2.1 Literature Review:
There is a very limited body of literature available covering studies on financial appraisal of Indian railway. The review of literature here covers a few bodies of the current theoretical and empirical studies to show the present status of research in this area.

Dr. Desh Gupta and Dr Milind Sathye (2007)
They analysed the factors that led to the turnaround of the Indian Railways from a low performing organisation to a high performing one. Literature on public sector turnaround provides the theoretical underpinnings. Enterprise turnaround is often ascribed to managerial leadership; we found that environmental factors (good luck) contributed in a substantial way to the success of Indian Railways. The implication of our study is that an organisation’s turnaround success needs to be put in a wider context.

The study is important for several reasons. First, there is a growing interest worldwide in strategies for turnaround of public services because of the growing awareness that public resources need to be efficiently deployed. Beeri (2006), states ‘the wide interest in New Public Management (in UK) created a different reality that has less tolerance toward failures’.

Studies by Boyne, 2002; Glynn & Murphy, 1996 also underscore this changed reality. The case of the IR is particularly important given the large investment of the GOI in the IR and the need to get adequate return on investment. Second, the research on turnaround has largely focused on the impact of managerial strategies. Boyne and Meier (2005), however, argue that ‘turnaround is also attributable to good luck, defined as a favorable shift in
external conditions that are beyond the control of a failing organisation’. We examine the IR turnaround from both these perspectives — good luck and good management. Last, public sector turnaround studies so far have focused on local councils, utilities, housing authority, police department etc. Railways are one of the largest public services organisations and interestingly have not been subjected to research in the public sector turnaround literature.

As already stated, the central question we attempt to answer is: What factors have led to the turnaround of the IR: Good luck, good management or both? To achieve the aim of the study we use the case study method. This method is suitable for the objectives of the study given the uniqueness of the IR in particular, which will be evident from the description given in paragraphs that follow. The theory of public sector turnaround underpins this case study. Publicly available data about the IR has been analysed. We found that both managerial leadership and good luck contributed to the success of the IR. They suggest that turnaround successes need to be put in a wider context. Besides managerial actions, favorable environment also contributes to the success — an aspect that has hardly received attention in organisational turnaround studies.

The paper is organised as follows. Section 2 provides an overview of the financial performance of the IR. Section 3 reviews the literature on strategies for public sector turnaround Section 4 is about data and method, Section 5 is about analysis and results and Section 6 concludes.
Karan Kumar (2007-08)
The paper starts with an introduction on Indian Railways. It reveals certain startling facts about IR and, then, proceeds with an explanation on Public Private Partnership model. After giving an elaborate detail on the fundamental knowledge on IR and PPP, PPP in IR is introduced. There are many non-critical activities, which are either being run or being planned to be run through the PPP Model. This part of the report gives a detailed explanation of those and also reveals the weak appetite of the IR in inviting private sector participation in Indian Railways.

After this, the focus of the paper shifts towards a critical analysis of the Government’s policy on PPP in IR. Here, the lackadaisical attitude of the IR in bringing in much needed improvement in efficiency of services rendered to its customers is critically analysed. The last section of the paper presents a thumb rule for checking the feasibility of the project being implemented through the PPP Model.

It is observed in the study that the Indian Railways is considered the lifeblood of the nation and, hence, the onus of carrying the economy on its shoulder lies with the railways. The boom in the economy has resulted in a dire need of improvement and enhancement of rail infrastructure in the country. As part of the overall strategy of restructuring the railway infrastructure, a major thrust has been given to PPP.

PPP Project means a long-term project based on a contract or concession agreement, between the Government or statutory entity on one side and a private sector company on the other side, for delivering an infrastructure
service on payment of user charges. Typically, a private sector consortium forms a special company called a special purpose vehicle (SPV) to build and maintain the asset. The consortium is usually made up of a building contractor, a maintenance company and a bank lender. The SPV signs the contract with the government and with subcontractors to build the facility and then maintain it.

Risk sharing is one of the most important features of a PPP. The PPPs most likely to succeed incorporate a risk mitigation framework that apportions risk in terms of capacity to bear. The risk mitigation framework is addressed through a bankable concession agreement that clearly delineates project risks and responsibilities.

With the economy growing at a robust, rate of growth in the last few years the current abysmal level of infrastructure has been under tremendous strain. The Prime Minister’s Committee on Infrastructure has been specially formulated to give infrastructure- road, railways, port, air, electricity, irrigation etc a major boost.

The railways require substantial investments in order to keep pace with the 8% growth rate of the economy. Recognizing the need for substantial financial capital and techno managerial expertise in infrastructure building and freeing up its precious resources, the Railways have started seeking and encouraging increased private sector participation in this massive exercise. Also, competition with the Road and Aviation is driving the railways to improve their infrastructure.
The study concludes that non-critical areas in the Indian Railways should be identified and private sector participation should be allowed in the same. The Indian Railways should focus on the core activities of running and operating the trains. The prospects remain bleak for any major policy change due to an extremely weak record of enforcement of contracts in the long run. Corporatization of Indian Railways is the best way to take the restructuring of the Indian Railways forward. The IR should also adopt General Accepted Accounting Principles (GAAP), the role of the Indian Railways Regulatory Authority should be strengthened and it should be allowed to decide the fares to be charged from the passengers with a provision for adequate compensation from the Union Budget for keeping fares cheaper to fulfill its objective of social welfare. Manufacturing of locomotives and wagons should also be through the PPP Model.

**G. Raghuram (2007)**

This paper attempts a diagnosis of the ‘turnaround,’ beginning with the question as to whether it really was a ‘turnaround’. This paper then carried out an analysis of the various determinants of the ‘turnaround’ related to goods, passenger and other operations. This is followed by a critical assessment of the strategies and key processes being the ‘turnaround’. Finally, the sustainability of the ‘turnaround’ is explored.

To diagnose the ‘turnaround,’ the first question would be whether it really was a ‘turnaround.’ Exhibit 1 allows an analysis of this. The total earnings in 2005-06 increased by Rs 7121 crores, a 15.0% growth with respect to 2004-05. The total earnings in 2004-05 increased by Rs 4465 crores, a 10.4% growth with respect to 2003-04. Similar figures for the earlier years since 2001-
ranged between 4.5% and 8.5% with respect to the previous year. The total working expenses plus the lease charges towards principal payments in 2005-06 increased by Rs 4431 crores, a 10.4% rise with respect to 2004-05. The total working expenses in 2004-05 increased by Rs 3277 crores, an 8.3% rise with respect to 2003-04. Similar figures for the earlier years since 2001-02 ranged between 3.8% and 4.8% with respect to the previous year.

As a consequence of the total earnings and total working expenses, the net revenue reached a record of Rs 8005 crores in 2005-06, following the Rs 5274 crores in 2004-05. This was a record increase of Rs 2731 crores, reflecting a 52% increase in net revenues. Earlier, until 2004-05, there had been a steady climb from the low of Rs 1071 crores in 2000-01. The internal generation of cash surplus including provision for depreciation and Special Railway Safety Fund (SRSF) reached an historic level of Rs.13,068 crores for 2005-06, following the Rs 7603 crores in 2004-05. Exhibit 2 provides a visual description of the total earnings, total working expenses, their growth rates and the net revenue receipts.

The essence of the ‘turnaround’ was in the fact that (i) total revenues increased by a significant percentage in the last two years and (ii) the net revenues continued a robust upward trend. This justified the principles that “freight business is a play on volumes,” and that “passenger business is a play on volumes and quality” which were behind various focused initiatives undertaken by the MR, and driven by the RB. Further, the initiatives were pursued in a manner that results could be obtained as quickly as possible, yet laying the foundation for continued performance improvements. An interesting aspect was that the total earnings in 2005-06
had gone up by a record Rs 3523 crores with respect to the budget estimates (BE) for the year. While this could raise questions about the budgeting process, for the year 2005-06, it is more of a consequence of initiatives that were put in place during the year, with results coming in the same year. The next question would be the determinants of the 'turnaround'.

The increase in total earnings of Rs 7121 crores could be attributed to (i) goods earnings of Rs 5509 crores (17.9% increase on a base of Rs 30,778 crores), (ii) passenger earnings of Rs 1013 crores (7.2% increase on a base of Rs 14,113 crores) and (iii) others earnings including parcel, catering, advertising etc of Rs 599 crores (24.2% increase on a base of Rs 2479 crores) in 2005-06, out of the total earnings, goods constituted 67%, passenger constituted 28% and others 6%.

The study also gave certain recommendations as given.

1. Tenures of general managers, members and Chairman of the Board should be for a minimum of 3 years. The general managers and members may be made equal in salary so that they do not have to move simply for the sake of increased salaries. Similar tenures are suggested for additional general managers in the new structure.

2. The average age of divisional railway manager is generally above fifty, which results in short tenures at more senior positions. To remedy this and to assure minimum tenures at senior levels, posting at divisional railway managers should be at younger age level.
3. Creation of a unified Indian Railways Service with a development and selection process to groom those who only will man general management positions such as Divisional Railway Manager, Additional General Manager, General Manager and Member.

4. The changes suggested for the functions of the Board members from the present departmental to those proposed should be implemented first to send out the message of change.

**M.P. Sinha, Rajiv K. Srivastava (2006)**

This case study based paper on Maintenance scheduling of Locomotives for Passenger Operations in Railways was presented at the 10th Annual Conference of the Society of Operations Management, held at IIM Ahmedabad, during December 21-23, 2006.

Here it was mentioned that Indian Railways operate its services with a fleet of about 3500 diesel locomotives for hauling passenger and goods trains. These locomotives are assigned a Diesel Shed, which carries out all maintenance tasks including breakdown maintenance and preventive maintenance. The case study is an attempt to study and design link schedules integrated with maintenance activities to minimize the number of locos needed to run the required number of passenger services. Improvement and integration of link schedules and maintenance activities will enable making more locos available for freight train operation and in turn increase profitability of Indian Railways.

**Prof. Sebastian and Prof. Raghuram, and Prof. Rekha Jain (1990)**

This study was based in the topic Restructuring of Indian Railways and submitted in partial fulfillment of the requirements of the course infrastructure
development and financing to Prof. Sebastian and Prof. Raghuram, and Prof. Rekha Jain. This study concluded that the privatization of rail networks, infrastructure and services has been a controversial issue throughout the world. For instance, in the UK, serious objections were raised against the privatization of British Rail in the 1990s. Moreover, Rail track, the private infrastructure company, was recently indicted by the Cullen Committee, which inquired into the train accident at Paddington in 1999 in which 31 people died.

It is in this perspective that we must examine the enormity of the task confronting the Rakesh Mohan Committee. Alongside this, we must also keep in mind that IR has traditionally been looked upon as a public institution, which exists to serve the people; therefore, the very mention of the word market orientation with respect to the railways is anathema to many of the participants of the Indian political scene. Thus, we do not see any far-reaching changes coming out of the panels’ recommendations and that are most likely to have the same fate as most of such other committees.

However, broadly looking at the report, The Rakesh Mohan Committee's prescriptions are similar to those advocated and implemented in the controversial restructuring of the power and telecom sectors. It suggests the formation of the Indian Railway Regulatory Authority, similar to the Telecom Regulatory Authority of India (TRAI). The Authority will not only play the role of a neutral regulator and arbitrator in a field, which will be opened up for new private players, but will also ensure the non-intervention of the Government in decision making, that is suggested by the Committee. The Committee advocates sweeping legislative changes to prepare the ground for it
and to reflect the separation of the commercial and social objectives of the Railways. Such changes are envisaged within a year of the restructuring exercise. Although the Committee does not actually suggest an abridgement of parliamentary control over the Railways, it goes without saying that such controls would be incompatible in a situation in which commercial considerations hold full sway over operations. Moreover, the space for such control would be restricted as the Railways itself is shrinking its scale of operations in a restructured environment. The annual presentation of the Union Railway Budget in Parliament would no longer be necessary if the suggested reforms are implemented. Restructuring of Indian Railway IDF Section A, Group 8 In the first three years, the Committee would also like to start the restructuring of noncore activities and to revamp the Railway Board to reflect the organization’s status as a commercial entity. In five years, the Committee envisages the introduction of competition in the sector by allowing the large-scale entry of private entities in railway operations.

**Madhu Ranjan Kumar**

He conducted research work on the topic Total Quality Management as the basis for organizational transformation of Indian Railways in Southern Cross University.

The basic objective of this research was to assess the suitability of Total Quality Management (TQM) via the International Standards Organization (ISO) 9000/2000 quality accreditation system route for bringing about organisational transformation in the Indian Railways and to develop an India specific model for taking an ISO certified organization towards TQM.
The first part of the research aimed at getting the ‘as is’ and ‘should be’ status of Indian Railways from an organisational change point of view. Based on the work carried out by Khandwalla (1995), a series of open-ended and close-ended questions were asked to the senior members of Indian Railways. Analysis of their responses was undertaken. It indicated that the way they thought Indian Railways should change was in line with the TQM model of change.

The second part of the research aimed at measuring the hierarchical orientation among the employees of Indian Railways. This was measured on three dimensions of ‘dependency proneness’, ‘personalised relationship and status consciousnesses based on the work done by Sinha (1995). It was found that among the three dimensions, ‘status consciousness’ and ‘dependency proneness’ were more deeply entrenched cultural traits among Indian Railway employees as compared to ‘personalised relationship’. On the two dimensions of ‘status consciousness’ and ‘dependency proneness’, the class 1 officers of Indian Railways were less hierarchy conscious than the class 2 officers who, in turn, were less hierarchy conscious than the supervisors. The tendency for ‘personalised relationship’ did not vary significantly either across the class 1 officer, class 2 officer and supervisor categories or across different age groups. Further, employees less than 30 years old, from 31 years to 50 years old and more than 50 years old, demonstrated similar level of ‘status consciousness and ‘dependency proneness’. This shows that at least in the Indian Railways, even among the younger generation, notwithstanding 15
years of liberalisation, hierarchical orientation continues to be a powerful cultural trait.

The third part of the research aimed at understanding the impact of ISO 9000 implementation in the Indian Railway units. It was found that, contrary to the literature, there was no resistance to implementation of ISO based change in the Indian Railways. This research argues that because of their strong sense of identity with their work group, the employees of Indian Railways are more amenable to an internal leader initiated change. Hence, there was no resistance to change.

The fourth part of the research was an action research project aimed at ISO 9000:2000 certification of a warehousing unit in the Indian Railways. This was carried out to investigate the way organisational learning occurred during ISO certification. Three action cycles were conducted over a period of two months. Seven months later, one additional cycle was completed. Special care was taken to see that the conclusions arrived after one cycle were validated from other sources. It was found that departmentalism and lack of team spirit are major problems in Indian Railways. Both are ascribed to the caste system in India. It is hypothesized that since an Indian Railway employee remains in a department throughout his/her career, the department becomes his/her ‘professional caste’. The research then identifies an Indianised version of leadership in the context of organisational change. It hypothesizes that hierarchical teacher-student (guru-shishya) relationship with the leader
invokes personal bases of power, which promotes change in India. The teacher-student (gurushishya) relationship with the leader is conceptually similar to ‘intellectual stimulation’ factor of transformational leadership. The ‘personalised relationship’ with a more equitable slant can be elevated to the status of ‘individualised consideration’ factor of transformational leadership and the Nurturant Task (NT) leadership model of India is conceptually similar to the contingent reward factor of transformational leadership.

In the context of TQM, this research hypothesizes that there is a sequential relationship among the critical success factors (CSFs) of TQM. For this, one should begin by framing process-based quality procedures and quality objectives. Process based quality procedures and quality objectives lead to development of team orientation in the context of TQM implementation. Similarly, a multi-tier Corrective and Preventive Action (CPA) reinforced with a reward and recognition system positively intervenes in the transition of an ISO certified organization towards TQM.

The reinforcing effect of successive improvement inculcates a feeling of team spirit among members of different functional groups. Successive CPAs supported by a suitable reward system and an Indianite version of leadership mentioned earlier create a spiral vortex which continually pulls the organization towards achieving TQM.
Finally, this research establishes a link between the soft system methodology and an India specific cultural dimension called ‘context sensitivity’. The researcher argues that it is because of context sensitivity of Indians that no resistance to change was found during ISO implementation in Indian Railways. This also explains why post liberalisation Indians have been able to make a mark in the world.

**Chitta Baral**

Kalahandi, Nuapada, Balangir, Subarnapur, Koraput, Malkangir, Rayagada and Nawanrangpur Districts of Orissa are officially known as KBK districts. Here, additionally he included equally backward Kandhamal. Boudh, Gajpati and Bargarh (Padampur sub-division only) districts of Orissa in KBK+ region of Orissa as the whole region is a single cluster of backwardness. Developmental progress of this whole region consisting of above 12 districts of Orissa were summarized and discussed here.

It is argued that the goal of Indian Railways is not to be a profit-making arm of the Indian government. The Indian is not a business enterprise, but rather a self-sustaining unit that fulfills its social responsibilities and provides for part of the infrastructure needed for India’s economic growth. So making profit is a good goal for IR; but at the same time, it must not lose sight of its social responsibilities. As the 2007 Railway Budget and the 11th five-year plan looms we would like to hereby remind the IR and the planning commission some of the social aspects of IR that they both should keep in mind and that have a chance of getting overlooked by the Indian Railways drive for profit.
While the importance of having adequate Railway infrastructure in Jammu and Kashmir and the Northeast has been realized the same is not the case with respect to the other frontier of India that lies in the interior. With respect to the North east the planning commission aims to break the sense of isolation associated with it. Several projects for the NE have been planned during the 11th five-year plan including extending tracks to Kohima, laying lines inside Meghalaya, and possibly a line to Itanagar. A line to Agartala is nearing completion.

By the other frontier of India, I mean the area that includes the KBK region of Orissa, parts of Chhattisgarh, parts of Andhra Pradesh etc. The Rail density in this area is very low, the population of this area is mostly tribals, several districts of these areas are listed among the most backward districts of India, and big part of these areas are extremist infested. In other words this area is farther from the mainstream India than most of Northeast and Jammu and Kashmir. However, this area abounds in mineral resources and thus generates a lot of revenue for the Railways. Yet the Railways have severely neglected this area and its people.

Hence, although the 2005-06 Railway budget significantly increased its allocation to projects in Orissa over previous years, the 11th five-year plan should aim to finish and the 2007 budget should have generous allocations towards some of the unfinished connectivity in the above mentioned forgotten frontier straddling Orissa, Chhattisgarh and Andhra Pradesh. This includes the lines Khurda Rd - Balangir, Nuapada-Gunupur-Theruvali, LanjigarhRd-Junagarh-Nawarangpur-Jeypore-Malkangiri, Baripada Bangiriposi-...
Tatanagar, Durg-Dallirajhara-Jagdalpur, Rajahmundry- Bhadrachalam Rd. and connecting Malkangiri, Kirandul and Manguru.

Finally, it was also suggested that IR must watch out the activity of some of the older railway zones that seem to have not gotten over the zone splits and as a result have knowingly or unknowingly acted in a way detrimental to states that are part of that zone but do not contain the HQ of that zone. For example, CAG reported that while the gauge conversion of the Rupsa-Bangiriposi section (in Orissa) in South Eastern Railway (SER) zone was conceived as an alternate to the third line between Kharagpur and Tatanagar, SER adopted a mixed track structure instead of conforming to the standard required to run heavy haul trains, thereby defeating the basic objective of providing an alternate route to the heavy haul freight traffic. If SER is not interested in these lines, and is wasting Railways money, may be the railway ministry can consider taking them away from SER and give it to ECOR.