the most successful public enterprises of the government of India.

Anand (1998): he attempted to study the reforming Indian Railways financial management. The problems in broad terms were divided in three main parts i.e., the present state of affairs, the distortions and dilemmas, and the way out. He found out that the major difficult area of Indian Railways financial management is not ‘shortage of resources’, but its diminishing contribution in the national transport market, undifferentiated and uncommercial character of its investments, distorted tariffs construction and its stagnation in operating efficiency and in traffic carried. The main failure in commercial enterprise ethos, attitude and culture are not changing over a long

period of time but it is essential to face the emerging challenges in the competition, customer – driven market and high cost investment in the place of its old monopolistic position and low capital that enjoyed before.

Subramaniam (1998): in his paper, he emphasized the relationship between the financial performance and operational efficiency of Indian Railways. His study attempted to establish the correlation of indicators of financial administration and of utilization of asset. He also includes staff productivity, total traffic output, wagon, track utilization and engine utilization in his study. He states that improving the operational efficiency must be translated into corresponding financial performance. The correction index which he tested, turned out to be very poor. So, another correlation is attempted on operational efficiency variable and simulated financial variable which resulted in high correlation, establishing the importance in alignment of tariff to input costs to generate financial benefits from operational efficiency improvements.

2.2 LITERATURE GAP

In the above studies, the overall data used by the research scholars ranged from 1966-1967 being the oldest and up-to 2017-18 being the latest. However, the data used in this paper is taken from CAG Reports on Union Government (Railways) Railways Finances (2018-19) and Demand for Grants 2020-21 Analysis, covering the period from 2012-13 to 2019-20.

CHAPTER 3

3.1 OBJECTIVES

The followings are the objectives set for the present study:

1. To have a critical review of Financial Planning & Management of Indian Railways including the budgetary process and different sources of Railways' funding,
2. To find the areas of challenges which has resulted in financial stress of Indian Railways and
3. To suggest measures for improvement of the present financial status of the Indian Railways.

3.2 DATABASE AND METHODOLOGY

The present study is based on the financial scenario of the Indian Railways for which data has been collected from secondary sources such as Demand for Grants (Railways), budget speech on Railways, financial audit reports of the CAGI etc.

We examine the data for the period from 2012-13 to 2019-20 for the above study. Simple statistical tools such as averages and percentages are used to compare variables of revenue and expenditure of Indian Railways. Tabulation and graphical representations are used in the study to interpret the data.

- Reference – Adapted from the study of A Bharat Bhushan, “A CASE STUDY OF SOUTH-CENTRAL RAILWAY”, the tools used in that paper were averages, percentages, tabulation and graphical representations etc.

Basing on the analysis, conclusions have been drawn. Finally, suggestions have been made for better functioning and also to improve the financial position of Indian Railways.

3.3 LIMITATION OF THE STUDY

One of the major limitations of this study is that the data used are based on secondary sources and are not continuous. The present study is limited to a period of short duration with an emphasis on the years from 2018-19 to 2020-21, and therefore, trend review is not feasible in this case. Also, in this paper, no advanced mathematical or statistical tools have been used.

CHAPTER 4

4. FINANCIAL PLANING AND FINANCIAL MANAGEMENT IN INDIAN RAILWAYS (A CRITICAL REVIEW)

4.1 CORPORATE OBJECTIVES AND PLANNING PROCESS OF RAILWAYS

Simply stated, the pivot of finance functions revolves broadly on procurement of funds and their effective utilisation in the business. Obviously, it envisages the need and importance of proper financial planning and financial management. Corporate objectives and goals being key to the planning process, it would be high time to know the basic corporate objectives of the Indian Railways:

1. Keeping in consonance with Government's policy of development of backward areas, objective is to provide rail transport for both passengers and goods adequate to meet demand in areas where railway operation provides optimum benefit to the economy.
2. To provide adequate provision for replacement of assets and some provision for development of business, requirement of the railway users with safety of operation and the low amount of pollution in the environment with broader objective of providing rail transport at the lowest cost.
3. To engage in ancillary activities necessary to sub-serve the above two objectives, it has to work in association with or utilize other modes of transportation, such as road transport and pipelines simultaneously.
4. To take interest of the public and of the nation as its ultimate objectives, the corporate image of the railways is to be established as an up-to-date business organization.
5. An organizationally-effective personnel is to be developed with pride in their work and faith in the management.

Based on the above corporate objectives, Railway's planning process centres around-

- a. Passenger traffic projections;
- b. Freight traffic projections; and
- c. Formulation of railway development programmes.

Once the planning process is finalised, the finance function commences with the annual exercise

of preparation of Railway budget. Simply stated, Budget is ‘a statement of estimated annual receipt and expenditure of an organization’. Like every year, a railway budget based on individual railways’ estimated receipt and demands for expenditure is prepared by the Railway Board for the Indian Railways as a whole and is laid before the Parliament.

The steps which are involved in the presentation of Railway Budget are as follows:

- a. Preparation of budget
- b. Voting of budget
- c. Execution of budget
- d. Review of budget as executed

4.2 DEMANDS FOR GRANTS

The proposals are submitted to Parliament in the shape of demands and when appropriations are sanctioned by President and Budget is voted by Parliament, the same very demands become grants. There are 16 “Demands for Grants”:

Demand No.	Name of Demand
1.	Railway Board
2.	Research Audit and Mics. Establishment
3.	General Superintendence and services on Railways
4.	Repair and Maint. Of Way. And Works.
5.	Repairs and the Maint. Of motive powers.
6.	Repairs and Maint. Of Carriage and Wagons.
7.	Repairs and Maint. Of Plant and Equipment.
8.	Operating Expenses Rolling Stock and Equipment
9.	Operating Expenses Traffic.
10.	Operating Expenses Fuel.

11. Staff Welfare and Amenities + Payment of Medical staff
12. Misc. Working Expenses + Payment of RPF suspense
13. PF pension and other Retirement benefits.
14. Appropriation to funds.
15. Repayment of loan taken from General Revenue, Dividend to General Revenue.
16. Asset – Acquisition and Replacement.

A critical analysis of the demands for grants is detailed below:

Since Indian Railways is a commercial undertaking of the government, like every year, recently the Railways finances were presented on February 1, 2020 by the Finance Minister Mrs. Nirmala Sitharaman along with the Union Budget 2020-21. The Ministry of Railways is responsible for managing the policy formation and administration of Indian Railways through the Railway Board.

The key highlights are as under:

1. **Traffic revenue**: As per the revised estimates of 2019-20, revenue from freight traffic is estimated to be 6% lower than the budget estimate. In 2020-21, revenue from both passenger and freight traffic has been expected to grow by 9%. With a 10% increase from the revised estimates of 2019-20, total revenue from traffic is estimated at Rs 2,25,613 crore for 2020-21.
2. **Operating Ratio**: In 2020-21, the Railways' Operating Ratio is estimated to be 96.2%, which is marginally better than the revised estimates of 2019-20, being 97.4%.
3. **Expenditure**: The total revenue expenditure by Railways is projected at Rs 2,19,413 crore in 2020-21. This is an 8% increase from the revised estimates of 2019-20. In the revised estimates of 2019-20, total revenue expenditure is estimated to be 3% lower than the budget estimates.

4.3 RAILWAYS' REVENUE AND EXPENDITURE

Railways' Revenue

Indian Railways is financed through the following:

- (i) budgetary support from the central government,
- (ii) its own internal resources (i.e., freight and passenger revenue and leasing of railway land),
- (iii) extra budgetary resources (i.e., primarily borrowings but it also includes institutional financing, foreign direct investment and public private partnerships (PPP)).
 - Railways' working expenses (i.e., salaries, pension, staff amenities, asset maintenance) are financed through its internal resources. Capital expenditure (i.e., procurement of wagons, station redevelopment) is met through extra budgetary resources, Railways' internal resources and the budgetary support from the central government.

(i) Budgetary support from central government

In order to expand its network and invest in capital expenditure, Railways depend on the budgetary support from the central government. Till the year 2015-16, the fund provided in the form of budgetary support from the central government used to be the core source of funds for capital expenditure. But this state of affairs changed in 2015-16 where from an increasingly higher proportion of the capital expenditure is being financed through extra budgetary resources. A higher portion i.e., 54% of the capital expenditure was met through extra budgetary resources in 2017-18.

With a 3% increase on the revised estimates of 2019-20 (Rs 68,105 crore), the budget estimates from central government is proposed at Rs 70,148 crore in 2020-21. The operating losses made on strategic lines, and for the operational cost of e-ticketing to IRCTC are reimbursed to Railways by the central government.

(ii) Internal Resources

The internal revenue of Railways is earned mainly from passenger and freight traffic. Passenger and Freight traffic contributed to about 27% and 67% of the internal revenue respectively in 2018-19. On the basis of which Railways expects to earn 65% of its internal revenue from freight and 27% from passenger traffic in 2020-21. It is expected that miscellaneous sources such as parcel service, coaching receipts, and sale of platform tickets etc can contribute the remaining 8% of the earnings.

Freight traffic: Railways mostly transports bulk commodities such as raw materials for certain industries like power plants and the iron and steel plants etc. As shown in **Figure 1**, Railways generated 45% of freight earnings from coal followed by 8% from cement, 7% from iron ore and 7% from pig iron/ finished steel. Railways expects to earn an increase of 9% over the revised estimates of 2019-20, i.e., Rs 1,47,000 crore from goods traffic in 2020-21.

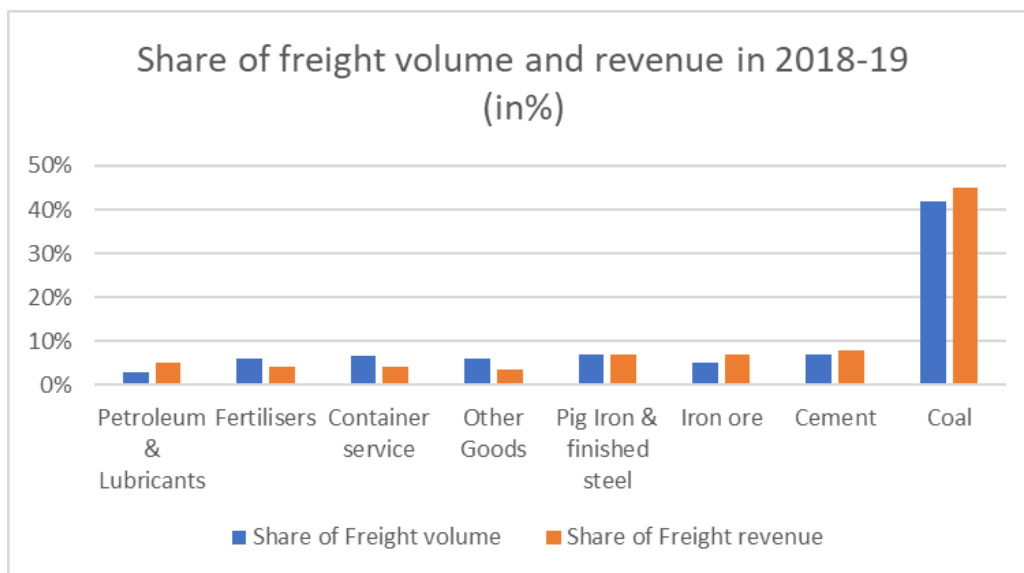


Figure 1: Share of freight volume and share of freight revenue in 2018-19 (in %)

Sources: Expenditure Profile, Union Budget of 2020-21.

Passenger traffic and revenue: Passenger traffic is subdivided into two categories i.e., suburban and non-suburban traffic. Passenger trains which cover short distances of up to 150 km, are

called suburban trains. They help to move passengers within cities and suburbs. Majority of the passenger revenue (about 94% in 2018-19) comes from the non-suburban traffic (or the long-distance trains).

In 2020-21, Railways has expected to earn Rs 61,000 crore from passenger traffic, which is an increase of 9% over the revised estimates of 2019-20. However, in 2020-21, the passenger traffic is estimated to grow at 1%. In 2019-20 (revised estimates), a 2% decline is also estimated in passenger traffic, while no change is estimated in the passenger revenue.

(iii)Extra Budgetary Resources (EBR)

The system of Extra Budgetary Resources (EBR) has been introduced in Railways as a source of external investments. This could be in the form of joint ventures, public private partnerships (PPPs), or market financing by attracting private investors to potentially buy equity shares or bonds in Railways. IRFC (Indian Railways Finance Corporation) borrows funds from the market and then through a system of leasing procedure, finances the rolling stock assets and project assets of Indian Railways and also for execution of RVNL (Rail Vikas Nigam Limited) projects. EBR-IF i.e., Extra-Budgetary Resources through Institutional Financing from LIC of India for funding capital projects and funds raised through implementing projects in PPP mode also form a part of EBR.

In march 2015, a MOU was signed between the Ministry of Railways and LIC of India. On the basis of which, LIC committed funding assistance for identified projects of Rs 1.5 lakh crore over a five-year period starting from 2015-16. An expenditure of Rs 35,927.41 crore has been incurred during the three years period i.e., 2015-16 to 2017-18 (Rs 9,887.95, Rs 11,465.15 and Rs 14,574.3 crore respectively) against an amount of Rs 37,359.89 crore which has been raised through this mode (Rs 9,430, Rs 13,170 and Rs 14759.89 crore respectively).

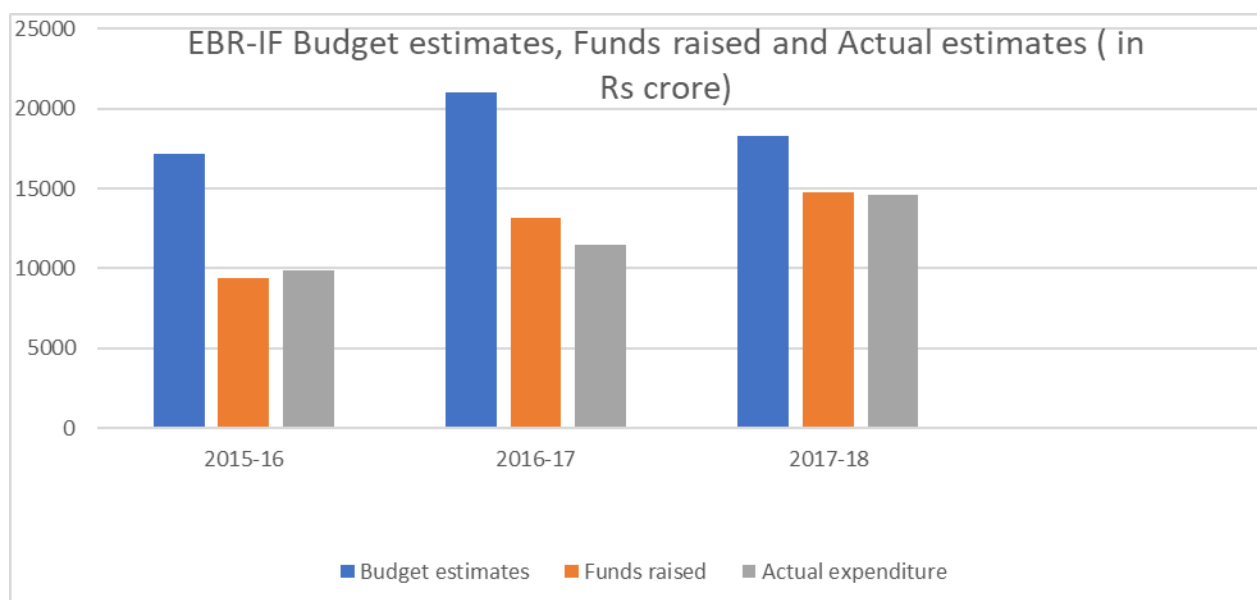


Figure 2: EBR-IF Budget estimates, funds raised and actual expenditure.

Until 2015-16, a major part of the Railways' capital expenditure used to be met from the budgetary support from central government. This trend changed with majority of Railways' capital expenditure being financed through EBR from 2015-16. However, it has been noticed that over the last few years, borrowings have substantially increased to bridge the gap between the available resources and expenditure. An amount of Rs 83,292 crore is estimated to be raised through EBR in 2020-21 which is slightly higher than the revised estimated amount i.e., Rs 83,247 crore of 2019-20.

Capital outlay

The total proposed capital outlay (amount spent on asset creation) is Rs 1,60,940 crore for 2020-21, which is 3% higher than the revised capital outlay for 2019-20 (i.e., Rs 1,56,352 crore).

Table 1: Capital outlay (in Rs crore)

	2018-19 (Actuals)	2019-20 (Revised)	2020-21 (Budget)	% Change (2020-21 BE/ 2019-20 RE)
Gross Budgetary support	52,838	68,105	70,148	3%

Internal Resources	4,663	5,000	7,500	50%
Extra Budgetary Resources	75,876	83,247	83,292	0.05%
Total	1,33,377	1,56,352	1,60,940	3%

Note: RE – Revised Estimates and BE – Budget Estimates.

Sources: Expenditure Profile, Union Budget of 2020-21.

The extra budgetary resources (52%), will finance the significant portion of this capital expenditure followed by the budgetary support from the central government (44%). Railways will only fund 4% of this capital expenditure from its own internal resources. The trends in capital outlay over the last few years is represented in **Figure 3**. This shows that Railways' capability of funding the capital outlay from its own revenue stream has been declining.

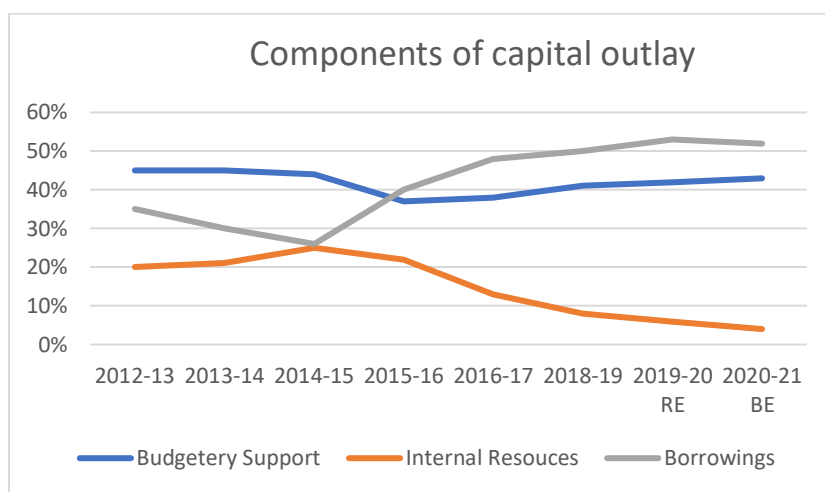


Figure 3: Components of capital outlays

Note: RE – Revised Estimates and BE – Budget Estimates. Sources: Expenditure Profile, Union Budget of 2020-21.

Railways' Expenditure

Indian Railways spent most of its money on staff (42% of its working expenditure), followed by expenses on pension fund (24%), and fuel (18%) in 2018-19. The total revenue expenditure by Railways is estimated at Rs 2,19,413 crore in 2020-21. This is an 8% increase over the revised estimates of 2019-20.

1. Staff wages and pension

Staff wages and pension, together constitute about two-thirds of the Railways' revenue expenditure. In 2020-21, allocation to the Pension Fund has been estimated at Rs 53,260 crore, which is 10% higher than the revised estimates of 2019-20. The expenditure on staff has been estimated at Rs 92,993 crore, which is 7% higher than the revised estimates of 2019-20. Together, these constitute about 66% of the Railways' estimated revenue expenditure in 2020-21.

2. Lease Charges

Indian Railways also pays lease charges to the Indian Railways Finance Corporation (IRFC). IRFC borrows funds from the market, which is done through taxable and tax-free bond issuances, term loans from banks and financial institutions, and then follows a leasing model to finance the project assets and rolling stock assets of Indian Railways.

In 2020-21, it is estimated that Rs 14,224 crore will be spent on lease charges. This is an increase of around 16% from the revised estimates of 2019-20. These lease charges are also estimated to increase from Rs 9,977 crore in 2018-19 to Rs 11,566 crore in 2019-20 (according to the revised estimates).

3. Fuel and electricity

In 2020-21, the expenditure on fuel and electricity is estimated to be Rs 32,300 crore, which is an increase of 4% from the revised estimates of 2019-20. However, the expenditure on fuel and electricity has been estimated to decrease by 5% approximately, i.e., from Rs 32,600 crore in 2018-19 to Rs 31,043 crore in 2019-20 (according to revised estimates).

4. Safety

Revenue expenditure such as maintenance and repairs of tracks and wagons and capital expenditure like track renewals, creating level crossings, bridge works and road over bridges and

under bridges are broadly categorized as the expenditure on safety. The expenditure on safety on revenue and capital account have been shown in the table below.

Table 2: Expenditure on Safety (in Rs crore)

	2018-19 (Actuals)	2019-20 (Revised)	2020-21 (Budget)	% Change (2020-21 BE/ 2019-20 RE)
Revenue	45,342	47,707	51,523	8%
Capital	21,615	23,266	26,523	14%
Total	66,957	70,973	78,046	10%

Note: RE – Revised Estimates and BE – Budget Estimates.

Sources: Expenditure Profile, Union Budget of 2020-21.

5. Depreciation Reserve Fund (DRF)

In Railways one dedicated fund called DRF (Depreciation Reserve Fund) has been created and appropriation to the DRF is intended to finance the costs of new assets replacing old ones. However, it has been noted that appropriation to the DRF has decreased substantially in the past few years. To give an illustration, appropriation to the DRF for 2018-19 was Rs 300 crore in comparison to Rs 7,775 crore in 2014-15. Appropriation to DRF is estimated at Rs 800 crore in 2020-21.

Appropriation to DRF is obtained as a residual after payment of the dividend and appropriation to the Pension Fund unlike the actual requirement for the replacement of assets. Hence, the decline in procurement of wagons and coaches and track renewals is attributed to the reason of under-provisioning for the DRF and leading to the value of over-aged assets pending for replacement using this fund.

In 2018, the Standing Committee on Railways remarked that there was a lack of vision and poor

way of utilizing and appropriating valuable resources as to the context that transferring funds from DRF to the RRSK (Rashtriya Rail Sanraksha Kosh), does not allow for repair and replacement of depreciating assets. Railways' contribution towards RRSK was advanced entirely from DRF in 2017-18.

6.Rashtriya Rail Sanraksha Kosh: To finance critical safety related works of replacement, renewal and augmentation of assets, the RRSK (The Rashtriya Rail Sanraksha Kosh) fund was created in 2017-18. With being partially funded by the central government, the said fund has a corpus of Rs 1 lakh crore over five years period.

Railways allocated Rs 5,000 crore towards RRSK with an estimated Rs 15,000 crore to be provided from the general revenues of the central government in 2020-21. However, in 2018-19 the actual allocation was Rs 3,024 crore towards the fund which is 40% less than the proposed allocation i.e., Rs 5,000 crore. In 2019-20, Railways estimated to allocate only 50% of the proposed amount of Rs 5,000 crore i.e., Rs 2,500 crore.

7.Revenue Surplus and Operating Ratio

The difference between Railways' total internal revenue and total revenue expenditure is termed as Railways' surplus, where working expenses and appropriation to depreciation funds and pension funds are included in the revenue expenditure. In Railways, Operating Ratio is calculated as the ratio of the working expenditure to the revenue earned from traffic, where working expenditure comprises of expenses arising from day-to-day operations of Railways.

From the above, it is implied that a higher operating ratio envisages a poorer ability to generate surplus that can be used for capital investments such as deploying more coaches or, laying of new lines etc.

Railways expects to generate a surplus of Rs 6,500 crore in 2020-21, which is 71% higher than the revised estimates of 2019-20. However, as per the trend, over the last decade Railways has been struggling to generate higher surplus, since the operating ratio has been consistently higher than 90% during that period. In 2019, the CAG had noted that the operating ratio for 2017-18 would have been 102.66% if advances for 2018-19 were not included in receipts. Moreover, the ratio worsened to 97.3% as compared to the estimated ratio of 92.8% in 2018-19.

CHAPTER 5

5. SUMMARY OF FISCAL TRANSACTIONS OF INDIAN RAILWAYS

The following tables are exhibited showing Receipt and expenditure (capital and revenue) during 2016-17 and 2017-18.

Table 3 – Summary of receipt and expenditure during 2017-18 (in crore)

Summary of Capital and Revenue Expenditure

S. No	Details	2016-17 (Actual)	2017-18 (Budget Estimates)	2017-18 (Revised Estimates)	2017-18 (Actual)
1	Capital Expenditure	1,08,290.14	1,31,000.00	1,20,100.00	1,01,985.47
2	Revenue Expenditure	1,60,469.48	1,80,550.00	1,81,000.00	1,77,264.03

Summary of Revenue Receipts and Revenue Expenditure

1	Passenger Earnings	46,280.46 (4.51)	50,125.00	50,125.00	48,643.14 (5.11)
2	Freight Earnings	1,04,338.54 (-4.46)	1,18,156.50	1,17,500.00	1,17,055.40 (12.19)
3	Other Coaching Earnings	4,312.00 (-1.36)	6,494.04	5,500.00	4,314.43 (0.06)
4	Sundry Earnings	10,368.04 (74.88)	14,122.83	14,000.00	8,688.18 (-16.20)
5	Suspense	-6.84	100.00	100.00	24.16
6	Gross Traffic Receipts (Item No.1 to 5)	1,65,292.20 (0.58)	1,88,998.37	1,87,225.00	1,78,725.31 (8.13)
7	Net Ordinary Working Expenditure	1,18,829.61 (10.30)	1,29,750.00	1,30,200.00	1,28,496.51 (8.14)
8	Appropriation to -				
(a)	Depreciation Reserve (DRF)	5,200.00 (-7.14)	5,000.00	5,000.00	1,540.00 (-70.38)
(b)	Pension Fund	35,000.00 (1.45)	43,600.00	44,100.00	45,797.71 (30.85)

Table 3 – Summary of receipts and expenditures during 2017-18 (in Rs crore)

S. No.	Details	2016-17 (Actuals)	2017-18 (Budget Estimates)	2017-18 (Revised Estimates)	2017-18 (Actuals)
9	Total Working Expenditure (Item No. 7 and Item No. 8)	1,59,029.61 (7.57)	1,78,350.00	1,79,300.00	1,75,834.22 (10.57)
10	Net Traffic Receipts (Item No. 6 – Item No. 9)	6,262.59 (-62.04)	10,648.37	7,925.00	2,891.09 (-53.84)
11	Miscellaneous Receipts	90.29 (-97.77)	500.00	200.00	204.33 (126.31)
12	Miscellaneous Expenditure	1,439.88 (9.48)	2,200.00	1,700.00	1,429.81 (0.70)
13	Net Miscellaneous Receipt (Item No. 11 – Item No. 12)	-1,349.59	-1,700.00	-1,500.00	-1,225.48 (27.91)
14	Net Surplus (Item No. 10 and Item No. 13)	4,913.00 (-53.24)	8,948.37	6,425.00	1,665.61 (-66.10)
15	Surplus available for appropriation to -				
(a)	Development Fund (DF)	2,515.00 (106.19)	2,000.00	1,500.00	1,505.61 (59.87)
(b)	Capital Fund (CF)	2,398.00 (-58.64)	5,948.37	4,925.00	0
(c)	Rashtriya Rail Sanraksha Kosh (RRSK)	0	1000.00	0	0

Source: Railway Budget for 2016-17 and 2017-18 and accounts for 2017-18;**Note: Figures in brackets show the increase/decrease in percentage over the previous year.**

Table 4: Railways Receipts and Expenditures for 2020-21 (in Rs crore approx.)

Sl. No.		2018-19 (Actuals)	2019-20 (Budget)	2019-20 (Revised)	% Change (2019- 20 RE/ 2019-20 BE)	2020-21 (Budget)	% Change (2020- 21 BE/ 2019-20 RE)
	RECEIPTS						
1	Passenger	51,067	56,000	56,000	0%	61,000	9%
2	Freight	127,433	143,000	134,733	-6%	147,000	9%
3	Other traffic sources	11,407	17,675	15,100	-15%	17,613	17%
4	Gross Traffic Receipts (1+2+3)	189,907	216,675	205,833	-5%	225,613	10%
5	Miscellaneous	601	260	436	68%	300	-31%
6	Total Internal Revenue (4+5)	190,508	216,935	206,269	-5%	225,913	10%

	EXPENDITURE						
7	Ordinary Working Expenses	140,200	155,000	151,208	-2%	162,753	8%
8	Appropriation to Pension Fund	44,280	50,000	48,350	-3%	53,160	10%
9	Appropriation to DRF	300	500	400	-20%	800	100%
10	Total Working Expenditure (7+8+9)	184,780	205,500	199,958	-3%	216,713	8%
11	Miscellaneous	1,953	2,400	2,500	4%	2,700	8%
12	Total Revenue Expenditure (10+11)	186,733	207,900	202,458	-3%	219,413	8%
13	Net Surplus (6- 12)	3,775	9,035	3,811	-58%	6,500	71%
14	Appropriation to RRSK	3,024	5,000	2,500	-50%	5,000	100%
15	Appropriation to Development Fund	750	1,000	1,311	31%	1,500	14%
16	Appropriation to Capital Fund	-	3,035	-	-100%	-	-
17	Operating Ratio	97.3%	95.0%	97.4%	-	96.2%	-

Sources: Expenditure Profile of 2020-21, Union Budget of 2020-21.

Table 5 - Freight Services Details					
Year	Loading (Million Tonne)	NTKM (in million) (Revenue Freight Traffic only)	Earnings (in crore)	Average lead (in kilometer)	Rate per tonne per km (in paise)
2013-14	1051.64 (4.32)	665810 (2.49)	93,905.63 (10.14)	633	141.04 (7.46)
2014-15	1095.26 (4.15)	681696 (2.39)	1,05,791.34 (12.66)	622	155.19 (10.03)
2015-16	1101.51 (0.57)	654481 (-3.99)	1,09,207.66 (3.23)	594	166.86 (7.52)
2016-17	1106.15 (0.42)	620175 (-5.24)	1,04,338.54 (-4.46)	561	168.24 (0.83)
2017-18	1159.55 (4.83)	692916 (11.73)	1,17,055.40 (12.19)	598	168.93 (0.41)

**Note: (i) Figures in bracket show percentage increase/decrease over the previous year.
(ii) Figures for 2017-18 (except earnings) are provisional.**

Table 6: Details of Freight traffic (NTKM in millions and Earnings in Rs crore (approx.))

	2018-19 (Actuals)		2019-20 (Revised)		2020-21 (Budgeted)		% Change (2020-21 BE/ 2019-20 RE)	
Commodities	NTKM.	Earnings	NTKM.	Earnings	NTKM.	Earnings	NTKM.	Earnings
Coal	3,11,487	56,964	2,84,907	61,482	2,93,940	67,355	3%	10%
Raw materials for steel plants except iron	15,141	2,359	14,387	2,350	14,715	2,779	2%	18%
Pig Iron & finished steel	49,926	8,422	42,369	7,582	44,625	9,238	5%	22%
Iron Ore	43,322	9,377	45,744	14,342	47,230	12,345	3%	-14%
Cement	67,818	10,166	59,916	9,240	61,832	11,022	3%	19%
Food grains	57,575	7,616	53,254	6,951	53,820	8,119	1%	17%
Fertilizers	46,835	6,348	44,899	6,391	44,460	7,314	-1%	14%
Petroleum & Lubricants	29,333	5,632	29,104	5,935	29,166	6,874	0%	16%
Container Service	57,882	7,369	53,900	5,770	56,040	4,669	4%	-19%
Other Goods	59,204	8,328	51,532	7,723	53,728	9,307	4%	21%
Miscellaneous earnings	-	4,852	-	6,967	-	7,979	-	15%
Total	7,38,523	127,433	6,80,012	134,733	6,99,556	147,000	3%	9%

Notes: NTKM: Net Tonne Kilometer (One NTKM is the net weight of goods carried for one kilometer);

Sources: Expenditure Profile of 2020-21, Union Budget of 2020-21.

The following table is exhibited showing Passenger traffic details -

Table 7: Details of Passenger traffic (PKM in millions and Earnings in Rs crore (approx.))

	2018-19 (Actuals)		2019-20 (Revised)		2020-21 (Budgeted)		% Change 2020- 21 BE/2019-20 RE	
	PKM.	Earnings	PKM.	Earnings	PKM.	Earnings	PKM.	Earnings

Suburban

Total Suburban	1,46,678	2,813	1,57,952	2,998	1,63,008	3,095	3%	3%
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Non-Suburban

AC First class	1,871	518	1,997	596	2,010	651	1%	9%
AC Sleeper	23,252	3,864	25,176	4,512	25,334	4,930	1%	9%
First Class (M&E)	87,207	11,223	84,479	11,726	85,009	12,810	1%	9%
First Class (Ordinary.)	623	178	521	160	524	175	1%	9%
AC 3 Tier	13,291	1,893	12,752	1,958	12,832	2,140	1%	9%
Sleeper Class (M&E)	115	15	65	9	65	10	0%	9%
Second Class (M&E)	282	13	386	18	388	20	1%	9%
Sleeper Class (Ordinary.)	2,91,144	14,321	3,22,820	17,126	3,24,844	18,710	1%	9%
Second Class (Ordinary.)	3,523	146	3,934	176	3,959	192	1%	9%
AC Chair Car	3,69,835	11,418	3,27,300	10,898	3,29,352	11,906	1%	9%
Executive Class	2,19,353	4,666	2,53,784	5,822	2,55,376	6,360	1%	9%

Total Non-Suburban	10,10,496	48,254	10,33,214	53,002	10,39,693	57,905	1%	9%
Total Passenger	11,57,174	51,067	11,91,166	56,000	12,02,701	61,000	1%	9%

Notes: PKM – Passenger Kilometer (One PKM is when a passenger is carried for one kilometer); RE – Revised Estimates and BE – Budget Estimates.

Sources: Expenditure Profile 2020-21, Union Budget of 2020-21.

CHAPTER 6

6. FINDINGS

1. As can be observed from the **Table no. 3**

- a. As compared to 0.58% growth in 2016-17, Gross Traffic Receipts increased by 8.13% during 2017-18. Because there was an increase in growth rate of freight earnings as well as passenger earnings by 12.9% and 5.11% respectively when compared to the previous year, the above increase was registered.
- b. As compared to the growth rate of 10.30% in 2016-17, Net Ordinary Working Expenses increased by 8.14% in 2017-18.
- c. There was a decrease in 'Net Surplus' by 66.1% in the current year as generated after meeting all revenue liabilities. In 2017-18, net surplus decreased to Rs 1,665.61 crore in comparison to net surplus in 2016-17 i.e., Rs 4,913.00 crore. Both the shortfalls in Net Traffic Receipt and in Net Miscellaneous Receipt i.e., 72.85% and 27.91% respectively as compared to budget estimates led to this shortfall.
- d. The Net Surplus of 1,665.61 crore was appropriated to Development Fund (1,505.61 crore) and Railway Safety Fund (160.00 crore). Even though an amount of Rs 1,000 crore was estimated in the BE (budget estimates), no funds were appropriated to RRSK.

2. Operating Ratio (O/R) exhibits the overall efficiency of Indian Railways. It is in the sense that the O/R indicates how much we spend to earn a revenue of rupee one. As can be seen from **Table 4**, the actual O/R of 2018-19 was 97.3%, on the basis of which the budget estimate was projected as 95.0% for 2019-20, but however it was to be revised to 97.4% for the year 2019-20. With an optimistic view, the budget estimate of O/R for 2020-21 has been projected as 96.2%. But the trend suggests that it is an ambitious target to achieve. To substantiate the above, in 2019 as per noting of CAG, a decline in appropriation to the various funds by Railways from its internal resources resulted from a decline in its revenue surplus in 2017-18. In Railways, Operating Ratio is calculated as

the ratio of the working expenditure to the revenue earned from traffic, where working expenditure comprises of expenses arising from day-to-day operations of Railways. Thus, a higher operating ratio envisages a poorer ability to generate surplus. Of late it is seen that Railways has been struggling to generate higher surplus. As a result of which for more than a decade, the operating ratio has been higher than 90% consistently.

3. As can be seen from **Table 5**, During 2017-18 the annual growth rate of NTKM was 11.73 per cent. The growth rate of 'Rate per tonne per kilometre' was 0.41% in 2017-18 against the growth rate of 0.83% in 2016-17. The average lead improved from 561 km in 2016-17 to 598 km in 2017-18 due to higher growth rate of NTKM and loading.

4. Challenges in raising revenue

During last few years, a declining trend is observed in the growth of rail-based passenger as well as freight traffic. As a result of which, the core business of Railways' i.e., running freight and passenger trains has been affected. So far as freight service is concerned, a trend is observed that Railways has been losing out on high potential markets such as FMCGs, or automobiles and containerized cargo, hazardous materials. Most of this traffic is transported by roads. Moreover, Indian Railways does not have an institutional arrangement to attract and aggregate traffic of smaller parcel size.

It is a hard fact that Railways' freight coverage is limited to a few bulk commodities as seen from **Figure 1**. To illustrate, coal contributed to about 45% of freight revenue and 30% of the total internal revenue in 2018-19. Thus, Railways' finances could be affected significantly provided there is any shift in transport patterns of any of these bulk commodities like cement, iron ore, coal etc.

5. Freight cross-subsidies passenger traffic

It is observed that to manage its overall financial situation, the profits from Railways' freight business is utilized towards compensating the losses in the passenger services. This is called cross-subsidization which has led to high freight tariffs. To compensate for the loss from passenger and other coaching services, as high as 95% of profit earned from freight operations was utilised in 2017-18. Freight operations made a profit of Rs 39,956 crore whereas passenger and other coaching services incurred losses of Rs 37,937 crore in 2017-18. From the above it is noted that, losses in the passenger business are approximately 82% of its revenue which was Rs 46,280 crore during this period.

The above losses in passenger segment is attributed to (a) concessions to various categories of passengers and (b) passenger fares being lower than the costs.

6. The Standing Committee on Railways (2018) noted that if funds from the RRSK (Rashtriya Rail Sanraksha Kosh) cannot be utilized well, then the purpose of having a dedicated safety fund becomes futile. During 2018-19, Ministry of Railways pointed out its worsening resource position which did not allow it for the transfer of desired level of funds to the RRSK funds. Thus, Railways is in a tricky situation to continue to fund the RRSK with its struggling position of meeting its expenditure and declining internal revenues.
7. In the context of **Figure 2**, Audit observed that the amount raised has been less than the amount estimated in all the three years since 2015-16. Railways could not spend this amount fully during the past two years i.e., 2016-17 and 2017-18.

6.1 CHALLENGES

1. So far as the project works are concerned like construction of new lines, doubling of lines, line capacity works, efficiency improvement works or even developmental works, there is lack of timely implementation of project for which the works are not completed in time, the gestation period prolongs and railway finances have to bear the brunt of time-overrun and cost-overrun.
2. Excessive dependence on borrowings vis-à-vis the effective utilisation of the amount borrowed puts a tremendous burden on the finances of Indian Railways.
3. Lack of proper utilisation of human resource in the sense that the same is not either effectively used or remains underutilised in most of the pockets. In this context, it may be pointed out that the Committee on Restructuring Railways (2015) had observed that the expenditure on staff is extremely high but this expense is not under the control of Railways since it keeps increasing with each Pay Commission revision. Hence, employee cost is one of the key components that reduces the Railways' ability to allocate resources towards operations and to generate surplus.

CHAPTER 7

7. SUGGESTIONS

Over the years, various committees have been formed and a number of research papers published in order to suggest the ways and means for improvement of railways and its overall performance. At times, status papers have been circulated and suggestions sought for from various user groups. Based on the above, the following suggestions are made in this paper which would augur well for improvement of the financial position of Railways:

- a) In Railways, the ‘Operating Ratio’ represents the working expenses to gross earnings. Thus, operating ratio has been regarded as an important financial tool to measure Railways’ performance and is taken as an index of operating efficiency and financial viability of a zonal railway. In order to improve the operating ratio, a two-pronged approach has to be adhered to i.e., on one hand suitable measures are to be taken for generation of more revenue, on the other hand, effective methods are undertaken for curtailment and control of expenditure.

Prior to taking up measures for generation of revenue, a more business-oriented approach has to be woven into the fabrics of Railways in order to thrive as a financially viable organisation. The business-oriented approach calls for:

- Avoidance of freight cross subsidisation for passenger traffic i.e., the profit from freight earnings should not be utilized to make up the loss in the passenger segment. Railways has to fix the fare which is more than the cost or at least closer to the cost so that the profits on freight business is truly realised.
- Besides being a carrier of bulk commodities, Railways has to devise a method through which small sized materials, consignments could be carried which are till date carried by other modes of transport, especially road transport. Special teams can be formed at major/ big stations with the task of collecting the small sized consignments directly from small vendors or through franchise as the case may be and also the number of the parcel wagons per round of journey to be increased. Parcel policies need to be more liberalised with

special consideration for e-commerce sites through a system of contract since they are going to play a major role in the days to come.

- Generation of revenue to cover more and more non-conventional sources like commercial utilisation of railway land in the form of sharing it for running of banks, post offices, ATMs, office and commercial space, food courts, shopping complexes, parking lots and so on at stations on normal market rates through smart planning of station redevelopment and renovation. Specific trains to cover more and more pilgrimage sites to be run. Prints and digital aids in platforms, trains, tickets to be adopted. Through effective waste management, the waste produced in railways can be sold to solid waste treatment plants to generate electricity and thereby earn revenue. Railways can think of using the land for horticulture and planting of trees along railway track which can provide an alternative way of earning some revenues.
 - It is equally important to prevent leakage of revenue through unscrupulous means. This can be done by strict ticket checking to guard against theft, pilferage and wastage of railway material and complete digitisation in the accounting of earnings and expenditure.
- b) As a vast organisation, since Railways has to incur huge expenditure, effective control over expenditure is highly called for. In this regard, a cost control mechanism has already been put in place by Railways so as to curtail unnecessary expenditure covering both working expenditure as well as the expenditure on railway projects right from the stage of preparation of estimates down to the level of actual expenditure being incurred. However, the need of the hour is to strengthen the present mechanism in the true sense of the term. In this context, it is noted from the **FINDING NO.7** that Railways could not fully spend the amount raised during the two years spell i.e., 2016-17 and 2017-18. Thus, it is utmost needed that the estimation should be made as accurate as possible so that the actual expenditure doesn't mismatch to the extent. There can't be two opinion as to the fact that railways spend hugely on its staff strength. Hence, to control over the cost of staff, the measures like unifying and streamlining the recruitment process, and rationalising the manpower while retaining an optimal level of functional specialisation within it is required. Keeping in consonance with the metaphor that 'Charity begins at home',

In December 2019, the Union Cabinet approved organizational restructuring of Indian Railways. This resulted in identifying a single service called Indian Railways Management Service on merging of various Group A services. The proposed restructuring will also include reorganising the Railway Board on functional lines. Though it can be seen as a good beginning, the trend should percolate down the line to the field level to achieve the desired objective of right sizing the cadre and thereby control the expenditure. In order to fully utilise the human resources of Railways the projects like SAKSHAM are to be devised to prepare the staff so that they can become well trained, skilled and technologically updated to be deployed as per requirement or as the occasion demands.

- Another major area of expenditure is on fuel and electricity. To reduce the cost on this front, Railways can generate its own electricity by using solar energy in the form of solar panels installed on train roofs and platform roofs of station or wherever possible, to make it energy self-sufficient and save the cost of electricity. If the idea succeeds, railways may be even in a position where it can sell some energy back to the grid.
- c) Of late, the Railways have been facing the greater challenge of raising revenue for its own functioning on the face of dwindling or almost constant budgetary support, internal resource generation being insufficient and extra budgetary resources flowing with a hard bargain in order to finance its vast network of expenditure.

To address the issue, the following suggestions are made:

- Railways is passing through a phase of phenomenal transformation, large scale modernisation, technological upgradation and application of up-to-date methods for regular maintenance work and developmental works. In view of the above, more emphasis is needed to tap on non-conventional sources of financing like public-private-partnership (PPP) model especially for financing developmental projects like station renovation and beautification, running of premium trains and metropolitan railway transportation projects etc. When implemented properly, PPP model can ensure operational efficiency, hassle free service at a reasonable price.

- A scheme may be devised under which railway staff would be required to part with a fixed percentage of their salary for purchasing of railway bonds to be circulated and managed by a dedicated agency like IRFC, through which funds can be raised for financing of railway expenditure. In one way, it would boost up the organizational behavior and efficiency among the staff and on the other hand, they would be encouraged to put in their best for overall improvement of the organisation at large.
 - It was suggested by the NITI Aayog that as per the prevalent market rates in corresponding transport modes, Railways can price passenger fares. As noted in 2015 by the Committee on Restructuring Railways that several decisions like introduction of new trains, increase in fares and provision of halts are not taken on the basis of commercial considerations by the Railways.
 - On the backdrop of the above, it is suggested that pricing of rail fares and freights should base more on commercial lines while taking care of the social service obligation criteria being a Government organisation also.
- d) It is obvious that timely implementation of projects eases the path for generation of revenue. When after construction, a new railway line is opened to traffic, it earns revenue. Thus, it is to be keenly monitored and scrutinized that a railway project is not stalled due to non-availability of land, non-clearance from civil authorities, forest department or electricity department, change in plans and sites or paucity of fund and the like. Since delay in execution for any reason whatsoever leads to mounting of costs and non-generation of income, a mechanism of fixing a line of responsibility is needed to be strictly enforced to guard delay in implementation of the project.

8. SUMMARY AND CONCLUSION

To be precise, the wheels of progress of the national economy as well as the development of the country invariably depends on the edifice of its infrastructural setup of which Indian Railways assumes utmost importance being the national transporter of the country. Thus, it is essential as well as desirable that the wheels of Indian Railways are on the right track of financial stability and viability.

Now, it is time to analyze the reversal trend of pre-dominant position to diminishing contribution of Railways in the national transport market. It is mostly because of non-commercial character of its investments, distorted tariff policy and a routine nature of operational efficiency, the traditional mindset not allowing to cope with the changing ethos and culture of a commercial enterprise to face the emerging challenges in the competition posed by alternative modes of transport in a modern customer-driven market.

In order to get back its original position as the major transporter of the country, Indian Railways has to ensure its financial stability and improve upon operational efficiency. An all-out effort is to be made by railways to achieve optimum capacity utilisation in the form of wagon, engine and track utilisation, to maximize the staff productivity so that overall improvement in operational efficiency would translate into corresponding financial performance.

It is required that Railways should collect suggestions from all the stakeholders, end users and customers through application of ICTs like IRCTC app and so on, which could be used for betterment of its performance.

It is aptly said that ‘where there is a will, there is a way.’ On the basis of my above study, it can be concluded that Indian Railways can well emerge from the financial stress on the basis of the strong political will which is being exhibited in the form of cabinet decision to revive and restructure Railways as a robust organisation. With proper and timely implementation of the various plans and policies in a cost-efficient manner and by inculcating the organisational spirit amongst its staff to turn them into the pillars of progress which would ultimately put the Indian Railways on the track of financial stability so much so that Indian Railways would not suffer from financial crunch, rather there may be resource flow in the form of domestic and foreign investments in achieving its ultimate corporate objectives.

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