

SOUTHERN AFRICA GLOBAL COMPETITIVENESS HUB



Technical Report: **Review of the Effectiveness of Rail Concessions in the SADC Region**

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TABLE OF CONTENTS

1. EXECUTIVE SUMMARY	4
2. INTRODUCTION	8
2.1 Background	8
2.2 Objectives of Study	9
2.3 Study Methodology	9
2.4 Report Structure	10
3. BEITBRIDGE BULAWAYO RAILWAY CONCESSION	11
3.1 Objectives of Privatization	11
3.2 Scope of Railway Privatization	11
3.3 Mode of Privatization	11
3.3.1 Clauses of Concession Agreement	11
3.3.2 National Versus Regional Focus	12
3.3.3 Operational Performance Measures	13
3.4 Lessons Learnt.....	13
4. RS of ZAMBIA CONCESSION	14
4.1 Objectives of Privatization	14
4.2 Zambia Privatization Agency	15
4.2.1 Scope of Railway Privatization	15
4.3 Railway Background.....	16
4.4 Concession Model.....	17
4.4.1 Mode of Privatization.....	17
4.4.2 The Selection Process	18
4.4.3 Technical and Financial Evaluation.....	18
4.4.4 Reasons for Dividing the Concession and Potential Pitfalls	19
4.4.5 Labor Reform And Rehabilitation Action Plan	22
4.4.6 Progress Toward These Stated Steps	23
4.4.7 Examination of the Long Haul Focus	23
4.4.8 Status of Rehabilitation of Assets.....	25
4.4.9 The Role of Regulatory or Monitoring Agency	27
4.4.10 Procedures for Tendering Technical and Financial Evaluation	28
4.4.11 Operational Performance Measures and Monitoring.....	31
4.4.12 Contractual Clauses Regarding Market Power Abuse	34
4.5 Lessons Learnt.....	34
5. MOZAMBIQUE RAILWAY CONCESSION.....	36
5.1 Mozambique Concessioning Structure.....	36
5.2 Objectives of Privatization	37
5.3 Scope of Railway Privatization	38
5.3.1 Northern Corridor	38
5.3.2 The Concession Process	39
5.3.3 Labor Reform	40
5.4 The Central Corridor.....	41
5.4.1 Moatize Basin.....	41
5.4.2 Rail Concession and Rehabilitation.....	42
5.4.3 The Concession Financing Features.....	44
5.4.4 The Concession Process	45
5.4.5 Progress to Date	46
5.4.6 Factors for a Successful Concession	46
5.5 The Southern Corridor.....	46
5.5.1 Limpopo Railway Corridor.....	46

5.5.2	The Ressano Garcia Line	47
5.6	Lessons Learnt.....	48
5.6.1	Nacala Line	48
5.6.2	Beira Concession	48
5.6.3	Other Lines	49
6.	TANZANIA RAILWAY LIMITED CONCESSION	50
6.1	Tanzania Railway Corporation	50
6.2	Objectives of Privatization	50
6.3	Scope of Railway Privatization	51
6.3.1	The Role of Regulatory or Monitoring Agency	51
6.3.2	Clear Objectives.....	52
6.3.3	Rehabilitation of Assets.....	53
6.3.4	Labor Reform	53
6.3.5	Rehabilitation Action Plan	53
6.3.6	Passenger Service	54
6.3.7	Political Support	54
6.3.8	Lessons Learnt.....	54
7.	CENTRAL EAST AFRICAN RAILWAY CONCESSION	56
7.1	Objectives of Privatization	56
7.2	Mode of Privatization.....	56
7.2.1	Concession Process and Award of Bid	57
7.3	Concession Terms	57
7.4	Deficiencies in Concession Process.....	59
7.4.1	Institutional Reforms	59
7.4.2	Annual Report	60
7.4.3	Performance of the Concession	61
7.4.4	Passenger Service	63
7.4.5	Lessons Learnt.....	63
8.	SUGGESTED FUTURE ACTIONS	64
	ANNEX 1: SARA CORRIDORS BACKGROUND PAPER.....	66
	ANNEX 2: Questionnaires	70
	ANNEX 3: SOW.....	86
II	BACKGROUND.....	86
VI	REPORTING	88
VI	TIMING.....	88
VII	LEVEL OF EFFORT	88
	ANNEX 4: Acknowledgements	90

1. EXECUTIVE SUMMARY

Following the concessioning of some railways in Southern Africa, a number of challenges seemed to have emerged, among them, declining performance in certain areas, declining state of infrastructure, massive retrenchments, reduced business cooperation amongst railways in certain areas, reduced frequencies of passenger services. However, the States subsidies to railways had been eliminated, thereby bringing about fiscal relief to the States concerned. As a result of the reduced capacity of such railways, some traditional rail traffic has since moved on to the road, causing immense damage to road pavements. The background of this section provides more of the justification for this report.

The concessioned railways in the Southern Africa Development Community (SADC) region were each evaluated to determine if performance, both operational and financial, had improved since concessioning. Reasons for failure to achieve expectations were also examined. Several common causes were found in those concessions believed to be most lacking in performance. These common causes were:

1. Failure to enact enabling legislation and to establish a Railway Regulator prior to concession. This was found to be the case in Zambia, Mozambique and Malawi. To a lesser extent the same was true in Zimbabwe, but that concession is unique in its concession process.
2. Failure to have a clear understanding of the roles and responsibilities of the concessionaire and government as relates to infrastructure rehabilitation and investment. This was found to be the case in Zambia, Mozambique and Malawi.
3. In the absence of enabling legislation and regulator, several concessions depended upon contract language to govern concession obligations. In most cases the contract language did not anticipate every circumstance and eventuality that might arise. Clear definition of “investment”, “maintenance “and “force majeure” are but of few of the areas of dispute. This was found to be the case in Zambia and Malawi.
4. Failure by the parties to establish clear Public Service Obligations (PSO) of both parties due to lack of clear definition of PSO and because of trying to defer the date for reaching agreement to a point in the future, all passenger operations in those countries are now matters of dispute and dissatisfaction. This is true in Malawi where the date for agreement was put off for five years, and in Zambia where standards weren't clear and where supposed passenger subsidies haven't been forthcoming.
5. Failure to have a sound business plan that would support capital investment (Malawi).
6. Timeliness and sequencing of the concession process from time of announcement of intent to finalization of the concession. This was found to be true in Zambia, Mozambique, and Tanzania. The lengthy process had an adverse impact on employee morale, asset deterioration and business shrinkage.
7. Splitting concessions into units, one of which was attractive and one of which was not. This has led to a common concessionaire focusing only on the attractive and having de facto abandoned the unattractive, yet very necessary business. This was especially true in Zambia.
8. Granting a privately negotiated concession that contained clearly anti-competitive clauses which have severely impacted other railways within the region's network. This was the case with the concession in Zimbabwe.

Each of the concessioned railways was studied and the results and findings are contained in the body of this report. Where possible, interested stakeholders were interviewed and were given the opportunity to present data outlining performance and their own views of the areas of dispute. Below is a brief summary of the study findings. Data upon which these findings are based is contained in the report.

I. Beitbridge Bulawayo Railway

The concession awarded for operation of the Beitbridge Bulawayo Railway (BBR) has been successful in terms of improvement of service through the corridor. Traffic is enjoying reduced transit times, and government is receiving concession fee payments. As events have turned out, it is doubtful that the National Railways of Zimbabwe (NRZ), using its own resources, would have been capable of providing service along this very important corridor. BBR and its affiliated companies provide all of the equipment, fuel, management and marketing for the corridor from Livingstone to Beitbridge.

Success in these areas must be balanced with the failure to support the regional network and make use of pre-existing capacity, namely the total diversion of transit traffic from Botswana Railway (BR). The concession contains anti-competitive clauses and results in an inefficient use of regional rail network capacity. This impact has been extended with the awarding of the Railway Systems of Zambia (RSZ) concession to the same investment group. Without a regional regulatory body, such as Southern African Railway Association (SARA), but with enforcement and regulatory powers, the adverse impacts will continue.

II. Zambia

The Zambia concession of Zambia Railways Limited (ZRL) to the RSZ has been successful in stopping the deterioration of the Zambian railway infrastructure and of railway equipment. The government has been freed of meeting the investment capital needs of the railway. Freight service over the long haul corridor has been significantly improved and the concessionaire is investing in improvements to the infrastructure and to the railway rolling stock. Passenger service is operating, albeit not at the level desired by government, but the government has been freed of the operating cost of the passenger operation. Disagreements continue over contract language and there continues to be a lack of an effective regulator.

The concession has been a failure in regards to several of the primary goals of the concession as relates to the inter-mine short haul movements supporting the copper industry. RSZ in effect, abandoned service to this critical area. It was able to do so because of lack of clear contract language requiring continued service and because there was no railway regulator. It is now resuming some service to the inter-mine traffic, but not close to the level that existed at time of concession. Disagreements continue over the level of investment made by the concessionaire, but there is no question but that the infrastructure is better than at time of concession.

III. Mozambique

Mozambique's concessions of railways and ports have both successes and failures. The early attempt to concession the Ressa Garcia line could not be finalized and the government has decided to continue operation under Portos e Caminhos de Ferro de Mozambique, E.P. (CFM). To this end, the line is undergoing major rehabilitation and will be capable of handling the projected increases in traffic. The Limpopo line lacks the traffic

base to attract a concessionaire and its future prospects are not good. It is probably best that CFM continue to operate the line. The same is true of the Goba line. CFM is now trimmed down and should be able to provide good service to the three retained southern lines at an efficient cost.

The Sena/Machipanda line concession to Beira Railway System (BRS) seems to be headed to a successful operation. The lines that had been out of service are now being returned to service and will provide efficient railway service to the hinterland of central Mozambique. The rail systems will enable development of the many mineral deposits in the region. While no railway regulator has been established, CFM will attempt to fill this role. As a minority shareholder in the concession, how successful the dual role will be is yet to be seen. For now, service is being returned, the government is freed of a major capital investment and in the future the government will receive significant concession fees. At some point in time the CFM shares will be made available to Mozambique investors.

The Nacala concession, CCDN, has not demonstrated success. It is closely tied to the Malawi concession and performance there has been lacking. Traffic levels are down from pre-concession levels and it is alleged that the infrastructure has not been improved during the life of the concession. The minority shareholder, CFM (49%), could not be more dissatisfied with the northern corridor concession. This concession is in its early years, and in time, there may be improvement, but at this date there is much lacking.

IV. Tanzania

The Tanzania Railway Company (TRC) concession to Tanzania Railways Limited (TRL) is in its first year of operation but thus far it seems to be a success. The necessary enabling legislation was enacted, a regulator was established and a rail asset holding company was established. The concession process took many years and had some adverse impacts, but when completed it was properly done. The concessionaire and the government are rehabilitating the line and adding new/remanufactured locomotives. Rolling stock is now available to restore service on the Tanga line after not having been provided for five months. Passenger service on the Central line is doing well and is not now government subsidized. Retrenchments have been completed. The concessionaire, Rites, is an experienced railway operator with adequate resources.

The rail asset holding company is an acknowledgement that on some light density railways, the government must have a role and a responsibility to invest in railway infrastructure, just as it does in roadway infrastructure. It is expected that the rail infrastructure will greatly improve and that new business will be developed both on line and in potential line extensions into new territories. The government will begin to receive concession fees and the economy will be more competitive with sound railway transportation. At this time, Tanzania Zambia Railway Authority (TAZARA) is not a likely concession candidate.

V. Malawi

The Malawi railway concession was one of the first in the SADC region. The railway was deteriorating and the government was anxious to free itself of the burden of funding the railway. No enabling legislation was enacted, there was no railway regulator, but the concession moved ahead in the belief that nothing in the existing legislation precluded concession. In that environment, the concession contract had to cover all eventualities

and clearly set out the responsibilities of the state and of the concessionaire. Even with several redrafts of the contract, much was lacking. Circumstances arose that were not clearly defined, contract language was open to interpretation, and disputes arose.

In the early years, the concessionaire seemed to make headway in returning rolling stock to service and making repairs to portions of the line. But over time traffic levels slipped, revenues didn't make forecast and there weren't sufficient internally generated funds to support infrastructure investment. Anecdotal evidence suggests transit times from Nacala are months in some cases. Passenger service was to be on a PSO basis that was to be negotiated after five years. Negotiations reached a stalemate and the little passenger service that now exists is inadequate in the government's eyes.

2. INTRODUCTION

2.1 Background

Railways in Southern Africa constitute one of the most integrated networks linking some 12 mainland SADC countries, with a route network of more than 22,000 kilometers. Around the 1970s, railways carried most of the internal as well as exports and imports amounting to about 250 million tones, with the railway market share exceeding the 50% mark, and enjoyed recognized levels of efficiencies.

Whilst the railways had been reliable forms of transportation for both passengers and goods for decades, on a selective basis, the performance of railways in some countries started declining, with levels of efficiencies declining to ultimately low levels of performance, followed by requests for increased levels of subsidy by central governments.

However, due to alleged persistent government interference in the running of railways, as well as poor management thereof, the commercialized railways performance still declined. This trend then called for a new strategy aimed at institutionalizing sustainable reforms of the railways and their performance to rid them of unwarranted interference, and an institutional framework coupled with investment to put the railways on the path to long term viability.

Following the aforementioned performance, and financed viability challenges of railways, the World Bank and its partners then advocated for private sector participation in the operations of railways through various models of concessioning of railways for private sector consortia for periods ranging from 20 - 30 years.

Pursuant to this initiative, SADC railways pursued the path of concessioning although a number of Member States, especially those whose performance was satisfactory, namely Spoornet, Swaziland Railways (SR), Trans Namib (TN), BR, continued to entertain state participation in the management and operation of railways as a basis for the running of the railway business. However, other States, namely Malawi, Zambia, Mozambique acceded to the concept of concessioning and of late, the United Republic of Tanzania (URT) has finalized concession agreements for TRC.

In order to assist the SADC Railways with its concessioning process, through funding from the United States Agency for International Development (USAID), under the SADC Transport Efficiency Programme (STEP) component, the Southern Africa Transport and Communications Commission Technical Unit (SATCCTU) formulated some guidelines for concession options for the region. The guidelines constituted a model on the basis of which, SADC Member States could formulate their concessioning frameworks. Customized frameworks were also developed through SATCCTU for the railway concessioning frameworks for Namibia, Tanzania, Zambia and Zimbabwe.

Following the concessioning of some railways in Southern Africa, a number of challenges seemed to have emerged, among them, declining performance in certain areas, declining state of infrastructure, massive retrenchments, reduced business cooperation amongst railways in certain areas, reduced frequencies of passenger services. However, the States subsidies to railways had been eliminated, thereby bringing about fiscal relief to the States concerned. As a result of the reduced capacity of such railways, some traditional rail traffic has since moved on to the road, causing immense damage to road pavements.

Because the performance of the concessioned railways has been below the expectations of the states, the SADC Ministers responsible for Transport approved a study on the “Review of the Effectiveness of Rail Concessions in the SADC Region”. To this end, the SADC Secretariat has commissioned this study to address the request of the Ministers and the Member States.

In the course of reviewing this study, it is important to remember that the concession process evolved over many years. Early “privatization” suggestions in the mid 1980’s were not warmly received. Developing the Model Legislative Procedures (MLP), SSATP Toolkit, and Model Concessions took several years. The process has gradually progressed and successes, where apparent, should be celebrated. At the same time, failures to meet expectations should be examined to determine if recommended processes were followed and if not, why. If the processes were followed and still there were failures we must determine what went wrong. Throughout this review, the reader will recognize “expectation gaps”¹ which contribute to the feeling that some concessions are not performing, even though service has improved and the financial burden to government has been lessened.

2.2 Objectives of Study

The overall objective of this study is, therefore, to review railway concessioning processes in the SADC region with a view to draw important lessons regarding the effectiveness of the policy position and implementation process for that policy position.

For each concession, the specific objectives are to review the following within the context of the SADC/SATCC Guidelines for Railway Concession Options (RCO) and best practices elsewhere in the world:

- (i) The objectives of the privatization scheme;
- (ii) The scope of the privatization scheme;
- (iii) The mode of privatization;
- (iv) How the concessioning process took into account the following critical success factors in the conception and implementation of the privatization scheme:
 - Labour reforms;
 - Political initiative and support;
 - Clarity of objectives and the existence of a rational action programme;
 - How national policy positions were dealt with in the process;
 - Defining the role of the Railways Management Authority (RMA) and necessary institutional reforms; and
 - Freedom to set prices.
- (v) Procedures for the tendering and technical and financial evaluation; and
- (vi) Clauses of the concessioning agreement.

2.3 Study Methodology

The study was based upon desk top research of available public documents relating to the concessions under study. Following that research, questionnaires were prepared for each of the States involved for completion by interested stakeholders. Information to be used in the study was thus to be obtained, in particular performance measurements and concession clauses that were not publically available. Unfortunately, only one State stakeholder responded, but that response contained very useful information. Interviews

¹ Mr. Babe Botano, an experienced regional rail expert, has applied this term to several of the concessions under review.

were conducted with several stakeholders of each of the involved States. These personal interviews provided good background information and anecdotal experience with the concession process and performance.

2.4 Report Structure

The report begins with BBR as it is one of the first concessions and because the BBR concession has had far reaching impacts on other SADC region railways. It precedes the report on RSZ because of the common or overlapping ownership of the two concessions and the impact that has had on the focus of service initiatives. Mozambique's concession history follows and includes a discussion of the Moatize mineral development potential, which has enabled concessioning of the central corridor. Tanzania's concession effort was a lengthy process and provides lessons all could have learned from, but some of the lessons learnt in the neighboring countries no doubt influenced its form and process. The Malawi Central East African Railways (CEAR) concession is then reviewed. It has been the focus of some critical assessments, but now may be in the process of change.

3. BEITBRIDGE BULAWAYO RAILWAY CONCESSION

3.1 Objectives of Privatization

The BBR was constructed in 1999 as a Build Operate Transfer (BOT) concession negotiated between New Limpopo Bridge Project Investments Ltd (NLPI) and the Government of Zimbabwe (GOZ). The concession was privately negotiated and is in place for a period of thirty years, after which the railway ownership reverts to the GOZ. The concession was awarded on a negotiated basis and is held by NPLI (Pvt) Limited, an investment company. Because the concession was not awarded based upon International Competitive Bidding (ICB), little is known of the terms of the concession. The objective of the state was to have the concessionaire provide a shorter route from Bulawayo to connections with Spoornet and to lengthen NRZ's haul.

The BBR is a subsidiary of NLPI Limited (Ltd), an investment holding company, whose main investment focus is infrastructure-related projects on the continent of Africa. The shareholders of NLPI are Nedbank Ltd, Old Mutual and Sanlam, all major South African financial institutions, together with New Limpopo Bridge Projects Limited (NLP), an investment company. NLPI has a collective 85% interest in BBR, while the NRZ holds a local 15% stake in the company.

3.2 Scope of Railway Privatization

The construction of the 350 km railway was completed in 16 months and opened to traffic in July 1999. It involved new line construction of approximately 150 km and rehabilitation of an existing line of 170 km. The total cost of the project is approximately US\$85 million. This project pioneered the BOT concept for infrastructure projects in Zimbabwe and is the first of the railway concessions to be totally financed with private funding. The concession was important because of that. The new route reduced the distance for traffic moving via Bulawayo by 184 km over the previously used route via Somabhula.

The BBR Private (Pvt) Ltd operates the railway. The foreign investor holds 85% equity and the balance is held by NRZ. BBR manages the railway with a small staff of 65 employees. It has contracted out the maintenance of railway infrastructure and the operation of the railway to Spoornet. BBR handled 1.5 million tons of traffic in the first year of its operation. BBR has since obtained operating rights over NRZ between Bulawayo and Livingstone in a haulage type arrangement and uses NRZ crews to man the trains. As BBR offers a shorter route from Bulawayo to east coast South African ports than BR, the latter has lost most of its transit traffic with the advent of BBR.

3.3 Mode of Privatization

3.3.1 Clauses of Concession Agreement

It is here that the terms of the concession severely impacted the railway systems of SADC region railways, with that impact still being felt. It has been alleged since the inception of the concession that the concession contained an "exclusivity" clause. That clause requires that all traffic handled by NRZ for furtherance to or from South Africa be routed via BBR, or if routed otherwise, that BBR still would be paid its share of the revenue, as if it had actually handled the traffic. With this contractual provision, NRZ began moving all traffic via BBR.

Historically, traffic to and from South Africa moved over BR to Plumtree for interchange to and from NRZ. At the time, before the opening of BBR, that route was the shortest and in terms of agreement between railways and the railway organization, SARA, traffic moved via the shortest route. Before the BBR concession, BR handled 1.155 million tons of transit traffic between Mafikeng and Plumtree. This traffic had an average length of haul of 641 km and, even though the rates per tkm were less than half of the average rate on BR, total transit revenues accounted for 33% of all of BR's revenue.

BR was in the process of upgrading its entire mainline. All mainline sleepers were changed from steel to concrete with a spring type fastener. All mainline rail, previously 40 kg per meter, was changed to 50 kg per meter, and all joint connections are welded into Continuous Welded Rail (CWR). In the face of this major upgrade, BR suddenly saw its traffic base drop dramatically. That traffic loss continues today and BR transit tonnage is now less than 150,000 tons, down from more than 1.15 million tons before BBR concession. Downstream financial impacts continue with passenger service south of Gaborone being discontinued, and with significant retrenchments being made across the system.

To address the impact of the re-routing of traffic around Botswana, SARA attempted to mediate a settlement. Historically, up until 1987, NRZ used to operate on the rail network through Botswana up to Mafikeng and therefore the distribution of traffic to and from South Africa between the Plumtree and Beitbridge routes was immaterial. Following the hand-over of the rail network in Botswana to BR in 1987, NRZ diverted most of the traffic to the Beitbridge route where it had longer distances in excess of 400 km as opposed to the 100 km that were left on the Plumtree route following the handover of BR. This left BR with reduced traffic volumes leading to the proposal to have traffic following the shortest route between origin and destination as a logical way of distributing traffic between NRZ and BR. The issue was discussed between Spoornet, NRZ and BR, who were the only affected parties then, and the discussions resulted in the acceptance of the proposal and some traffic going back to BR.² (SARA position paper is included in the Appendix)

After BBR, the shortest route became via BBR and BR again lost traffic. BR proposed an amendment to the principle resulting in its amendment to include cost, efficiency, customer preference etc. considerations when consigning traffic. Traffic volumes on the Plumtree route continued to decline leading to the elevation of the issue to Heads of State level at some point in time (Botswana and Zimbabwe). The problem did not disappear after the intervention of Heads of States.³

To resolve the issue, SARA mediated an agreement wherein traffic to and from the western part of South Africa would be routed via BR. This was known as the "zoning agreement", and in the short term seemed to be a satisfactory compromise. However, shortly thereafter Spoornet revised its train blocking strategy and all trains were originated in Johannesburg, thereby negating the zoning impact.

3.3.2 National versus Regional Focus

As discussed in the portion of this study relating to the concession of Zambia Railways (ZR), NLPI, Spoornet and BBR continue to extend their influence to move as much traffic as possible via BBR and achieve maximum length of haul for each of the three railways.

² SARA Corridor Paper

³ SARA Corridor Paper

At times this is to the detriment of connecting lines in Botswana and in Tanzania and to the detriment of short haul local freight shippers. While the concession as a standalone project has been positive in terms of reducing transit times in the corridor, it must be viewed in a holistic sense and must take into account the impact on the entire SADC region railway network. Here the conflict between national and regional rail goals is very clear.

BBR faced intense competition from the road sector and therefore strived to compete on the basis of price as well as quality of service. It implemented a wagon tracking system and is thus able to keep its customers informed of the location and expected arrival time of wagons at destination. The transit times and wagon turn round has been reduced substantially. BBR believes that it has no option but to market its service over the entire corridor (Democratic Republic of Congo (DRC), South Africa, Zambia and Zimbabwe) and provide higher quality of service. It was instrumental in negotiating a deal with a Zambian mining company for Zambia-Durban traffic on an annual basis, with a guaranteed transit time of seven days, although some observers indicate today's transit times are closer to 12 days. BBR believes that with improved service on corridor basis, rail has the potential to increase its market share from estimated 40% to 60%.

3.3.3 Operational Performance Measures

It has been seen that BBR, as a private sector railway, has set high standards of efficiency and service quality. It is also marketing its service aggressively and actively promoting the corridor concept in the region. With its interest in the haulage arrangement between Bulawayo and Livingstone and its ownership participation in RSZ, it has continued to focus on maximizing corridor performance. Its performance and success could go a long way in convincing governments in the region that privatization and concession of railways is the right approach, but for the adverse impact on other railways and shippers within the region.

3.4 Lessons Learnt

As this was the first concession in SADC, it is important because the success of the operation has demonstrated the potential for private sector participation in the region's transport systems. It has improved the network, in shortening the distance by 184 km, and it has reduced transit times within the corridor.

However, the letting of the concession, and the negotiation of its provisions, were not open and transparent. It has always been suspect within the region because of this. Ownership interests were along the subject of speculation. The "exclusivity" clause is clearly anti-competitive and has had a material adverse impact on the region's transport systems. Market forces, such as allowing BR to compete on the basis of service and price, would have made more rational use of the region's entire transport network.

In this concession, as with many others, the guidelines set out in the MLP and the Model Freight Concession (MFC) were not followed. Even today, there is no railway regulator within Zimbabwe to monitor BBR performance or to assure fair treatment to all shippers.

4. RAILWAY SYSTEMS OF ZAMBIA CONCESSION

4.1 Objectives of Privatization

Zambia passed through a period of severe economic decline throughout the 1970's and 1980's. "Zambia experienced deterioration in the terms of trade, collapsing copper prices, soaring oil prices, lack of capital investment and significant internal mismanagement. The situation was further aggravated by drought.

Hoping that the shocks were temporary, Zambia undertook huge external borrowings and by the end of the 1980s external debt was over US\$6billion. Inevitably, Zambia's economic position deteriorated to such an extent the country became unable to service its obligations and unable to support its ailing domestic industries. From 1985 to 1989 public enterprise losses were estimated at US\$455 million.

It took a change of Government, and a change of political philosophy, to start the reversal of the economic decline. In 1991, the new Movement for Multiparty Democracy (MMD) Government made a fundamental decision to attempt to stem the economic decline of Zambia through private, rather than state enterprises. In order to achieve this, two major policy initiatives were implemented. The first was to establish an "enabling environment" for the private sector to thrive; the second was to sell off state owned companies.

Within the context of Zambia's Structural Adjustment Program (SAP), the new Government introduced a number of major initiatives to promote the private sector, and these included:

- Enacting the investment Act in 1991 (updated in 1993 and 1996) to facilitate, coordinate and promote the establishment of business enterprises in Zambia;
- The establishment of the Lusaka Stock Exchange (Luse);
- Enacting the Banking and Financial Acts of 1994;
- Streamlining the company law, which is currently in line with the European Company Law;
- Removing all restrictions from foreign currency transactions; and
- Passing into law in 1992 the Privatization Act No. 29, which among other things established the Zambia Privatization Agency (ZPA), an autonomous private sector led agency whose mandate was to implement the privatization program. Specifically its responsibilities were to plan, implement and control the privatization of state owned enterprises in cooperation with the Government.

The stated objectives of the privatization program were to:

- i) Scale down the Government's direct involvement in the operations of enterprises;
- ii) Reduce the administrative load associated with this direct involvement;
- iii) Minimize state bureaucracy in enterprise operations;
- iv) Reduce the costs of capital expenditure and subsidies from public funds;
- v) Promote competition and improve efficiency of enterprise operations;
- vi) Encourage wide ownership of shares;
- vii) Promote the growth of capital markets;
- viii) Stimulate both local and foreign investment;
- ix) Promote new capital investment; and

- x) Derive capital income for the Treasury. ⁴

4.2 Zambia Privatization Agency

4.2.1 Scope of Railway Privatization

With the establishment of the ZPA, privatization efforts through either sale or concessioning received high priority. The ZPA's objective of privatization is to transfer the control of companies to private ownership, thereby allowing them to compete in a market economy and make decentralized decisions regarding the allocation of resources and capital. As this relates to the privatization and concessioning of ZRL the following were specific areas requiring improvement; to enable ZRL through restructuring and privatization to: (i) increase operating efficiency; (ii) reduce cost of operations; and (iii) make freight services and tariffs competitive, and, consequently, increase the railways' share of the local, international, and transit freight traffic. Additionally, efforts of a privatized and efficient ZRL to increase its share of freight traffic were expected to result in:

- i) Heightening of railroad competition and, consequently, overall reduction in transport costs, leading to the Zambian economy becoming globally more competitive and growth oriented;
- ii) A significant reduction of traffic on road, particularly the long-haul and bulk traffic, and, therefore, in the budgetary allocation of funds for the maintenance, rehabilitation and expansion of the road network in Zambia as well as in the level of pollution and congestion;
- iii) The ZRL linked international corridors becoming more efficient and cost effective, leading to more trade between countries along these corridors, viz., South Africa, Mozambique, Zimbabwe, Zambia, DRC) Botswana, Uganda (after setting up the inter-gauge trans-shipment facilities in Tanzania), and Angola (after the reopening of the Lobito rail link);
- iv) ZRL becoming financially self-sustaining and being in a position to renew its assets and reward its capital providers;
- v) Government of the Republic of Zambia (GRZ) being able to reduce its budgetary deficit through receipt of concession fees, taxes, and hire and lease charges; and
- vi) Zambia generating more foreign exchange through a shift of considerable transit and international traffic from mostly foreign road haulers to ZRL.⁵

These six bullet points listed above will be specifically analyzed to determine if the post-privatization railway operation has attained these goals. On the surface, many would say several of these goals were not attained.

Excessively high transportation costs were particularly noted as the major impediment to private sector investment and growth. The Government particularly identified ZRL as one of the priority state owned enterprises requiring urgent attention. The railway was fast losing its market share because of poor market orientation, poor and unpredictable quality of service, and erosion of its operating capacity caused by inadequate maintenance, and ever-increasing competition from the road haulers. Traffic levels sharply declined during the 1990s, from 1,072 million net-ton-kilometers in 1993 to 540 million net-ton-kilometers in 1999. In order to reverse this trend, the Government decided to concession the railways in March 2000.

⁴ Zambia Privatization Agency study of the effects of privatization

⁵ World Bank Implementation Completion Report (IDA-34330 TF-23134) Dec 20, 2005

All prospective bidders who had bought tender packages were invited to attend the bidders' conference to be held during the week starting 27th August 2001. The initial project concept had envisioned that the concession would take effect in late 2001 or early 2002. However, due to lack of Government experience in railway concessions and other reasons to be discussed later, along with the Government's keenness to oversee the process in much more detail, the process took longer than anticipated and was completed in December 2003. The long delay for the concession to materialize had a negative effect on the morale of employees at ZRL as the employees were anxious to know their fate. As a result of the above, project activities which were implemented by ZRL staff proceeded at a much slower rate of progress than planned.⁶

4.3 Railway Background

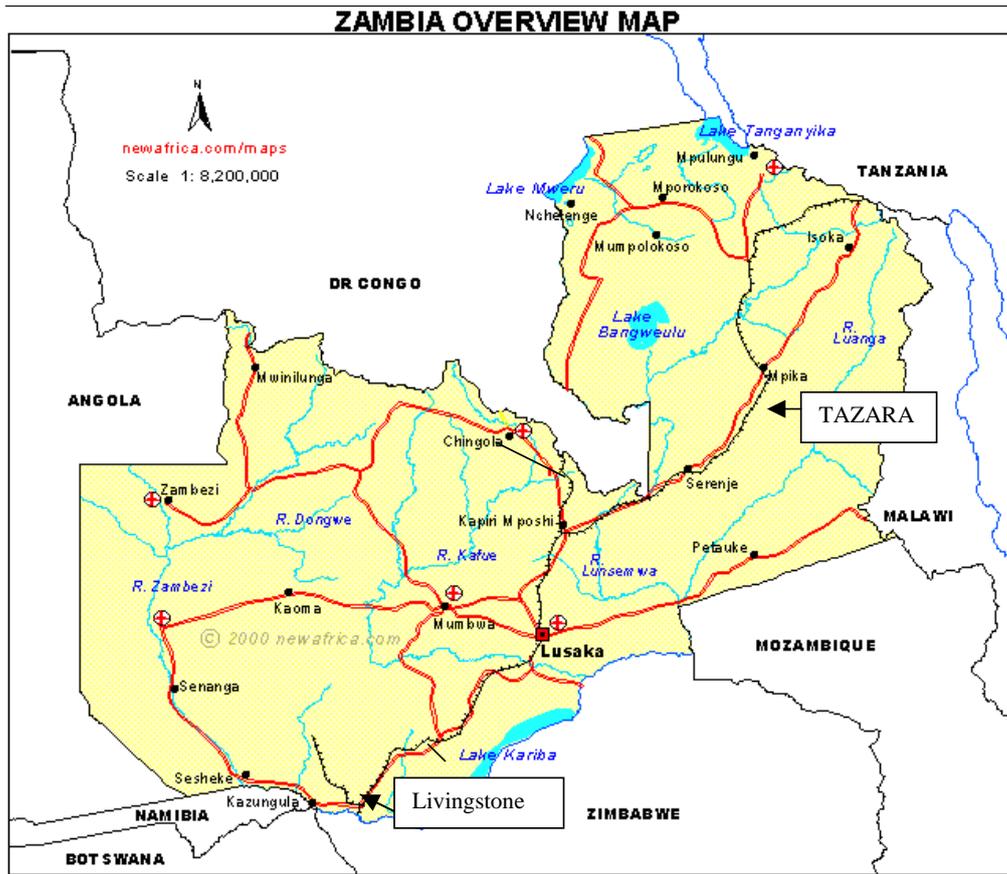
Zambia has two railway systems: (i) the main north south link, which was operated by ZRL, a wholly state-owned company, registered in terms of the Companies Act; and (ii) the TAZARA, jointly owned by the Tanzanian and Zambian governments, built with Chinese financing. The TAZARA Managing Director reports to the two governments through the TAZARA Board. The Managing Director of ZRL reported to the ZRL board prior to concessioning.

In this regard, ZRL was "tranche" for privatization in 1998 and in March 2000 Cabinet approved concessioning as the mode of privatization. The ZPA, an independent statutory body charged with the task of privatizing parastatal organizations in the country, spearheaded the concessioning initiative. In preparation for the concession, GRZ secured a World Bank loan for selected rehabilitation of the track, locomotives and wagons, and to assist in any other related social costs.

ZR operates from the Zimbabwe border in the southeast of the country, north through Choma, Lusaka, Kabwe, Kapiri Mposhi, and Ndola to the border with the DRC at Sakania. It includes branch lines that serve the Copperbelt, and a branch that runs between Choma and Masuka, from which it hauled coal from Maamba to the smelters and refineries of the Copperbelt. Maamba has now been shut down and there is little likelihood of it resuming operation due to its high debt and pension backlog. Coal for the refineries and cement plants is now sourced from Hwange in Zimbabwe and moves in three thirty wagon train sets each week. Another branchline runs between Livingstone and Mulobezi, a distance of 163 km but, being of no commercial significance, it was excluded from the proposed concession. Total mainline trackage is 797 km, and total branchline trackage is 426 km.

Traffic volumes of ZRL have been falling for many years. Freight traffic exceeded six million tons in 1975, representing over 1.4 billion net ton-kilometers (ntkm). By 1988, traffic levels had declined to 4.5 million tons and by 1998 to 1.4 million tons. The decline in traffic volumes was attributed mainly to the inefficiency, excess employment, low productivity, waste, poor management of train operations, lack of incentives, and inadequate accountability of staff normally associated with state owned railway enterprises. Within the last 10 years freight traffic volumes peaked at 4.4 million tons involving rail appropriate commodities such as copper, coal, lime/limerock, cement, and petroleum. Passenger traffic during the past ten years has varied between 0.8 million and 2.1 million passengers per year.

⁶ World Bank IMPLEMENTATION COMPLETION REPORT (IDA-34330 TF-23134) December 20, 2005



4.4 Concession Model

4.4.1 Mode of Privatization

The proposed concession model was a vertically integrated, but fragmented into geographical and business segments as follows:

- i) Package A - short haul inter-mine Freight Services, encompassing lines running between mining towns: from Kitwe to Chingola, Chililabombwe, Mufulira, and from Ndola to Luanshya, with access rights on the mainline from Kitwe to Ndola. This was to be a twenty years concession with two possible extensions of five years each, to bring the total possible concession duration to Thirty years;
- ii) Package B - long haul mainline freight services, encompassing the current mainline running from the Zimbabwe border to Kitwe and from Ndola to Sakania to the border with the DRC, including the branch line from Choma to Masuku. This was to be a twenty years concession with two possible extensions of five years each, to bring the total possible concession duration to thirty years. Bids for package B were required to also bid for passenger services, package C, as described below; and
- iii) Package C - Passenger Services between Livingstone and Kitwe. Bidders were allowed to bid for package C alone. However, any bid for package B were to also include a bid for C. This was to avoid a situation where no bidder would have bid for C. The concession period for this concession was to be seven years with two possible extensions of two years each, to bring the total possible concession to eleven years.

The main features of the concession were:

- that the concession would include infrastructure as well as an identified number of core operating assets such as locomotives, wagons, workshop equipment, etc;
- infrastructure and core operating assets would be owned by Government or an asset holding company, but maintained and rehabilitated by the concessionaire during the period of the concession; and
- at the end of the period, the track, rolling stock, land and buildings along with the other fixed railway infrastructure will revert to the Government. Mulobezi branch, which runs from Livingstone to Mulobezi, was not included in the concession packages, as it was deemed unattractive at the time, and would have only reduced the attractiveness and value of the concession, if included.

Concession fee structure: The proposed concession fee structure comprised:

- a one off entry concession fee of
 - (1) US\$250,000 for package A,
 - (2) US\$500,000 for package B,
 - (3) US\$750,000 for package A+B.
- variable concession fee of 5% of total annual revenues; and
- a fixed annual concession fee for each year of the concession term, which was to be proposed by the bidders. The bidder was not required to pay either an entry or variable concession fees for package C.

4.4.2 The Selection Process

The Zambia Railways Concession (ZRC) was advertised in both local and international print media including Internet on July 4, 2001. During the tender period, eight prospective bidders purchased bidding documents at a cost of US\$5,000. A bidders' conference was conducted on August 28, 2001 at which all issues relating to the bidding documents and the concession were clarified. The final bidding documents were issued on September 21, 2001. On December 7, 2001 the tender closed and four bidders submitted technical and financial proposals as shown in the table below.

Prospective Concessionaires Participating

BIDDER	Package A	Package B	Package C	Package A+B
Edlow Resources (Bermuda)	X	X	V	V
Sheltam Group (South Africa)	V	V	V	V
CANAC (Canada) in cooperation with Norconsult (Norway)	X	X	V	V
(NLPI) and Spoornet (South Africa) Consortium	X	X	V	V

- V Bid submitted for the package
 X No bid submitted for the package

4.4.3 Technical and Financial Evaluation

Two bidders obtained the minimum score to pass the technical evaluation. These were CANAC/Norconsult and NLPI/Spoornet (NLPI held 72.8 %, Transnet (South Africa) 18.2 %, and

Canarail 6 % and Employees 3 %.⁷ The financial proposals of the two qualified bidders were opened on January 18, 2002. NPLI/Spoornet offered to pay GRZ a total of US\$253.5 million spread over a period of 20 years in respect to the freight packages A+B; and a negative inflow of US\$7.4 million for package C for a seven year period. The fixed fee depends on a threshold profit being achieved; on reaching this threshold, half the additional profit is paid as a fee; this was the basis of the very large price (about \$250 million) reported in the press at the time.⁸

CANAC's offer reached US\$20.9 million for the freight packages A+B and a negative inflow of US\$16.7 million for package C for a seven year period.

The concession agreement was signed with NLPI/Spoornet on February 14, 2003. The commercial terms are as follows; Fixed concession fee of US\$253,500,844 spread over 20 years (much of which was dependent upon profits greatly exceeding the threshold) plus a variable fee of 5% on turnover and an investment pledge of US\$64,300,000, of which US\$6.1 million was initial capital investment and US\$14.8 million was to be invested in the first five years.

4.4.4 Reasons for Dividing the Concession and Potential Pitfalls

In pre-concession years, tonnage had declined precipitously as the copper industry underwent production cutbacks, and as the world copper price declined. A major portion of ZRL tonnage was short haul inter-mine, inter-smelter movement in the Copperbelt. Local traffic, of which inter-mine movement and coal for the mines were the major part, accounted for 56% of total tonnage in 1999. A large portion of this was the inter-mine movements. Transit traffic accounted for only 13% of the total, with import and export traffic being approximately 15% each.

	1994	1995	1996	1997	1998	1999
Total Freight Tons (000)	2,516,000	1,881,000	1,867,000	1,683,000	1,413,000	1,611,898
Total Freight Revenue (000) USD	33,857	21,965	21,044	28,615	17,894	23,343
Total TKMs (000)	653,000	446,000	462,000	536,000	473,000	542,081
Average Length of Haul	260	277	247	319	335	336
Total Revenue per TKm	0.052	0.049	0.046	0.053	0.038	0.043
Total Revenue per Ton	13.46	11.68	11.27	17.00	12.66	14.5

Source Consultant

Between 1994 and 1998, freight tonnage decreased 44% from 2.516 million tons to 1.413 million tons, with a corresponding and dramatic decline in freight revenue from US\$33.8m to merely US\$17.8m (down 47%). A further consequence was the fall in total revenue per ton kilometer carried, the impact of which was softened by the maintenance of reasonable average length of haul.

Freight tonnages rebounded somewhat to 1.611 million tons by financial year end 1999, the last year for which the consultant has detailed records, mainly as a result in increases in the transit, import and export categories. Local carriage had continued to decline due mainly to the slowdown in copper production. All of this inter-mine haulage was included in

⁷ AICD Final Report, Taking Stock of Railways in Sub-Saharan Africa

⁸ Results of Railway Privatization in Africa, Richard Bullock., World Bank

Package A. The following table shows the breakdown between local (inter-mine Package A) and long haul (import and export Package B) tonnage in the pre-concession period.

	2000 EST	As a percentage of total
Local tons	897,033	56%
Average Length of Haul	174	
Net Ton Kilometers (000)	155638	
Revenue (000)	7,750	33%
Revenue per TKm	0.050	
Import Tons	248,682	15%
Average Length of Haul	605	
NetTon Kilometers	150,422	
Revenue	6,226	27%
Revenue per TKm	0.041	
Export Tons	262,456	16%
Average Length of Haul	397	
NetTon Kilometers	104,064	
Revenue	3,745	16%
Revenue per TKm	0.036	
Transit Tons	203,727	13%
Average Length of Haul	648	
Net Ton Kilometers	131,957	
Revenue	5,621	24%
Revenue per TKm	0.043	
Total Freight Tons	1,611,898	
Total Freight Revenue (000) US\$	23,343	
Total TKMs (000)	542,081	
Average Length of Haul	336	
Total Revenue per TKm	0.043	
Total Revenue per Ton	14.5	

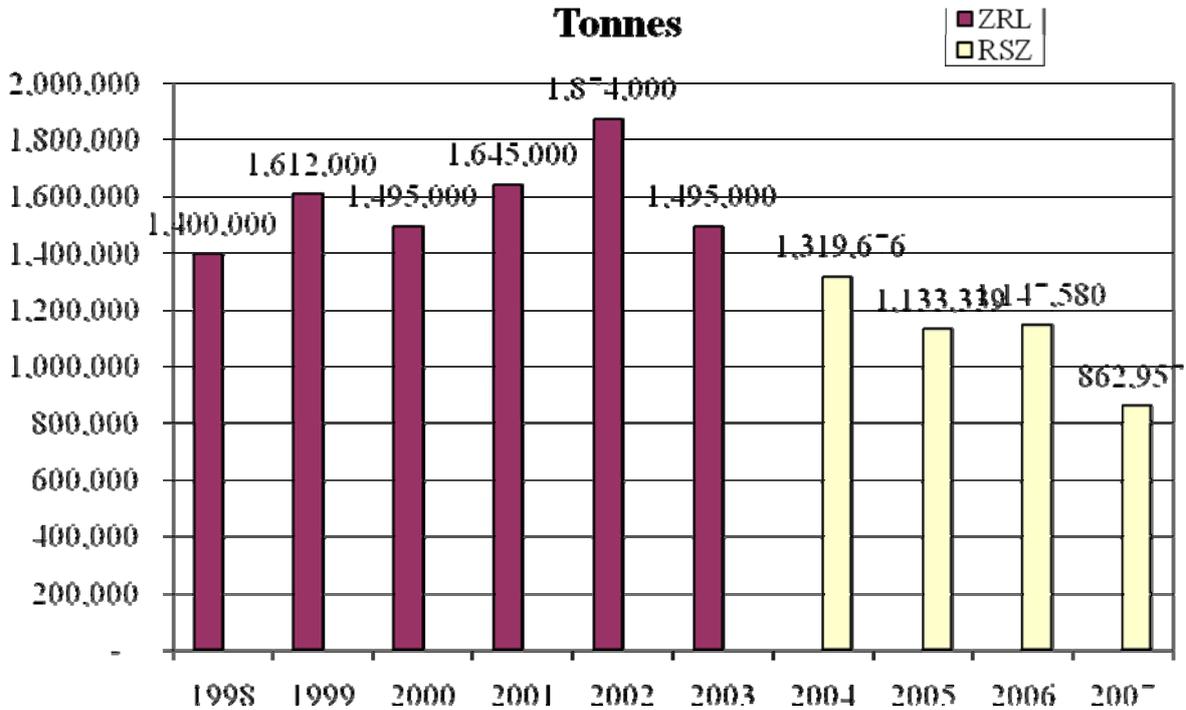
Source Consultant

The copper industry production has increased as a result of the privatization of ZCCM, which has been completed, and with the worldwide increase in commodity prices. An increase in rail freight carried (particularly copper) can be expected. Zambian copper production has increased from 260,000 tons in 1997 to 459,000 tons in 2005 and to 492,000 tons in 2006.⁹ Much of the copper anodes from the copperbelt move via truck to a marshalling center near Kapiri Mposhi and then by truck to Dar es Salaam. Little moves by rail over TAZARA because of its capacity constraints. RSZ has offered to move copper in haulage or trackage rights type arrangement to the Tanzanian border thereby improving its length of haul to almost 1000 km and providing added capacity to TAZARA. The proposal has yet to be responded to formally. Most of the copper moving via RSZ is now copper concentrates from DRC moving to Durban.

In this concession, however it is reported that the concessionaire has redeployed resources to long haul and has severely restricted resources for use in the inter-mine haulage. As seen above, 56% of the work effort, as measured by tons, contributed only 33% of the revenue before concessioning. Pre-concession rates stood at US\$3.70 per ton

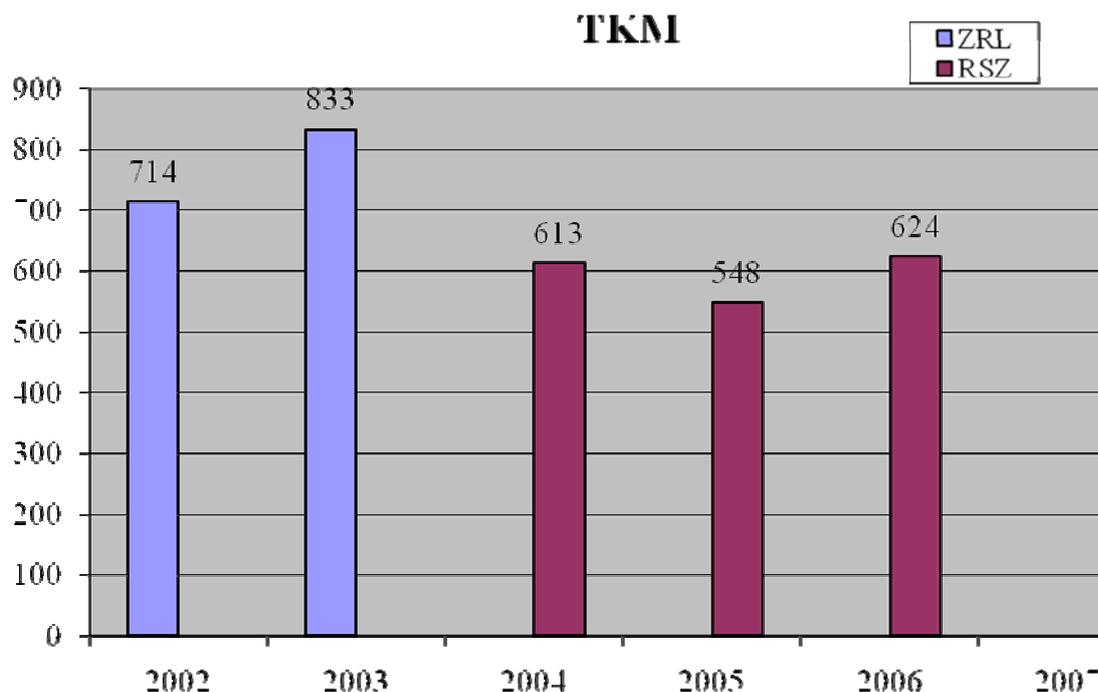
⁹ African Review of Business and Technology, December 2005

for the inter-mine traffic as compared to US\$8.60 for other local haul. While this resource redeployment may be a sound business decision, it has resulted in a diversion of all inter-mine tonnage to roadway, with the associated road damage, adverse roadway safety and increased cost to the miner. The impact of the reduction in service to the inter-mine traffic is shown in the table below. The concessionaire has now redeployed additional assets to the inter-mine traffic and has regained 35% of the formerly handled inter-mine traffic with a target to regain to 65% of the former level. This removes one of the least desirable consequences of the concession.



Source ZRL

Thus, the structure of the concession split the high margin, long haul portion, Package B, from the low margin inter-mine movements, Package A. In retrospect, provisions should have been included in the contract to require the concessionaire to continue to provide equipment, fuel, locomotives and manpower for the Package A portion of the concession. By redeploying resources, the concessionaire could have a de facto abandonment of this much needed service. Implementing provisions of the MLP, discussed later, or including minimum levels of inter-mine service in Package A, in the concession contract, may have prevented this cessation of service on the inter-mine traffic. While tonnage dropped very significantly, tkms, being heavily influenced by the emphasis on long haul traffic, only decreased 25% because of the short haul nature of the neglected inter-mine traffic.



Source ZRL

4.4.5 Labor Reform and Rehabilitation Action Plan

As part of an ongoing effort to improve railway operations in Africa, the World Bank played a large role in the concessioning effort. First US\$1.1million was provided to design the concession structure, evaluate bids and implement the concession. Second, US\$19.5 million was provided for staff retrenchment. Employment had decreased from 5882 to 3109 by year 2000, but was still well in excess of the labor force required to operate the railway as a privatized concession. The World Bank funding for retrenchment came in two phases; first a reduction from 3109 to 1800, then a further reduction of 1000 employees to reach the design level of 800 employees, to be retained by the concessionaire. This left the retrenchment as a government responsibility and did not lessen the value of the concession, as viewed by investors, by placing the burden on the concessionaire. While the retrenchment payments were generous, more could have been done in preparing the displaced workers for employment outside the railway. The lesson from past experiences is that labor-shedding operations may prove more successful than might have been feared so long as: (i) trade unions are properly involved; (ii) a sufficiently generous redeployment program is provided; and (iii) companion measures or retraining efforts are introduced.¹⁰ In the Zambia case the labor restructuring was well handled.

Third, US\$7.2 million was provided for asset rehabilitation. This component was intended to stop the deterioration in ZRL's ability to operate by;

- i) repairing and rehabilitating some of ZRL's wagon fleet which were out of service awaiting repairs, specifically fitting of 1,980 wheel discs to 255 wagons at a cost of US\$1.1 million;
- ii) Overhaul of five GM locomotives at US\$240,000 per locomotive, with a total allocation of US\$1.2 million;

¹⁰ SSATP Toolkit

- iii) US\$2.4 million was provided by the Bank for replacement of 40,000 concrete sleepers and 60,000 wooden sleepers, matched by GRZ commitment of US\$2 million for fasteners and ballast;
- iv) US\$.3 million for environmental remediation;
- v) US\$.5 million for ZRL restructuring to go from operating a railway to the role as custodian of the governments railway assets, monitoring concession compliance, etc;
- vi) US\$.8 million for MCT to develop the regulatory and legal framework to accommodate the concessioning;
- vii) US\$.5 million for MCT strengthening and software procurement, etc; and
- viii)US\$.1 million for social mitigation brought about by the retrenchments.

4.4.6 Progress Toward These Stated Steps

The start of the concession was marked by some serious problems. On the one hand, the Concessionaire faced problems with its own consortium members and subcontractors and on the other hand ZRL and the Government Inspector for Railways (GIR) produced a number of highly critical reports about the Concessionaire's performance within a few months of the start of the concession. This led to worsening of relations and a feeling that all was not well with the concession.¹¹

During the first two years since the commencement of the concession, the Concessionaire has focused on long distance traffic and the average haul has increased by about 25% and the freight traffic overall by 20% (based on net ton kilometers). The Concessionaire has introduced a system of independent survey of the customers to improve the quality of service.

This focus on long haul traffic may not well serve the interests of Zambia or of its rail shippers, if that focus adversely affects other needed services. As stated earlier, one of the expected results of a successful concession was "A significant reduction of traffic on road, particularly the long-haul and bulk traffic, and, therefore, in the budgetary allocation of funds for the maintenance, rehabilitation and expansion of the road network in Zambia as well as in the level of pollution and congestion". The diversion of resources from the inter-mine short haul ore movement runs counter to this expected result.

4.4.7 Examination of the Long Haul Focus

To understand the focus on long haul traffic one must examine several issues, including ownership of the concession and any interlocking investments that may be in conflict with some of the expected results.

The winning consortium included NLPI Ltd and Spoornet (South Africa) Consortium. Spoornet, as we all know, is the South Africa rail operator. Spoornet is a subsidiary of Transnet, the South African transport holding company. NLPI Group (which is assumed to include Spoornet's interest) owns 94% of RSZ with private investors holding 6%. NLPI shareholders include; (1) NLP, an investment holding company owned by well-established entrepreneurs with extensive project development experience. (2) Nedbank Capital, a leading South African bank holding company. (3) Old Mutual plc, a world-class financial

¹¹ World Bank IMPLEMENTATION COMPLETION REPORT (IDA-34330 TF-23134) December 20, 2005

services provider with a strong foothold in Africa (4) Sanlam, one of the oldest and leading financial services groups in South Africa.¹²

NLPI is not new to the concessioning process. Its first concession was the BOT concession of the BBR. The BBR was financed by NLPI. It consists of 150 km of new railway from Beitbridge, on the South African border, to West Nicholson where it connects to NRZ. From there, the existing railway to Bulawayo was rehabilitated. BBR is discussed elsewhere in this report but briefly it was built at a cost of US\$85 million, on a concession negotiated with the GOZ. BBR is owned 85% by NLPI and 15% by NRZ.

NLPI Logistics (NL) has the marketing rights over the 470 km NRZ line between Bulawayo and Victoria Falls, the connection to ZRL (now RSZ). NL provides the rolling stock, 35 locomotives and 600 wagons, and fuel. NRZ crews operated the trains in this section in what would be termed a “haulage” arrangement.

As discussed elsewhere in this report, the BBR concession requires that all traffic moving over NRZ to South Africa be routed via BBR, instead of the historic route via Plumtree and thence over BR for furtherance via Spoornet. (The history of this dispute and a recounting of efforts to resolve the disagreement between BR and NRZ and the GOZ is well reported in the SARA paper included in the appendix to this report).

Thus, it is in the best interest of NLPI to route all traffic from its subsidiary RSZ, to its NL haulage, thence to its subsidiary BBR for furtherance to Spoornet. Initially, Spoornet was the operator of the RSZ concession. RSZ employees were “seconded” to Spoornet. Spoornet was also the operator of BBR. Similarly, it is in Spoornet’s best interest to route traffic from its subsidiary RSZ, where Spoornet was the operator, to BBR (where Spoornet crews operate the trains) and thence via Spoornet to South Africa. Export traffic would probably be favored via the port of Durban. In this manner both Spoornet and NLPI achieve the maximum length of haul (It is reported that Spoornet is no longer the operator of either RSZ or of BBR).

The Oxford Analytical reported on December 10, 2007 on the long haul corridor focus. In that review, it saw success as the improved transit time between the Copperbelt and Durban, and if only measured in those terms, it has been a success. “The 3,119 km railway between Durban and Beitbridge (in South Africa), Beitbridge, Bulawayo and Victoria Falls (in Zimbabwe) and Victoria Falls and Ndola (in Zambia) represents one of the most successful freight concessions in Africa to date, although it has taken nearly a decade to integrate the three national rail networks through which the system runs. South Africa’s Nedbank Capital, which has an 85% stake in the consortium financing the Durban-Ndola railway, has witnessed a significant return on its investment. The freight railway now takes five days to complete a full journey, compared to six weeks before the three rail links were connected.” Knowledgeable sources indicate the five day trip time indicated in this paragraph is closer to 12 - 14 days.

This long haul proprietary focus may conflict with one of the expected results of the ZRL concession. In particular; “The ZRL-linked international corridors becoming more efficient and cost effective, leading to more trade between countries along these corridors, viz., South Africa, Mozambique, Zimbabwe, Zambia, DRC, Botswana, Uganda (after setting up the inter-gauge trans-shipment facilities in Tanzania), and Angola (after the reopening of the Lobito rail link”. Export shipments from the Copperbelt that might be more efficient

¹² NLPI website

moving via TAZARA and the port of Dar es Salaam, will be solicited to move via the southern route to achieve the longest haul for the RSZ and its owners. Similarly, Botswana would be restricted to only traffic destined Botswana and would be precluded from participating in transit traffic. How the long haul focus impacts interline relations with TAZARA is yet to be determined. In the short term, TAZARA lacks the capacity to move traffic from Zambia to Dar es Salaam. It has only 14 locomotives, of which seven are assigned to passenger trains and only five or six of which are available for the 1860 km trip from Zambia to Dar es Salaam. However, the interline relations with TAZARA are a major source of dissatisfaction within GOZ over the performance of the concessionaire, even though the issue preceded the concession.

4.4.8 Status of Rehabilitation of Assets

According to the World Bank report of December 2005, rehabilitation of assets was also progressing well almost two years into the concession. "So far, as indicated by the Concessionaire, the level of investment by the concessionaire in terms of rehabilitation of fixed infrastructure and rolling stock has been adequate, with the emphasis on first addressing critical areas. The regular and systematic rehabilitation has now picked up with the highlights being as follows:

- i) 266 kms of track has been rehabilitated and another 450 kms is in progress;
- ii) eight remanufactured engines have been ordered and four of them have been received in order to strengthen the locomotive fleet;
- iii) wagons are being rehabilitated at a rate of 80 per month;
- iv) telecommunication equipment, plant and machinery, and station buildings are also on a regular rehabilitation schedule; and
- v) about 28 good second hand passenger coaches have been procured from the Republic of South Africa, and an additional 28 are expected by mid 2006."

Given the current circumstances of the dispute between GRZ and the Concessionaire, the level of rehabilitation and investment would appear not to have kept pace with commitments. RSZ agreed to invest US\$14.8 million in the freight business over five years and about US\$0.5 million in the passenger business over four years. Much of this dispute is over methods of accounting.

In the concession contract a detailed investment plan was included. It set out the areas to be rehabilitated, the resources, i.e. sleepers, rail, ballast, etc., to be installed for each line segment. One part of the investment plan called for a "1 in 4" sleeper upgrade from wooden to concrete sleepers, reading in part "...primarily to replace one out of four defective wooden sleepers" That is, every fourth sleeper would be changed. Given the fact that at the time of concession 75% of the ZRL was operating at restricted speeds due to deteriorated track conditions, changing every fourth sleeper would keep the railway safe and in some cases might allow for removal of temporary speed restrictions. At present only 25% of the lines are under temporary speed restriction and the goal of RSZ is to reduce that to 15%.

This agreed to approach, as contained in the contract, is now a source of major dispute between RSZ and GRZ. Despite being in the contract, the GIR is now asserting that the "1 in 4" sleeper change outs are to be categorized as maintenance and not as capital investment. "*The upgrade defined in the concession agreement does not constitute rehabilitation but mere maintenance.*" Given the fact that the railway had been allowed to deteriorate to the extent that every fourth sleeper had to be replaced, it is disingenuous to now define the sleeper renewal as "mere maintenance". It would have been maintenance

had the sleepers been renewed on a regular basis over the past ten to fifteen years, as they should have been. The same is true of ballasting set forth in the investment plan, where re-ballasting was required to prevent concrete sleepers from center-cracking because of lack of adequate ballast under end of sleeper. Conditions such as this do not develop overnight, but instead demonstrate a failure to adequately maintain the railway over a long period of time. RSZ firmly, and by worldwide railway accounting standards correctly, asserts that the sleeper upgrade is indeed capital investment. Given RSZ's understanding, all capital commitments have been fully met or surpassed. ZRL has indicated, "The upgrade as defined in the concession agreement has been met. The concessionaire was responsible for funding." The five year investment plan called for US\$14 million and RSZ has invested US\$20+ million.

Investment Plan

	Year1	Year2	Year3	Year4	Year5	Phase 1 Y1-Y5 Total
Infrastructure						
1.1 Track	6,450,000	2,658,514	968,486	0	0	10,077,000
Ballast - additional ballast to prevent sleeper cracking and to ensure tamppability on concrete sleepers sections. Improve track stability.	720,000	271,726				991,726
Sleepers - Concrete sleepers (new) to replace those damaged in derailments and at joints; Steel sleepers (second hand) and/or wood sleepers (new) primarily to replace 1 out of 4 defective wooden sleepers	2,700,000	800,000	288,220			3,788,220
Rails (40 kg/m & 45 kg/m) to replace excessively worn rails and rail lost due to end cropping to fix joints	540,000	194,897				734,897
Joints (repair bad joints using on-track flash butt welding process. Also some thermit welds)	1,600,000	561,891				2,161,891
Other (e.g. weed control, repair track on bridges, points & crossings, rail fastenings, fish plates, on-track plant and off-track drainage work, etc)	540,000	830,000	680,266			2,050,266
Equipment for track gangs	350,000					350,000
1.2 Bridges	0	0	0	0	0	0
See maintenance programme						0
1.3 Buildings	80,000	47,000	47,000	42,000	42,000	258,000
General clean up. Building and electrical repairs; Paint interior and exterior.	81,000	47,000	47,000	42,000	42,000	259,000
1.4 Telecommunicatons	465,000	100,000	100,000	135,000		800,000
New Radio network for RTW; Additional peripheral equipment; New equipment for workshops; GPS on locos.	465,000					
Commence replacement of 50% of UHF FDM Philips Microwave radio. Additional peripheral equipment		100,000				
Complete replacement of 50% of UHF FDM Philips Microwave radio. Commence replacement of 25% of Digital NEC microwave network.			100,000			
Complete replacement of 25% of Digital NEC microwave network				135,000		
1.5 Signalling	105,000					105,000
Remove points machines and install hand tumbler; Install RTW computer and voice recorder and commission; Decommission & remove defunct CTC. Activate Radio Train Warrant (RTW) system	105,000					105,000
Infrastructure Total	7,100,000	2,805,514	1,115,486	177,000	42,000	11,240,000
Rolling stock						
2.1 Locomotives	782,000	782,000	782,000	209,000	200,000	2,755,000
Rehabilitate 20 locos (15 x U20C/15C and 5 x GT36) at cost of \$2,346,000 spread over years 1,2 and 3. Equip all with tachometers.	782,000	782,000	782,000			
Rehabilitate 4 locos (4 x U20C) at cost of \$409,000 spread over years 4 and 5. Equip all with tachometers.				209,000	200,000	
2.2 Wagons	0	0	0	0	0	0
See maintenance programme						
2.3 Workshop Equipment	579,000					579,000
Rehabilitation of existing workshop equipment (e.g.air compressors, wheel lathe, power plant, overhead cranes, fuel test and engine overhaul equipment etc)	325,000					
Aquisition of new workshop equipment such as fork lifts, transport, measuring and other equipment, battery charger and vapor steam cleaning plant	254,000					
Total Rolling Stock	1,361,000	782,000	782,000	209,000	200,000	3,334,000
Management Info Systems	150,000	50,000				200,000
Completion and customisation of ACIS systems and training of staff; ACPAC accounting system with human resources & payroll functionality; Wagon hire accounting system with server Configuration & commissioning of systems.	150,000	50,000				200,000
TOTAL INVESTMENT	8,611,000	3,637,514	1,897,486	386,000	242,000	14,774,000

Source ZRL

Regulatory reform and enabling legislation prior to concession would have avoided much of this misunderstanding. An independent regulator, familiar with the industry would immediately have recognized that an out of phase 25% sleeper renewal and upgrade to concrete is an investment.

One suggested approach to insure adequate investment in infrastructure rehabilitation is included in the SSATP Toolkit. It is based upon experience gained in other recent concessions. In the Zambia case, the concession depends on RSZ to fund sizeable rehabilitation, as only US\$2.4 million of the World Bank funding went to infrastructure. Apparently, the concessionaire underestimated the rehabilitation needs, or the railway deteriorated during the several years the concession process was underway. In either event, the following suggestions seem to be on point:

- Having the State carry a portion of the loans used for railway network rehabilitation and/or development;
- Assigning the status of subordinated debt to the State loans that are on-lent to the concessionaire, so as to provide security to those providing funds not guaranteed by the State;
- Introducing a mechanism for the affermage of part of the assets covered by the concession, without creating an asset management company;¹³ and
- The concessionaires are encouraged to utilize the Partial Risk Guarantee (PRG) offered by World Bank.¹⁴

A recent study found the following line segments to be in need of rehabilitation.¹⁵

Zambia	RSZ (1351)	Chingola-Mulobezi	456
		Chachoma – Masuku	54
		Ndola – Lwansya	62
		Ndola – Sakania	39
		Others	94
			705 km

4.4.9 The Role of Regulatory or Monitoring Agency

The Railways Act contains no authority for the concessioning of the railway and consequently the concessioning process leaned heavily upon the Privatization Act. In Zambia, the rules in effect at time of concession are primarily set out in:

- The Zambia Railways Act (ZRA), 1982 and subsidiary legislation relating to railway permits, accident inquiries, breath test devices, and the handling and transportation of explosives and other dangerous goods; and
- The *Rhodesia Railways Act*, 1949.

These laws were addressed to accommodate the operational environment of a monopoly public sector service provider. Quite understandably, their application to a new operational environment of private monopoly service provider and government regulator leads to areas of potential conflict (e.g. the Minister having a wide discretion to approve tariffs, when the concession agreement provides that a Concessionaire is free to set tariffs); and areas where the law is inadequate to support a healthy regulator-service provider

¹³ In a lease or an affermage contract, the public owner of the contract retains the authority to set tariffs and assumes the obligation and risks of financing the CAPEX.

¹⁴ SSATP Toolkit

¹⁵ AICD Final Report, 2007

relationship (e.g. lack of provision for transparency in undertaking regulatory action, or for the regulator to access information essential to regulatory decision-making held by the Concessionaire.¹⁶ While the Privatization Act is adequate to guide and complete the concessioning process, it does not address execution of the concession and the relationship between the railway regulator and the privatized railway. The law responds to a different operational environment and does not adequately support the planned environment of government regulator and private monopoly service provider. The Railway laws are more critical to the eventual success of the concession than the Privatization Act, which is merely focused on putting the concession in place.

As such, the privatization of ZRL moved ahead in terms of the Privatization Act, 1992, which provides a legal framework for the privatization of state-owned enterprises. The focus of the Privatization Act is slanted towards privatization through the public or private sale of shares, or sale of assets and it does not expressly provide for concessioning. By leaning upon the Privatization Act, and not providing for a legislatively mandated Railway Authority, as recommended by the MLP, the concession faced difficulties almost immediately. To the GIR, basically a safety inspector fills the assumed duty of monitoring the concession. This monitoring was without sufficient background and without a thorough understanding of the concession contract terms that had been negotiated by agents of the Privatization Agency.

The need for Member States to establish such supportive regulatory and legislative frameworks is clearly specified in the Protocol (see Article 2.4(l)), while regional consensus on an appropriate railway regulatory framework is embodied in the MLP on Railway Restructuring and Regulation. The MLP include provisions on the establishment of a Railway Authority as an independent juristic entity at arms-length from Government. Moreover, the MLP contain a statement of high-level regulatory principles and a comprehensive array of regulatory mechanisms. Clear rules setting out the obligations of concessionaire, regulator and government are a necessity to avoid some of the problems seen in the RSZ concession.

The promotion and protection of the public interest in respect of fair commercial practices and safe and environmentally-friendly railway operations is the responsibility of government. The MLP assign this function to the Railway Authority that is established as an independent juristic person at arms-length from government. The Railway Authority assumes the role of prime regulator of commercial and safety/environmental matters pertaining to public and private service providers.¹⁷

4.4.10 Procedures for Tendering Technical and Financial Evaluation

The institutional framework of the Railway Authority comprises a chief executive officer and professional, technical and administrative support staff. The Authority is required to carry out its functions with a focus on outputs while promoting the principles of transparency and accountability. To this end, the MLP provide, for example, for preparation of a business plan, accountability to Parliament; introduction of performance contracting.¹⁸ The MLP further sets out examples of reports that the concessionaire must furnish to the Railway Regulator.

¹⁶ Technical Assessment Report, RAPID 2000

¹⁷ MODEL LEGISLATIVE PROVISIONS: RAILWAY RESTRUCTURING AND REGULATION, 11 April 2001

¹⁸ MODEL LEGISLATIVE PROVISIONS: RAILWAY RESTRUCTURING AND REGULATION, 11 April 2001

1. A concessionaire must, according to intervals determined by the Railway Authority or at a time specified in the concession, provide a concession report to the Authority.
2. A concessionaire must report on:
 - a) service quality and levels of service;
 - b) financial viability of the concession, including progress made with the phasing out of public funding;
 - c) compliance with safety and environmental standards, rules and practices;
 - d) steps to eliminate any anti-competitive or discriminatory practices; and
 - e) any other matter in respect of which the concession or the Railway Authority requires a report.¹⁹

Had these provisions of the MLP been adhered to, many of the conflicts between concessionaire and regulator would have been avoided. Clearly defined reporting requirements to the Railway Regulator should have been contained in the concession contract. In addition, the Railway Regulator should have been established by law and not simply have been a continuation of ZRL senior management in a new role as “regulator.” It is stated that “...the GIR partially acts as the Regulatory Authority” and that “ZRL monitors the performance and the concession and adherence of the concessionaire to the agreement and reports to the Ministry of Communications and Transport for any non compliance issues for further action.” These do not constitute independent regulators.

Even now, five years post concession, draft legislation is being circulated to establish a Railway Regulator. Sadly, as written, the regulator will not be independent as the position will be assigned by the Ministry of Transport. Other provisions of the draft law include a strengthening of the Asset Holding Company. I assume this to be ZRL’s role, establishment of a Rail Fund which will be constituted of funds from concession fees, which now go to the general fund and with fuel taxes on railway fuel which now go to the roadway fund. This rail fund could be used for infrastructure improvement beyond that required or deemed necessary by RSZ, or for expansion to connect with other state railways.

The SSATP Toolkit suggests that it is important that the private partner be required to provide information such that the public authority is able to verify compliance with the agreement. The major aspects that the public authority in the partnership must be able to monitor relate to:

- The operator’s technical and operational performance; and
- The actual performance of the investment works planned at the time of the railway concessioning operation.

A joint monitoring body should be established for purposes of monitoring the partnership agreement during its life.²⁰ Here lies another area of dispute. RSZ asserts that all reports have been submitted. Some in the Ministry say the reports have not been filed. Again, they either have been filed or they have not, and surely the parties can establish that fact. If the information is seen to be lacking, perhaps agreement can be reached on changes to the report, within bounds of confidentiality needs etc., but whether or not they have been filed should not be an area of dispute. It serves no purpose.

¹⁹ MODEL LEGISLATIVE PROVISIONS: RAILWAY RESTRUCTURING AND REGULATION, 11 April 2001

²⁰ SSATP Toolkit

Another provision of the MLP governs access to services and sets out the proposition that the concessionaire has certain common carrier obligations and implicitly must provide service and must do so under reasonable conditions. Specifically, the MLP requires;

- a. A railway service provider may not unreasonably refuse to provide, to any person, any carriage or service normally provided by it in the course of its business.
- b. For the purpose of subsection (1), a refusal to provide carriage or a service is not unreasonable where :
 - i. insufficient rolling stock is available to transport such goods within a reasonable time;
 - ii. the railway is blocked or damaged;
 - iii. subject to section 35, the service provider is required to fulfill reasonable commitments in terms of a shipping contract concluded in terms of section 37;
 - iv. system capacity constraints do not permit the immediate accommodation of additional freight volumes;
 - v. the accommodation of hazardous freight would constitute an unacceptable safety risk; and
 - vi. where the value of the freight is of such a nature that the risk for accepting such freight is commercially undesirable; or various other good cause reasons for not providing service.

This provision is motivated by the need to achieve a balance between the legitimate expectations of shippers in being able to rely on existing railway services and the rights of railway service providers to manage their businesses on a commercial basis. Railway service operators should generally be obliged to accept all consignments provided all conditions of carriage are met, except where the exceptions set out in the section apply. Including these MLP recommendations in the concession contract, or in the Railway Authority statute, might have avoided the situation where the RSZ effectively ceased the service to the inter-mine short haul movements, and where RSZ favors its long haul options to the detriment of interline movements via other railways or over differing routes.

“During 2004, the concession was marked by generally poor relations between RSZ and Zambia Railways Limited (ZRL), the government asset manager, due to differences in interpretation of the concession agreement. Although concession payments were made, little or no reporting on either traffic or revenue or asset condition was made by RSZ. In December 2004, a conference was convened between RSZ, ZRL and government officials to review the concession and resolve these issues. The key issues centered on non-achievement of the first year investment plan, with the 10 percent of track under temporary speed restriction at concessioning increasing to approximately 20 percent, and perceived deferral of periodic maintenance. The RSZ general response was that the railway had been in very poor condition when they took it over and that the situation had to be stabilized before it could be improved.

The monitoring process itself was a particular problem, as RSZ refused to accept ZRL as the Monitoring Agent; as a result no information concerning either management accounts or operating and revenue statistics were supplied to the government, in spite of the concession agreement requiring this on a quarterly basis. Nevertheless, regular concession payments had been made, quarterly in arrears, although the government had no way to check their compliance with the concession agreement.

This concession is only in its early days but a pattern is already beginning to emerge in which RSZ feeds as much traffic as possible to the south, thereby maximizing the distance traveled over its own, and related, networks. It will be

*interesting to observe how much information is provided to ZRL; the concession agreement is understood to have many reporting requirements and conditions that need to be monitored but to date it is understood almost no information has been made available by RSZ. No information is available on traffic levels but rates are reported to have increased. Staff levels have reduced sharply but this may be due to budgetary pressures as much as inherent productivity gains; certainly there have been many claims that the railway is under-maintained as a result”.*²¹

4.4.11 Operational Performance Measures and Monitoring

According to the audit report of the Auditors for the Concessionaire, the Concessionaire has met all his concession fee obligations. A total amount of US\$3.7 million (as at third quarter 2005), has been transferred to the government. In addition the concessionaire also paid the government a total of US\$1.3 million in corporate taxes and its entire initial investment program has been met.

However, the monitoring agency ZRL, has alleged non-compliance by the Concessionaire in fee obligations, and asserted weaknesses in the Concession Agreement that favor the Concessionaire. Specifically the monitoring agency’s assertions as stated in the World Bank Report of December 20, 2005 were given as lessons learned;

- i) Lack of agreed monitoring schedule framework or procedures between RSZ and the Government Inspector of Railways (GIR under ZRL).
- ii) RSZ not adhering to concession agreements regarding to timetable for effective rehabilitation of the main railway track.
- iii) Limited investment in rolling stock maintenance leading to obsolete wagons and passenger coaches;
- iv) The market share of RSZ to International rail freight traffic is uncertain due to the lack of agreement between TAZARA and RSZ;
- v) The concession fees so far paid by RSZ to GRZ only constitute 50% of total amount that should have been paid at this point in time;
- vi) Passenger services on the main line between Kitwe and Livingstone are not regular as agreed.
- vii) Freight and passenger trains travel at very low speed leading to slow turnover of goods and services between Kitwe and Livingstone;
- viii) Regarding participation of ZPA in the Concessioning process and the subsequent outcome agreement, it appears that ZPA did not at the time of negotiating the concession have adequate capacity to closely scrutinize the clauses especially regarding how such clauses would impact on the Zambian economy and the investor's economic interest.
- ix) It appears, there was too much leeway in favor of the investor in coming up with the concession agreement. This is a lesson that needs to be considered in all future concession negotiations

To address some of these perceived problems, the GIR was established as a railway safety regulator, not as the concession compliance manager. The GIR should have no reporting relationship to ZRL but should be a part of an independent regulator’s staff. The timetable for rehabilitation is contained in the contract and RSZ asserts it has been fully complied with. A knowledgeable independent regulator could easily monitor compliance. An earlier World Bank review found that the rolling stock had been rehabilitated as expected. At concession, all coaches of ZRL had been condemned and it was necessary

²¹ Results of Railway Privatization in Africa, Richard Bullock., World Bank, September 2005

to purchase coaches from South Africa. This is not the fault of RSZ. Now the GIR asserts that passenger coach quality is inadequate, but it is certainly an improvement over that which existed at time of concession.

These disputes might have been avoided had the enabling regulation been enacted prior to concession. Without such legislation it is left to the contract to lay out very clearly all responsibilities of the concessionaire. Language must be unambiguous and performance measures set forth in detail. In this case, the concession contract laid out a definite investment plan that has been followed but that is now challenged due to a lack of specificity as to what constitutes investment and what constitutes maintenance expense. The same goes for the PSO. Not only number of trains, but levels of service, i.e. sleeper, coach, second, third classes should have been defined along with on-time performance measures. One contributing factor was that many of the terms of the Draft Concession Agreement (DCA) were developed by consultants assisting in the concession process. They were experienced in such matters. The final contract though, was negotiated and written by members of the Attorney General’s staff, people not familiar with railway operations. The editing and review process, in some cases, changed the content.

The variable concession fees are easy to calculate, 5% of revenues are to be paid quarterly. They either have been paid, as alleged by the RSZ auditor, or they haven’t been paid, as some have alleged. However, ZRL has indicated that the concessionaire has paid concession fees of K9.5 billion in 2004; K6.8 billion in 2005; and K6.2 billion in 2006. It is a different matter of dispute if the assertion by ZRL is that the accounting is deficient. Generally accepted accounting principles should govern.

Passenger services are contained in the concession. The concession contract calls for the government to cover operating losses only after the concession meets the threshold earnings after which one half of the excess goes as the fixed concession fee. In the meantime, the concessionaire must operate the passenger trains at their cost. The following table sets out the payment for operating the passenger trains, but bear in mind that these fees are only paid as a deduction in the fixed fee. With the fixed fee being contingent upon reaching an agreed upon threshold, that has not yet been reached, there has been no reimbursement to RSZ for the cost of operating the passenger trains. Three trains in each direction each week were called for initially, increasing to seven each direction each week. The three per week commitment has been met, but not the seven per week because of circumstances beyond the control of the concessionaire.

	Subsidy (USD)
Year 1	-700,000
Year 2	-800,000
Year 3	-1,000,000
Year 4	-1,200,000
Year 5	-1,200,000
Year 6	-1,200,000
Year 7	-1,309,671

Source ZRL

The government will not allow operation of the passenger trains at night because of fears that the railway track may have been sabotaged. Frequent occurrences of theft of fishplates and other track components have been common. Thus, without nighttime operation, the seven trains per direction each week cannot be accomplished. Security of this nature is more properly the responsibility of the government and not of the concessionaire. Another passenger dispute revolves around train capacity and classes of service. The concession contract is silent on both issues, but RSZ asserts that at time of concession there was only economy class with no higher class coaches. Again, this should have been unambiguously defined in the contract, or mutually agreed to modifications should have been made.

While these may have been lessons learned, there has been no improvement in the listed areas, or no reconciliation of disputed facts. Doing so would be the job of the railway regulator, if one existed. This is evidenced by the report of February 28, 2008 quoting Zambian President Mwanawasa who described the performance of the RSZ as “shameful” because of its failure to deliver on the rosy promises management made when it won the concession to run the network. The President said he had earlier indicated that government would repossess the company and give it to another investor capable of delivering expected services.²²

Further evidence of a concession perceived to be going the wrong way is offered by the World Bank in its request for expression of interest by consultancies to conduct a study to review various aspects of the concession. This study is to create a sound basis for more intense discussions between GRZ and the concessionaire that should result in the drafting of an agreed action plan to improve the overall performance of the railway concession as well as ensure its short and long-term financial and operational viability.²³

The concession contract contains termination provisions. Non-compliance is grounds for termination but the concessionaire maintains that it is in complete compliance. If the concession is in compliance then other contractual provisions come into play if the contract is terminated. An agreed upon formula provides for repayment of unamortized capital investment and **for loss of foregone profits over the life of the concession**. This quickly adds up to a very sizeable penalty to the government if the concession is cancelled for less than good cause. The negotiators for the government should never have guaranteed assumed future profits in a termination clause. Four concession reviewed by the World Bank study contain similar termination clauses but such clauses should only make the Concessionaire whole, not provide a windfall in the tens or hundreds of millions of dollars. “All four concession contracts’ termination clauses reviewed provide a certain level of protection to the private operator in the form of an obligation for the Concessions Authority to minimally purchase and/or service the debt related to the equipment and/or track it has financed. Additionally, two of these contracts stipulate that the Concessions Authority would be liable in the case of early termination for the projected benefits that each concession could generate for the remainder of the contract”.²⁴ Here in the ZRL/RSZ concession, the concession negotiators were more skilled than those of the government.

²² African Press Agency, Feb 28, 2008

²³ The Republic of Zambia, ministry of communications and transport, consultancy services for the independent technical and financial review of the Zambia railway concession, request for expression of interest (REOI)

²⁴ Review of Selected Railway Concessions in Sub-Saharan Africa, World Bank, June 2006. Benefits calculated on the average benefits earned over the prior three years and going forward annually for the life of the contract

4.4.12 Contractual Clauses Regarding Market Power Abuse

In some of the areas where market abuse could be a concern, there has been a suggestion offered in a World Bank study as follows. A contract should incorporate a clause that defines what constitutes evidence of undue market/pricing power:

- f) When the tariffs applied by the operator are over twice as high as the level of all charges incurred (including the depreciation and capital costs associated with the operation of the rolling stock);
- g) When an operator openly discriminates against a client in terms of the transport conditions offered; and (for example inter-mine traffic)
- h) When an operator refuses to provide services to a client.²⁵
- i) Another clause should require non-discriminatory dealings with connecting railways, in terms of pricing and in terms of providing equal dispatch of traffic to be interchanged. (e.g. interchange to TAZARA)

The regulatory mechanisms that have been included in the on-going concessions tend to provide for regulation by: (a) Market forces, when the market so permits (rail-road competition); (b) The concession agreement, for instances such as monopoly abuse and discriminatory practices. Failing regulation by market forces and by the agreement, the monitoring body must have the authority to intervene. In the event that amicable agreements cannot be reached, means of resolving disputes including arbitration procedures must be provided and implemented.²⁶

Clauses very similar to these were included in the MLP, and if included in the RSZ contract or in the Railway Authority Act (RAA), would remedy the situation where short haul inter-mine movements have been diverted to roadway and where RSZ is seen to be uncooperative in dealing with TAZARA on export traffic to be delivered to TAZARA. RSZ maintains that TAZARA lacks the capacity to move the copper. Given that TAZARA has only five to seven locomotives to service the approximate 2000 km haul and has not furnished wagons for the copper, it probably does not have the capacity, yet this issue still remains an irritant to GRZ.

The MLP specifies that a railway service provider must afford any person adequate and suitable accommodation for receiving, carrying and delivering traffic on and from its railway. The MLP also sets out the conditions of service re-design or discontinuance, which had they been enacted, would have covered the inter-mine traffic situation.

While these various ways of asserting excessive powers are broad in nature and should, in theory, be sufficient to combat the most glaring examples of market failures, one must note that these concession contracts, at least from a financial monitoring standpoint, fail to stipulate what information a concessionaire must provide a regulator in order to enable it to enforce contractual clauses.²⁷ This question of required information has seemingly plagued the ZRL/RSZ relationship since the beginning.

4.5 Lessons Learnt

²⁵ Review of Selected Railway Concessions in Sub-Saharan Africa, World Bank, June 2006

²⁶ SSATP Toolkit

²⁷ Review of Selected Railway Concessions in Sub-Saharan Africa, World Bank, June 2006

The single most important lesson to be learned from the Zambia experience is the absolute need for enabling legislation to be enacted prior to concession. The privatization legislation under which this concession was carried forward provided only for the disposal of the asset. Regulation to provide for the ongoing operation and monitoring of the concession was lacking. In an attempt to correct this deficiency, the GIR, a subordinate position within the Ministry, clearly not independent, assumed the role of a regulator. ZRL also assumed the role of monitor and this unclear reporting relationship has been a source of dissension from the beginning.

Prior to concession, one study suggested a review of “amongst others, the provisions setting out rights and duties of the Government and the Concessionaire; the Concessionaire’s investment obligations; any public service obligations with which the Concessionaire is required to comply; the provisions relating to transfer and re-transfer of assets; the circumstances which may lead to default and termination of the contract; the circumstances constituting force majeure; and the procedures for dispute resolution.” “In this regard, the SADC Model Investment Contract on Railway Infrastructure, Equipment and Freight Services and the SADC Model Passenger Concession provide a useful indication of the scope and nature of provisions that should be included in a railway concession contract.”²⁸

Each of the areas listed in the paragraph above are now subjects of contentious dispute. These are:

- a) Investment obligations
 - a. Maintenance or investment?
- b) PSO
 - a. Number of trains
 - b. Classes of service
 - c. Re-imburement of cost of operation by government
- c) Transfer of Assets
- d) Default and termination
 - a. Termination clauses containing severe penalties to the state
- e) Force majeure (such as found in Malawi RiviRivi dispute)
- f) Procedures for dispute resolution
 - a. Fees paid?
 - b. Reports submitted?
 - c. Investment plan met?

For whatever reason, the concession of ZRL was done without the necessary enabling legislation and without benefit of the model concession provisions suggested by the SADC models listed above. Whether the rush was due to pressure for quick action or because of lack of firm political support, the result is a concession that in some ways is functioning very well, in others is not functioning, and in the mind of public and political opinion, is a failure.

²⁸ Rapid Technical Assessment Report , November 2000

5. MOZAMBIQUE RAILWAY CONCESSION



The rail concessioning effort in Mozambique began in the 1990's. Mozambique's railway system is like that of many other African States, with rail lines running from coastal ports to the hinterland. In the case of Mozambique, the lines serving the principal ports of Maputo, Beira and Nacala do not interconnect between the southern, central and northern corridors. The concessioning of the Mozambique railways was separated into three corridor specific activities comprising the north, central, and the south.

The early design of the concession process incorporated the following:

5.1 Mozambique Concessioning Structure

Parties to any Agreement	Three (3) parties must sign the contract, namely the Private Concessionaire, the Minister of Finance, and CFM
Extent	Railway corridors are included with geographically positioned Ports in the prospective concession agreements.
Form	There are five (5) vertically integrated rail corridor concessions as originally identified, namely: <ul style="list-style-type: none"> - Nacala - Beira - Ressano Garcia - Limpopo - Goba The original Tender document included the Maputo

	Locomotive shops and Marshalling yard with the Ressano Garcia concession, and the three ports were to be concessioned separately.
Duration	Varies with each individual concession negotiated.
Rates and fares	In each instance, the Concessionaire is free to determine and alter rates.
Passenger Service	In each instance operated by Concessionaire as PSO.
Income earned by the Government/ CFM	Income to be earned by the Government from the concessioning of the railways will be generated from the following: - Entry fee - Fixed Fee Variable Fee expressed as a percentage of revenue Lease payments to CFM for wagons and locomotives.

5.2 Objectives of Privatization

Mozambique's railway system was operated by CFM, a state owned, independently managed enterprise. It did not depend on public subsidies for its operations. It however, received substantial donor financing for the rehabilitation of rail and port systems. One of the stated World Bank objectives of concessioning of the railways of Mozambique was to substantially increase the operating efficiency of the three major port-rail systems in Mozambique and enable them to increase their share of the international freight traffic of the neighboring countries. The increase in freight traffic should enable:

- i) the neighboring countries to reduce the surface transport costs of their exports and imports resulting from use of shorter routes, increased efficiency of operations, and use of railways in preference to roads;
- ii) the ports and railways in Mozambique to become financially self-sustaining;
- iii) CFM to increase its net income (net of its own expenses and provision for long-term infrastructure replacements) and, consequently, be in a position to pay dividends to the Government of Mozambique (GOM); and
- iv) Mozambique to generate more foreign exchange from the neighboring countries' use of railways and port facilities in Mozambique.

The level of the neighboring countries' international traffic moving over the port-railway systems in Mozambique was to be used as the main indicator of performance. The indicator is not only easy to monitor, it is strongly correlated to, and is a good proxy indicator, of the project expectations of;

- i) A reduction in the cost of surface transport of the neighboring countries' international traffic,
- ii) An improvement in the financial self- sustainability of the ports and railways,
- iii) An increase in CFM's net income, and
- iv) An increase in the net foreign exchange earnings for the country.²⁹

Unfortunately, the deterioration in Zimbabwe's economy severely reduced international exports from Zimbabwe passing through CFM and the ports of Mozambique. With the decrease in traffic to and from Zimbabwe, Mozambique's concessions goals changed, in particular in the central corridor. The concession of the Beira corridor roughly coincided with the Moatize coal exploration and mining concession awarded to CVRD, the Brazilian

²⁹ World Bank, Report No: 19085-MOZ

mining concern. Thus, concession and the rebuilding of the Sena line provided new objectives, namely to attract extractive industries to provide jobs and infrastructure to those in the Beira catchments area, and to provide foreign exchange through mining the abundant mineral resources.

In the early 1990's GOM made the decision to embark on concessioning of rail and port systems. The effort began to restructure the state-owned operator CFM into a lean holding company that would hold minority stakes in each of the concessions. Early concession efforts faced difficulties, in particular with the Ressano Garcia line, the concession for which was initially awarded to a SpoorNet-NLPI consortium. At this point the majority of ports have been concessioned (e.g. Maputo, Beira, Quelimane and Nacala) and there are currently two rail concessions in operation, the Beira and the Nacala corridors.

The concession of the Beira corridor with the rehabilitation of Beira Railway System (BRS) constituted a national priority. The return of rail service to the Sena line enabled the rich potential in mining, forestry, agriculture, animal husbandry, and power generation to be realized. The re-opening also met the social responsibility to re-open the hinterland to Beira and Maputo. The catchment area comprised of provinces of Tete, Zambezia, Sofala and Manica served by the re-opened railway lines comprises approximately 30% of Mozambique's population. As the line is currently being rehabilitated it has the capacity of six million tons annually and 20 tons per axle load limit. The addition of large movements of coal traffic, upwards of 11 million tons, will require additional capacity in terms of meeting and passing tracks, as well as heavier rail. This will be further discussed in the section on the central corridor.

5.3 Scope of Railway Privatization

5.3.1 Northern Corridor

The Nacala line extends from the port of Nacala to the frontier with Malawi at Entre Lagos, a distance of 610 kilometers. It includes two branchlines, one for 42 kilometers from Rio Monapo to Lumbo, and the other for 262 kilometers from Cuamba to Linchinga.

A portion of the mainline from Nacala to Cuamba (totaling 533 km) was rehabilitated in the late 1990's to high standards. It is comprised entirely of concrete sleepers, a 40 kg rail, and a good surface and ballast section. Between Cuamba and Entre Lagos/Nayuci (a distance of 77 km) the track is in poor condition, with 30-kg rail, and is operated with a 15km/hr speed restriction.

Of the remainder of this northern corridor, the branch line from Cuamba to Linchinga is in poor state of disrepair. Trips on this line take weeks to complete, normally at excessively slow speeds, and are accompanied frequently by derailments. Freight volume on the line is only 4,000t per annum, and service is, and will continue to be, infrequent. The following depicts the tonnage levels experienced prior to the concession.

Mozambique's northern rail corridor links the port of Nacala to Malawi. The Malawi railway network is an integral part of this corridor, as this is the main traffic feed into the system. The Mozambican and Malawian governments therefore decided in 2000 to bundle the Malawi railway and the Nacala corridor in one concession. The concession of the Malawi Railway, to the Railroad Development Corporation (RDC) consortium holding 51% and CFM holding 49%, in 1999 was seen as a condition precedent for the concessioning of the Nacala line. Less than 300,000 tons are moved by rail in this corridor.

TOTAL TONNAGE TRANSPORTED	1995 (000's)	1996 (000's)	1997 (000's)	1998 (000's)	1999 (000's)
NATIONAL	73.8	101.1	111.5	116.9	64.5
INTERNATIONAL	141.3	136.1	138.8	152.9	167.2
TOTAL	215.1	237.2	250.3	269.8	231.7

Source Consultant

5.3.2 The Concession Process

The concession process evolved from direct negotiations with a consortium consisting of RDC, United States, Edlow Resources Limited (ERL) and a Portuguese company. Although the concession was effectively awarded in 2001, it was not effective until January 2005 mainly due to the delay on the part of the strategic partners to achieve financial closure. This section has never been rehabilitated and is in an extremely bad condition with a speed restriction of 10km/h. The Overseas Private Investment Corporation (OPIC) funding of US\$29 million was intended to address this section³⁰. The concession is for a period of 15 years, renewable for the same period.

Within the SDCN consortium, shareholders include RDC (a USA Railroad Company); ERL (Bermuda), Manica, Mozambique private investors and CFM, the national port and railway administration. The US OPIC provided US\$29.6 million of financing for the project³¹. The project funding was to go to the rehabilitation of the 77 km segment between Cuamba and Entre Lagos totaling US\$11 million, over a two year period, as well as drainage improvement within Malawi and some US\$6 million in improvements in the port of Nacala.³²

The concession required an Entry Fee, a Fixed Fee, and a Variable Fee expressed as a percent of gross revenue.

The infrastructure remains the property of CFM, but the concessionaire is responsible for capital improvements and maintenance. Part of the railway rolling stock requirements are dry leased from CFM, with the concessionaire responsible for its maintenance. CFM is responsible for the retrenchment of those employees not required by the concessionaire. For staff governed by Labor Law, while current law requires approximately 1.5 month's salary for each year of service, the allowance has been increased in this instance to three month's for each year of service, plus a transition allowance of six months' salary. For civil service staff, the package includes one-time pension payment by discounting the future stream of pension payments, supplementary bonus as also a transition allowance of six months' salary.

The privatization process began in Mozambique several years ago. Consequently, the process and structure of the Nacala corridor concession does not resemble the Guidelines for Railway Concession, recommended by SATCC-TU.

The following major observations are made in this regard:

³⁰ International Railway Journal, November 11, 2002

³¹ RDC Release January 14, 2005

³² Railway Gazette International, June 2004

- i) Firstly, management of the railway has acted as the agent for designing and carrying out the restructuring and concessioning process. While the Guidelines recommend that intermediate and independent agency manages the process of change, that has political, economic and social implications, this was not done. However, the process utilized in the concessioning of the Nacala corridor has achieved the desired goal of encouraging private sector investment and management.
- ii) Secondly, restructuring had started in 2001 itself prior to the taking over of the concession.
- iii) Thirdly, there was no open bidding for the concession, rather closed negotiation between the interested parties.
- iv) Fourthly, the significant enhancement of retrenchment benefits, as negotiated by CFM, has had a positive impact as the retrenched staff members were able to quickly get reintegrated in society.
- v) In CFM's view, "the rail concession in Malawi as well as Mozambique is an example of how not to run a concession. In general, the concession failed due to a number of reasons including a) absence of audited accounts right from the beginning of concession b) non-accountal of funds drawn from OPIC, c) non-rehabilitation of the 77 km Cuamba-E. Lagos section, d) failure to comply with maintenance obligations, e) lack of responsible and accountable management structure f) large management fees to the 51% shareholders g) non-payment of royalty payments to CFM/Conceding Authority h) failure to adhere to the financial targets agreed with the Lender, OPIC. CFM alleges that there has been very little investment by the Concessionaire on infrastructure. CFM feels that the US\$11 million from OPIC for the Cuamba to Entre Lagos section was not fully applied to that section, as intended. In the course of the two concessions, CEAR and CCDN, the Concessionaire only added four secondhand Chinese manufactured shunting locomotives with the intention of using them in main line freight service. CFM asserts that the lease payments on rolling stock that was dry leased to the Concessionaire have not been made."³³ The Nacala line was extensively rehabilitated in the late 1990's. It consists of concrete sleepers and 40 kg welded rail. It has been alleged that "...there is no maintenance of that luxurious infrastructure where trains used to run at 100km/hour...this infrastructure has not been maintained for the last three years and currently it is in a very bad state."³⁴ From photos shown the consultant, the ballast section is being fouled by vegetation and sand and it appears that the line has had little maintenance and is not in excellent condition, even though it might be fit for purpose if the line continues to handle less than 500,000 tons.

5.3.3 Labor Reform

In terms of retrenchment, CFM had an extensive retrenchment program, which includes:

- i) redeployment support to help workers find alternative jobs.
- ii) social mitigation measures such as counseling, establishment of libraries, community centers etc., and the creation of a specific "Redeployment Fund" to meaningfully employ some of the surplus staff in small projects.

Results of this program are impressive. Presently CFM has about 2,000 staff. CFM employment stood at 1,653 employees. Over 13,500 employees have been retrenched.

³³ CFM response to inquiry, February 2009

³⁴ Xitimela, CFM in house publication, August 2007 issue

They have participated in counseling sessions for new skills training. 462 different professional courses were offered in which 5,473 retrenched workers participated. 8,700 former employees are now self-employed and another 900 have created small businesses.³⁵

5.4 The Central Corridor

The concessioned BRS comprises two Railway lines, the Machipanda Line (317 km) which extends from the port of Beira to the Zimbabwe border at Machipanda, and the Sena Line system (670 km). The Machipanda mainline is 40 kg rail, reportedly in fair condition. The Sena Rail System (SRS) emanates from the mainline at Dondo and consists of the principal branch, the Sena (578 km) terminating at Moatize, a short branch (39 km) extends from Mutarara and connects to Malawi at Vila Nova, and a second branch line (88 km) runs between Inhamitanga and Marromeu.

All the branch lines on the Beira Corridor are in disrepair and have been out of service since 1984. All are 30-kg rail, and require complete rehabilitation. As a conservative estimate, in excess of US\$250 million would be required to rehabilitate the lines. The Sena line has the greatest potential value because of mineral deposits in the Moatize region, reportedly 2.5 billion tons of high quality coking coal. Annual production, when the mines are developed, could reach between two and nine million tons.

The Machipanda line carries domestic and international freight to and from Zimbabwe. Traffic volumes have declined by more than 50% since the peak in 1996 of 1.2 million tons, dropping to freight traffic of 660,000 tons in 2005, 800,000 tons in 2006, and only 540,000 tons in 2007. The estimated rehabilitation cost of the line is US\$25 million (revised US\$39 million). As a standalone line, without the Sena line restoration, the Machipanda could not have been concessioned, due simply to the shallow traffic base and the uncertainty of investors regarding Zimbabwe's future prospects.

The Sena Line (670 km) was closed in 1983 due to civil war. It formerly carried sugar, cotton, limestone, coal (Moatize) and also carried domestic and international freight to Malawi and Zambia. The estimated rehabilitation cost is US\$127.5 million (revised US\$158 million) and estimated freight traffic is 1.57mt in 2010; 2.29mt in 2023, exclusive of the CVRD coal.

5.4.1 Moatize Basin

The Moatize coal deposit, which is situated 15 km from Canchoeira in Tete province in central Mozambique, has long been of interest to mining concerns. The civil war interrupted plans for development of the vast deposit. As long ago as the late 1980s CVRD and other players were involved with other companies in developing a prefeasibility study, but this was suspended due to the civil war at the time.

CVRD has announcement that it plans to invest US\$70 million (more than R500 million) in the Moatize coal project this year. A company spokesman explained that the feasibility study for the project was scheduled for completion by mid-2007. CVRD owns 95% of the consortium, which holds the right to develop the Moatize project. The other 5% is held by North American coal producer American Metals and Coal International (AMCI).

³⁵ Xitimela, CFM in house publication, August 2007 issue

The consortium confirmed its commitment in a development plan recently submitted to the Mozambique government. The proposal includes a robust exploration program for the development of the coal mine. It also includes feasibility studies for the development of a mine-mouth, coal-fired power plant with a capacity of up to 1 500 MW; the development of adequate port facilities; and a rail link to the intended port. CVRD will also assess various other domestic industrial projects linked to the mine, including coking, steel, cement, aluminum smelting, and ferro-alloy plants.

The Moatize mine, which suffered extensive damage during Mozambique's civil war in the 1970s and 1980s, is believed to hold about 2.5 billion tons of coal reserves, making it one of the largest untapped deposits of coking and thermal coal in the southern hemisphere. The Brazilian steel industry is a natural market for the supply of coking coal, as are China and India, while there is excess demand for energy in Australia, Africa and India, offering a good opportunity for the thermal coal.

The Mozambique government has confirmed that it will work closely with the consortium to ensure a speedy start to construction and other development work at the mine. At present 100% of the line has been de-mined. Forty-five percent of the line rehabilitation is completed with 280 km of the 545 km completed. The CVRD-led consortium expects to begin production in 2010, with estimated annual output of about 12 million tons of coal. This is expected to ramp up to some 20 million tons in due course. The life of the mine has been estimated to be 35 years. Some of the production will fuel a 2,000 megawatt thermal power station located near the mine mouth in Mozambique, with the rest destined mainly for export markets. This venture is expected to involve a capital investment of between US\$1.2 billion (R9 billion) and US\$2 billion (R15 billion). With the recent financial crises and fall in demand, it is likely the investment program may get delayed.

The CVRD project initially envisioned a 900 km railway linking the coalfield with the Nacala railway line. That has now changed and coal is expected to move via Companhia dos Caminhos de Ferro da Beira (CCFB) to Beira. To support the coal exports, Beira has recently added a new dredger that will take the draft to eight meters. An oceangoing dredger is on order and will be capable of further deepening the channel and keeping all silting cleared up.

Recently CVRD has entered into the Chinese market, with agreements with the Shanghai Baosteel Group Corporation and Yongcheng Coal and Electricity Group and the Yankuang Group and Itochu Corporation to produce anthracite, coal and metallurgical coke. The latter will include a new two million ton per year coke plant with methanol as a by-product that is expected to start production in 2006. These agreements also mark CVRD's entrance into the coal market, and the company's off take of coke and coal will be exported to Brazil for use in its pelletizing plants and for sale to steel producing clients. In addition to the CVRD projects in China there is a growing demand for both metallurgical and energy coal in India. This Indian demand provides the incentive for RITES and IRCON concession and rehabilitation of the Sena line.

5.4.2 Rail Concession and Rehabilitation

The initial project cost for the rehabilitation of the Sena Line and improvements on the Machipanda Line, as estimated during negotiations stage, was US\$152.46 million (Table 1).

Table 1. Initial Project Cost and Financing Plan (USD million)

Project Cost	Amount	Project Financing	Amount
I. SENA LINE		EQUITY	
Rehabilitation Works etc.*	119.3	Equity**	5.00
Workshop, Equipment etc.*	8.14	Shareholder Loans	14.74
Sub Total	127.43	Sub Total	19.74
II. MACHIPANDA LINE		DEBT	
Rehabilitation Works etc.*	7.95	IDA	104.5
Workshop, Equipment etc.*	17.09	GOI – LOC/Commercial Debt	25.44
Sub Total	25.04	Sub Total	129.94
		Internal Cash Generation	2.78
Total	152.46	Total	152.46

(*) includes Other Costs such as entry fee, legal advisory services, insurance, financing fees, Bank guarantee charges, project management services, duties and taxes, IDC, contingencies

(**) CFM's contribution both for equity and shareholder loans has been in kind (locomotives).

The revised Project Cost, as in May 2008, is US\$205.3 million with a funding gap of US\$49.6 million.

Table 2. Revised Project Cost and Financing Plan (USD million)

Project Cost	Amount	Project Financing	Amount
I. SENA LINE		EQUITY	
Rehabilitation Works	146.5	Equity**	5.00
Workshop, Equipment	6.2	Shareholder Loans	14.74
Other Costs *	21.2		
Sub Total	173.9	Sub Total	19.74
II. MACHIPANDA LINE		DEBT	
Rehabilitation Works	9.2	IDA	110.5
Workshop, Equipment	17.7	GOI – LOC/Commercial Debt	25.44
Other Costs	4.5	Gap in Funding	49.62
Sub Total	31.4	Sub Total	185.56
		Internal Cash Generation	0.0
Total	205.3	Total	205.3

(*) refers to Other Costs such as entry fee, legal advisory services, insurance, financing fees, Bank guarantee charges, project management services, duties and taxes, IDC, contingencies

Reasons for Project Cost Escalation

The original cost estimate prepared by the consortium for rehabilitation of the BRS (US\$152.46 million) was based on market prices prevailing at the time of submission of bid (November 2003) and expected price increases as per commercial prudence. However, based on contract values for the contracts awarded, expected price variations and increase in scope of work, the revised cost is now estimated at US\$205.3 million, i.e., an increase of 34.7%. The main reason for the increase in Sena Line rehabilitation cost has been primarily due to abnormal and unprecedented increase in prices of materials, labour beyond what could have been foreseen by normal commercial prudence.³⁶

Table 3. Cost increases for major inputs

Description	Percentage weight (approximate)	Unit	Prices as on		
			Nov 2003 (Bid submission year & month)	Contract award year & month	Present
Rail	25%	US\$ / t	604	770	≈1,400 [Recent quote of Euros 875/t]
Diesel (transportation of materials is a significant cost)	10 to 15%	MT/liter	10.22	17.72 (August 05)	28.34 (Jan 08)
Cement – 53 Grade (for PSC Sleepers)	15% (concrete sleepers)	Index	137.7	163.5 (Oct 05)	196.3 (Dec 07)
Labor		MT per man-month	982.7	1,277.13 (Aug 05)	1,645.5 (Jan 08)

The Concession Agreement was signed on 30 August 2004 between the Conceding Authority, CFM and S.A.R.L. CCFB. The Company took over the Machipanda Line on 10 December 2004 and the Sena Line on 8 March 2005. The Beira Railway Project (BRP) became effective on 15 March 2005.

The Company shareholding structure is RICON – 51% and CFM – 49%. RICON contributed its portion of the share capital and shareholders loans by cash, while CFM contributed its portion by kind consisting of 10 GM/GE locomotives.

5.4.3 The Concession Financing Features

The concession provides for a) an up front entry fee of US\$2 million b) an annual US\$1 million fixed fee per annum from year 11 to 25 (indexed from take over date to USA CPI) and c) a variable fee from year six onwards of 3% of turnover for traffic up to 300 million ntkms, increasing to 5% for traffic in between 300 million and 1 billion ntkms and further

³⁶ CFM response to inquiry February 2009

increasing to 7.5% for traffic above 1 billion ntkms. In this fashion, the Concessionaire is not faced with early fees that outpace traffic growth and the State is not faced with the Concessionaire having windfall profits. The Concessionaire is free to set tariffs, but for coal, traffic, a special mechanism is in place.

In the event of disputes, that are bound to happen over the life of the concession, there is a dispute resolution mechanism in place. The parties agree to act in good faith and if agreement cannot be reached the matter is referred to a technical expert if parties are unable to resolve a technical dispute. Thereafter, arbitration, in accordance with Rules of Conciliation and Arbitration of International Chamber of Commerce, will be used as a last resort. Providing for such disputes in the contract will avoid many of the problems seen in other concessions.

The contract contains standard termination clauses covered by Company and Conceding Authority Defaults. The concession is not without risk, including de-mining risk, commercial risk (traffic risk), construction risk, force Majeure such as was experienced on the Limpopo line, political risks, foreign exchange and last but certainly not least, economic situation of neighboring countries. The regulatory framework includes no economic regulation, but includes regulation of Safety/Health/Environmental issues (SHE). User complaints of unfair treatment will be referred and decided by the unfair competition commission for user complaints.

5.4.4 The Concession Process

International Competitive Bidding (ICB) was used to award the concession. Potential bidders were pre-qualified. Changing conditions required that the qualification be repeated with the final pre-qualification made in April 2003 with five applicants being pre-qualified. Past railway operation or management experience was mandatory. This can be more important than financial qualification for a successful railway operation. The final set of bidding documents were released to pre-qualified bidders in October 2003. Following that three bids were received in December 2003. Rites/Ircon was declared the successful bidder early in 2004. The concession was then negotiated over certain minor points and the concession agreement signed in August 2004. The Concessionaire then assumed operations on the Machipanda Line in December 2004, and on the Sena Line in March 2005.

The award criteria placed emphasis on a bid that was substantially responsive to the bidding document and required the lowest government support for rehabilitation of Sena Line (in terms of present value @ 10% discount rate). As can be seen along the process the Sena Line was a high priority and those best suited to rehabilitate and operate the line were the successful bidders.

The winning consortium consist of RITES and IRCON, leading a Joint Venture Company – Companhia Dos Caminhos De Ferro Da Beira, S.A.R.L. (CCFB), for assuming operation over the Beira Rail corridor from CFM (a parastatal company operating railways in Mozambique). CCFB has been incorporated in Mozambique for implementation of Beira Rail corridor concession. RITES and IRCON hold controlling interest of 51 per cent, consisting of 26 per cent and 25 per cent respectively and the balance 49 per cent shares are held by the GOM through CFM.

The concession agreement stipulates that the Concessionaire shall achieve recognized international performance norms for railway services agreed between the conceding

authority and the Concessionaire. Failure to achieve such will result in financial penalties to be drawn from the Performance Security for Maintenance. Additionally, WB, CCFB and the Borrower have agreed on Project Development Objectives, outcomes and end of project results which would be monitored through agreed performance indicators and intermediate output targets during project implementation (five years).

5.4.5 Progress to Date

As per the extended target date, the Concessionaire is expected to complete the track laying up to Moatize by the end of September 2009. As at the end of January 2009, track laying has been completed up to km 312 leaving a balance of 236 km to be completed by the agreed target date.

5.4.6 Factors for a Successful Concession

All indicators point toward a successful concession of the Beira Corridor. The concessioning process has been ongoing for almost ten years in Mozambique and several failures have been encountered, namely the failed Ressano Garcia concession. Reasons for that will be discussed later. The key points to consider here, and to contrast with some of the disappointments in other states are;

- i) Invest considerable time and effort in conceptualizing and finalizing project design
- ii) Socio-economic justification essential before structuring PPP and finalizing financing arrangements.
- iii) Beira Railway Project is a unique case of accommodating uncertainty of coal concession.
- iv) Full involvement of key Government officials and decision makers essential every step of the way to concession award and implementation.
- v) No negotiations allowed on any of the terms and conditions of concession agreement clauses after bidding.
- vi) All elements of procurement, including domestic preference and local industry involvement, agreed up-front.
- vii) Flexibility during implementation essential to overcome unforeseen difficulties.
- viii) Aggressive marketing and optimum utilization of resources to make Machipanda Line profitable.³⁷

5.5 The Southern Corridor

In the late 1990s, CFM embarked on the concession of the three lines that make up the Southern Corridor. These consist of the line from Maputo to Ressano Garcia on the South African border, the line from Maputo to Goba on the Swaziland border, and the Limpopo line from Maputo to the Zimbabwean border. All three of these lines join up at Machava, about 10 km from Maputo. However, during the tendering process, the Machava-South Africa line was split from the other two.

5.5.1 Limpopo Railway Corridor

The Limpopo corridor is southern Mozambique's connection to Zimbabwe. It is 520 km in length, laid with 45-kg rail and roughly follows the route of the Limpopo River. It has a nominal capacity of 3.8 million net tons per annum, but handled only 375 thousand tons in 1999. Most of the traffic is export traffic from Zimbabwe.

³⁷ CCFB Workshop on Large Project Finance, Maputo Feb 7, 2008

Traffic decreased markedly in 1999 to 375,400 tons, from the 1998 level of 539,400. Of this, national traffic accounts for only 17,200 tons while international traffic to/from Zimbabwe accounts for 358,200 tons. The main product carried is chromium (179,800t) while agricultural products, mainly sugar, (100,300t) are also significant. Coal shipments, that had previously been substantial, decreased from 143,200t in 1998 to 26,500t in 1999.

Prior to the wash out of the line, approximately three freight trains, per day operated on the Limpopo line, averaging almost 400 net tons per train. In addition, four passenger trains each day operate an average of 200 km per trip. One million passengers are transported on the line each year, at an average of 37 km per passenger per trip.

As a result of the flooding of the Limpopo River in February 2000, the railway suffered extensive damage from washouts along a 134 km stretch along the Limpopo River. The line was restored to service in November 2000 at a cost of approximately US\$7 million. During the initial work on the Limpopo Rail Line, which began on March 1, 2002, 225 kilometers from Maputo to the north side of the Limpopo River at Macarretane was reconstructed. In addition to fully restoring the track and line, repairs were made to the associated infrastructure (station houses, communication infrastructure, bridges, etc.). This work, known as Phase I, was completed by March 31, 2004. The Phase I reconstruction costs were US\$39.9 million and oversight costs were US\$6.3 million.

CFM then proposed extending the work on the Limpopo Rail Line from the Limpopo River to Chicualacuala (on the Mozambique/Zimbabwe border). USAID/Mozambique agreed, and this activity, known as Phase II, began in March 2004. This phase involved heavy maintenance (track alignment and earth work) and extended the rehabilitation effort an additional 300 kilometers at an estimated cost of US\$5.5 million. Phases I and II will result in total costs of approximately US\$53.1 million, including costs for reconstruction and oversight.

Given the sparse traffic and the economic deterioration in Zimbabwe over the past decade, it is doubtful that the Limpopo line will ever produce enough railway traffic to attract a Concessionaire. If there are reasons to retain the line, it will probably have to remain a state run railway, with its associated cost to the government.

5.5.2 The Ressano Garcia Line

Due to the dependence of the Maputo/South Africa line on South Africa's national railway, Spoornet, the Mozambican government decided that the concession for the Ressano Garcia line would be negotiated with a South African consortium consisting of NLPI and Spoornet. The plan was for Spoornet - in collaboration with consortium partner NLPI - to spend US\$12 million on upgrading the railway line. The consortium was expected to take over management of the line by mid-2002. Although the consortium won the concession, an agreement could not be reached for some time due to internal difficulties within the consortium, the deal could not be finalized. Later an agreement was tentatively reached between CFM and Spoornet. However that too was not finalized and it appeared that Spoornet was concerned about traffic being diverted from its ports to Maputo.

CFM has now determined that the best use of the line will be continued operation by CFM with close interline cooperation with Spoornet. CFM predicts that the line will reach nine million tons per year by 2009. The line has undergone substantial rehabilitation at a cost of about US\$20 million. The 88 km line rehabilitation included replacing sleepers, weld

joints and upgrading some bridges. Tons per axle has been increased to 20tpa. Thirty-five thousand concrete sleepers and two thousand wooden sleepers were replaced. Fifty-three switches were renewed along with their sets of sleepers, 920 joints were welded and 80,000 cubic meters of ballast were applied. The initial six km from Machava were electric fenced to prevent theft and encroachment by adjacent land users.

Most of the traffic is expected to be coal from smaller mines and coal for specialized markets that will allow Maputo to compete with Richards Bay. Thus, there are now no plans for concessioning of the Ressano Garcia line.

5.6 Lessons Learnt

5.6.1 Nacala Line

The principal lesson to be learned in the case of the Nacala line is that in the tying of the two concessions together, the Malawi and Mozambique Nacala segments, there was too much delay in awarding the second concession. In both Malawi and Mozambique; there was no regulatory reform enacted prior to the concession. In the Nacala, as in the other lines, the guidelines developed under the SADC Transport Efficiency Programme (STEP) component, the SATCCTU for concession options for the region were not used, perhaps in part because the Guidelines were being formulated during the time of concession, given the long period to finalization. These guidelines include MLP for legislative reform, model concession agreements for freight and passenger, and the SSATP Toolkit. The guidelines constituted a model on the basis of which, SADC Member States could formulate their concessioning frameworks. They weren't used here and in some ways the results show that deficiency.

The other lessons learned is the need for proper vetting of all short listed bidders and the need for a realistic feasibility plan by the government and a business plan submitted by the bidders. A thorough examination of the traffic volumes, potential business growth and status of infrastructure and rolling stock, might well have shown that the concession was not going to generate sufficient internal funds for rehabilitation of either. If, as stated by CFM, that the record on the Malawi concession, in which CFM is a partner, demonstrated an inability to maintain the infrastructure on the Malawi portion, then why extend the concession to include the Mozambique portion. This could have been notice that perhaps the state, as owners of the railway, should have been responsible for infrastructure investment, as was later seen in the Tanzania concession of TRL.

5.6.2 Beira Concession

The Beira concession is in its early years and has yet to demonstrate success or failure. Thus far, the committed rehabilitation is on plan. The hinterland will be opened to rail transportation once again. The coal field development will be enabled by the rehabilitation of the line. The Machipanda segment to Zimbabwe will be restored and served by the new concession. Without being tied to the Sena Line, it is doubtful that the Machipanda could have been concessioned. Here an experienced railway operator, with strong financial credentials and an interest in mineral development, being awarded the concession bodes well for success. Yet to be determined is the cost sharing of future line improvements brought about by the growth in coal shipments.

5.6.3 Other Lines

The Ressano Garcia line has traffic potential to attract a concessionaire. Unfortunately the most likely candidate, Spoornet, has many other investment needs and priorities. Even after several years of attempting to reach agreement on concession terms, the concession could not be finalized. As it is now moving forward, with CFM having downsized and restructured its workforce, CFM investment in the rehabilitation of the line and operating the line is the better of current options. If traffic grows as expected, the line will generate sufficient funds to allow ongoing infrastructure maintenance and investment. The Goba and Limpopo lines are not suitable concession candidates.

6. TANZANIA RAILWAY LIMITED CONCESSION

Tanzania has two railway systems. TRC is the 1000 mm gauge system that connects with railways in Kenya and Uganda. TAZARA system is a 1067mm gauge railway that connects Dar es Salaam with the railway in Zambia and through it, to other SADC railways. TAZARA has been studied numerous times but at present is not an immediate candidate for concession.

The Government of Tanzania (GOT) started the process of liberalization of the economy in 1991 and began to privatize some commercial entities. A Presidential Parastatal Sector Reform Commission (PSRC) was set up in 1992 by an act of Parliament to carry out the privatization program. In mid 1997, PSRC initiated work on privatization of TRC. The primary objective of the government was to create a railway that provided efficient and cost effective service to its customers and to be financially viable and not dependent upon funding from the state for its investment needs.

6.1 Tanzania Railway Corporation

TRC provides a vital transport link from the port of Dar es Salaam to the rest of the country and to landlocked Rwanda, Burundi and Uganda. The principal flow of traffic is on the east-west corridor with 60 percent traffic originating at Dar es Salaam. Since 1988, TRC has had commercial autonomy and has introduced cost-based tariffs and contract rates. It also controls its employment policy and has reduced its staff by over 3000 in recent years. Even so, at the time of concession, the railway was heavily overstaffed. This was despite the fact that the railway had been restructured and shed itself of non-core operations.

The network consists of two main lines totaling 2600 km, namely the Central line and the Tanga line. The Central line runs from Dar es Salaam to Tabora (850 km) and from there, there is one line to Kigoma (453 km) and another to Mwanza (386 km). The Tanga line starts from Tanga to Moshi and Arusha with a total length of 430 km. To connect these two lines there is a link line that is 186 km between Ruvu Junction Station on the Central Line and Mruazi Junction on the Tanga line. There are other three branch lines i.e. Kilosa Kidatu – 102 km; Kaliua Mpanda – 212 and Manyoni Singida – 115 km. TRC carried 1.5 million tons of freight and 630,000 passengers in 2004.

6.2 Objectives of Privatization

PSRC engaged a consultant in July 1997 to advise on measures that could be taken in respect of TRC for introduction of private capital and management and help relieve the government of financial burdens while providing better services to customers. Another study, funded by the World Bank, to evaluate the options for the privatization of TRC was carried out in year 2000. This study also recommended concessioning as the most suitable option and provided the format of the proposed concession. The concession process was lengthy and did not conclude in a signed contract until September 2007.

During the ten years leading up to concession, there was no investment in rolling stock or infrastructure. The intention to concession was well known and that had a harmful impact on employee morale and performance. Especially in the last three years prior to concession, employees faced the uncertainty of their futures as well as imposed wage freezes.

6.3 Scope of Railway Privatization

The concession was structured as a vertically integrated railway operation, without open access with a term of 25 years. One pre-existing access had been granted and that will be allowed to continue for five years, but only that legacy access will be allowed. The successful bidder was Rites, the national India railway operator and operates as Tanzania Railways Limited (TRL), which began operation October 5, 2007. The Rites involvement is similar to that in Mozambique, where long term India interest in extractive industries and access to raw materials, play a part in the motivation to become the Concessionaire.

6.3.1 The Role of Regulatory or Monitoring Agency

Prior to concession, the necessary regulatory reform was passed in 2004. The enabling legislation provided for the establishment of the Reli Asset Holding Company (RAHCO). This holding company will be responsible for infrastructure development. As a part of its role in infrastructure development, the new company, to be known as TRL and owned jointly by the government and RITES with 49% and 51% of the shares respectively, will run the railway under a 25-year Concession Agreement with the government. At a later date the government will offload some of its shares to Tanzanian investors. The 49% government interest was a late change to the concession. It may have been influenced by the Mozambique ownership position in several concessions. It is not without some drawbacks. For example, as a minority owner, a capital call for equipment purchase will require GOT to supply 49% of the investment. At some future point, the intent is to sell the government interest to Tanzanian investors.

It is in line with the government's policy of transferring commercial activities to the private sector but without abdicating from the basic responsibility of the government to provide the infrastructure and ensure a level playing field. The main objective of involving the private sector in operation of the railway is to improve efficiency and reliability of railway transportation service delivery.

The entry of a private railway operator necessitates the introduction of new roles for the regulator since a private operator, by nature, tends to prioritize achievement of financial goals to the detriment of externalities such as safety and environmental protection. The Railways Act (Act No. 4 of 2002) reinforces the Surface and Marine Transport Regulatory Authority's (SUMATRA) role as the economic and safety regulator of rail transport.

In that regard, the powers and functions of SUMATRA include the following:

1. To issue licenses to railway operators, monitor service standards of rail transport, monitor and prevent abuse of monopoly position in the railway transport sector, conduct investigations in relation to quality of service, investigate accidents and incidents prejudicial to safety, approve new rail infrastructure, safety systems and unusual safety related features of rolling stock, lay down standards and codes of practice in respect of rail transport operators and customers, monitor the adequacy of investments in railway transport and levels of return on the investment, and promoting inter-modal cooperation in railway transport.
2. To give effect to the functions of SUMATRA in safety regulation, the Minister for Infrastructure Development has enacted the following statutory regulations with effect from 26th January, 2007: The Licensing of Railway Operators Regulations (Government Notice No. 24 Of 26/1/2007), Safety Plan Regulations (Government Notice No. 22 of 26/1/2007) Approval of New Works and New Rolling Stock

Regulations (Government Notice No. 21 of 26/1/2007) and Accident Reporting and Investigation Regulations (Government Notice No. 23 of 26/1/2007). The Law (Railways Act, 2002) requires that anybody intending to operate a rail transport service shall apply to SUMATRA for a license. The Licensing of Railway Operators Regulations (2007) stipulates the conditions under which a license may be granted. They include the requirement that the applicant shall submit a Safety Plan and an Environmental Impact Assessment Report for approval before such license is granted. The license binds the railway operator to abide by license conditions which include:

3. Requirement to maintain some form of insurance against third party liability.
4. Requirement to establish and comply with a policy to protect the interests of people who are disabled and disadvantaged in their use of the railway operator's trains. Compliance to Complaints Handling Rules published by SUMATRA, Abidance to the approved Safety Plan and Abidance to the approved Environmental Protection arrangements.

The basic contents of a Safety Plan are elaborated in the Safety Plan Regulations, 2007. In summary, in the Safety Plan the company's safety policy is stated, the structures and roles for implementing the safety policy are defined, safety targets are listed, safety risks are assessed and the interventions which are to be carried out in order to achieve the safety targets are elaborated. The Safety Plan Regulations force the railway operator to develop a coherent and systematic approach to safety. Once approved, the Safety Plan becomes a reference document against which SUMATRA shall measure the safety performance of the operator.....³⁸

6.3.2 Clear Objectives

The general expectation is that the concession will continue the lines in operation, pay concession fees to the government and invest in rolling stock. A review of the new rail transport service and regulatory regime cannot be complete without mentioning RAHCO.

The Railways Act (2002) provides that there shall be incorporated a company to be known as RAHCO with the objectives, among others, to secure the provision of, or to provide, rail infrastructure, and on behalf of the government to develop, promote and to manage the rail infrastructure assets.

The company shall, where circumstances permit, exercise its powers to operate rail infrastructure and to provide rail transport services through a delegate. What this means is that RAHCO is the infrastructure owner on behalf of the Government and has powers to operate the railway, power which will be delegated to the concessionaire through the concession agreement.

TRL will operate the railway at its own cost and pay concession fees to RAHCO. RAHCO, as the infrastructure owner and party to the concession agreement on behalf of the

³⁸ Regulating privatized railways in Tanzania By Alfred Michael Nalitolela of SUMATRA

government, shall be responsible for monitoring the concession agreement, including service levels, investment levels etc.

The focus of RAHCO shall be predominantly on intra-firm aspects of service quality, for example vehicle type, load factor, vehicle availability, track availability etc. On the other hand SUMATRA's focus will be predominantly on quality aspects which affect social benefits, not just private benefits, in other words those rail operational aspects which affect both users and non-users of the service; they are externalities (safety, pollution, noise, dangerous goods, competition, etc).³⁹

6.3.3 Rehabilitation of Assets

RAHCO will fund rehabilitation of the majority of the concessions 2600 km railway line. The Concessionaire will be responsible in the first five years to rehabilitate 648 km.

RAHCO oversees the concession and monitors contract compliance and assures the infrastructure is not allowed to fall into disrepair. The concession requires an investment of US\$84 million in the first five years of operation. Of the US\$84 million, equity will provide US\$16 million, an IFC loan will provide US\$44 million, to be on-lent to RAHCO who will then contract the actual work to the Concessionaire, and the balance will be funded by the proceeds of the railway operation. In addition, a US\$33 million World Bank loan was provided. The first US\$8 million was to assure continued operation before concession and to prevent further deterioration in assets. The remaining US\$25 million can be used for rolling stock or infrastructure.

6.3.4 Labour Reform

The government budgeted US\$50 million to fund retrenchment. The retrenchment came in two phases with US\$10 million covering the first phase of 1800 employees. Phase two came at the time of concession and covered the remaining 3200 employees not selected for retention by the Concessionaire. This long period of uncertainty led to many skilled employees leaving the service for other opportunities. Those selected for retention carried with them their length of service for benefit and pension purposes. The government did not seek World Bank funding for retrenchment, preferring to only use lent funds for infrastructure or rolling stock improvement.

6.3.5 Rehabilitation Action Plan

The expectation is that the concessionaire will replace old dilapidated equipment with new or rehabilitated equipment. To that end Rites has committed to providing 15 locomotives. Five have earlier been delivered and are in operation, five were received in mid August 2008, and the remaining five are due soon. The locomotives are older class 73 meter gauge and have been rehabilitated. They are probably very well suited for the purpose.

³⁹ Regulating privatized railways in Tanzania By Alfred Michael Nalitolela of SUMATRA

6.3.6 Passenger Service

Passenger service is not a PSO at this time. Passenger service is not provided on the Tanga Line where the roadways provide adequate and very competitive passenger service. On the Central line passenger service is provided to Kigoma, Mwanza, Singida and Mpanda. This level of operation is done at the concessionaire's option using fare box to fund the operation. In the event the concessionaire decides to discontinue such service, the contract then calls upon the government to specify the routes to be run, minimum levels of service, and specific classes of service. At that point the government will be responsible for absorbing the cost of those passenger trains. Until then, the rates of third class may not be raised more than the rate of inflation and not more than once every three months. Fares on sleeper, first and second classes may be raised at the Concessionaire's discretion.

Since concession the Tanga to Arusha service has been out of service for five months due to a lack of rolling stock to support the service. With the added locomotives, service for freight has recently been recommenced. Beyond that it is difficult to yet determine the level of performance of TRL given that it has only been in operation for ten months. But with the enabling legislation done prior to concession there is hope for a sound operation. One thing already noted, and that may lead to morale issues down the road, is that while many well qualified TRC personnel were retained, all of the senior management of TRL is Rites employees. There are many layers of management for such a small company. Time will tell on the impact of this cultural difference.

6.3.7 Political Support

The thing that most stands out in the Tanzania concession process are the length of time it took to accomplish. This is indicative of the lack of total commitment initially to the privatization process. The lack of political will to determine the mode of privatization, and the pace of political reform all indicate less than complete resolve. The impact of the delay on morale, retention of competent employees and the impact on deteriorating infrastructure still show today. The method to be used was changed several times resulting in more delay. The concession was re-bid three times and this scared off some investors who perceived it an indication of lack of resolve. Some early supporters began to have second thoughts and in the ten year period governments change. The design of the concession as put forth by consultants, when implemented, was different than designed, but maybe that was for the good.

The enabling legislation was in place but the regulator was not in place until rather late in the game. Ideally the one responsible for monitoring the concession should be involved from the beginning of the process. Even still the regulator is not fully independent of the ministry. The MLP protocols set out a fully independent regulator, not reporting to or obligated to the ministry, just as one would not want an employee, or former employee of the Concessionaire to be the regulator.

6.3.8 Lessons Learnt

Tanzania opted to develop all necessary regulatory reform legislation before moving to concession. While it extended the process, it placed the concessioned railway in a far better position for success than some of those in other countries. In particular, the enabling legislation set up the asset holding company to manage the infrastructure. As experience has shown in other countries, many concessioned railways do not generate

sufficient internal funds to fully maintain the infrastructure, where that infrastructure had deteriorated prior to concession. Only the most robust traffic levels in the SADC region will support ongoing investment in infrastructure. Inasmuch as the railway belongs to the State and will return to State control at the end of the concession, it is in the State's best interest to assure that the railway remains suitable for both freight and passenger operation.

A financially strong Concessionaire with vast railway operating experience was selected. The concessionaire can draw upon that experience and the parent company ties for management personnel, as well as for a good source of suitable secondhand equipment.

The long process had its downside, that being the loss of skilled employees and the deterioration in employee morale over the period that the concession was being finalized.

7. CENTRAL EAST AFRICAN RAILWAY CONCESSION

7.1 Objectives of Privatization

The Central East African Railways Company (CEARC) Ltd. (formerly Malawi Railway) currently operates 710 km of single line track. The Concession Agreement allowing it to operate was signed between GOM and the CEAR on November 15, 1999. Operations under the new company began December 1, 1999. The move to privatize the railway was driven by the need to improve transport efficiency within Malawi and between Malawi and the port of Nacala, reduce the government subsidy of the railway and encourage private investment.

The railway, which previously carried most of Malawi's international traffic, lost traffic to truck competition. Despite GOM subsidy for losses of approximately US\$1 million per year, service continued to decline. A GOM decision was made to concession the railway and in preparation for this the railway was restructured in 1994.

The Railway Act of 1907 was the governing law covering railway operations in Malawi prior to the concession. Many of the provisions concern the opening of new railways and the provisions of new railway infrastructure. At the time the law was written, concession was not even a recognized concept. While a legal review found that the existing provisions of the Railway Act posed no barrier to the concessioning of Malawi Railways in the short term, it fell far short of setting out the responsibilities of both the government and the private railway operator in the post concession atmosphere. As seen in several other States where the Railway Acts were not amended to fit the new circumstances, the concession moved ahead without the proper and recommended regulatory climate.

7.2 Mode of Privatization

As a result, the concession was negotiated against the background of the Public Enterprises (Privatization Act, 1996) that enables privatization of State assets, very similar to the process that we later saw in the Zambia Railways concession. Thus, the concession was originally negotiated in a legislative and regulatory environment that did not adequately provide for concessioning as a means of private investment, post-concessioning management and overall safety regulation. This was done in part because at the time, investor confidence was good and because the Railway Act neither enabled nor precluded concessioning, the thought was that negotiations should not be constrained or delayed by the inadequate legislative regulatory framework. It was recognized that the Railway Act would require amendment but that the concession could move ahead in anticipation of the revision in the Act.

Against this background, it was agreed that the DCA would be amended as follows:

1. An addendum be annexed to the DCA, signed by the Minister responsible for transport, stating that upon signature of the DCA:
 - a) All approvals for the use of locomotives and rolling stock and the opening of the railway for the carriage of passengers as required by Sec 15, 16 and 17 of the Railway Act are granted;

- b) The Minister confirms the interpretation that the concessionaire is not required to submit General Rules in terms of Section 48, based on the conclusion that general Rules only had to be submitted when the railway became operational;
 - c) In the event of any complaint directed to the Minister regarding any matter contemplated in Sections 23-29, the Minister will not exercise the option of referring such matter to the High Court, but will deal with it by referring the matter to the Competition and Fair Trading Commission; and
 - d) The Minister confirms the intention to be guided in the interpretation of Sec 26 (1) of the RA, which mandates him to refer a matter to court, by the provisions of the DCA (thereby confirming that the Minister will refer such complaints to the Competition and fair trading Commission rather than the court).
 - e) The Railway Act was to be amended by deleting Sec 23-29 and Sec 48 (and Sec 15(2) which contains a reference to the general Rules made in terms of Sec 48).
2. The Concessionaire shall, from a date determined by the Minister in writing, submit a safety plan formulated in terms of the Railway Act to the Minister for approval.”

7.2.1 Concession Process and Award of Bid

It was originally envisioned that the three transportation elements comprising the Nacala corridor (Malawi Railway, CFM-N Railway, and Port operations) would be concessioned at approximately the same time. Prior to the beginning of the concession process, the governments of Malawi and Mozambique saw that, to function properly, the concession should involve the railways of both countries. Of the 1696 km between Nacala Port and Lilongwe, Malawi Railways only operated 710 km. For well coordinated operations within the corridor, the Mozambique portion of the line, the Nacala Corridor, was foreseen to be concessioned to the same parties as the Malawi Railway. Thus, a private investor consortium consisting of RDC, a USA Shortline railroad operator, and Edlow Resources, an investment firm, teamed with CFM, the Mozambique government owned Railway Company. The shareholding structure consists of private/strategic partners holding 51% and CFM 49%.

The concession was awarded and signed on November 15, 1999. The Nacala concession was to be awarded soon thereafter and the Council of Ministers in Mozambique approved the Nacala Concession document for signing in July 2000 and the shareholders and the Mozambique Government signed it in September, but the Concession did not become operational until January 10, 2005. CEAR had no doubt based its financial projections on the anticipated double concession that did not materialize for five years and thus it missed its business plan revenue forecasts. By the time of its signing, the Mozambique government and CFM had become sorely disillusioned by the performance of CEAR on the Malawi concession. Nonetheless, for reasons beyond the scope of this study, the Nacala concession moved ahead, despite CFM concerns, with CFM having 49% ownership in the Nacala concession.

7.3 Concession Terms

The Concession Agreement for the management and operation of Malawi Railways gives CEAR the right to operate the railway for a period of 20 years, as well as to purchase locomotives and rolling stock. The real estate, buildings, track, bridges, and other fixed infrastructure remain the property of the Government of Malawi. CEAR pays the Government:

- i) 5% of gross revenues (with a minimum of US\$0.5 million per annum)
- ii) US\$0.5 million initial payment
- iii) US\$0.9 million per annum for five years for purchase of the rolling stock (18 locomotives and 410 wagons).

Subject to the laws of Malawi including those for fair trading, the Concessionaire has the right to set its rates and prices, free of government regulation, except for the PSO.

In the event that there is a Change in Applicable Regulations which causes a material adverse effect on the economic value to the Concessionaire of the concession rights and obligations, and such change is:

- not generally applicable to privately owned commercial and industrial enterprises in Malawi; and
- the costs imposed on the Concessionaire by such change exceed the value of the benefits to the Concessionaire of such change;
- the concession provisions then provide a dispute resolution process to make the concession whole, as if the above mentioned changes had not occurred.

1. Prior to the completion of each five year period after the Commencement Date, the Parties may, by mutual consent, extend the Concession Period for an additional five years beyond the then current Expiry Date. If the Parties so agree, the Expiry Date shall be extended by an additional five years.
2. The Concessionaire shall put in place reasonable measures to cover liability for damage to the Railway Estate and third party damage, as well as injury to persons and any other liabilities that may arise through the use of the Railway Estate.
3. The Concessionaire agrees to provide certain railway passenger services which are deemed by GOM to serve the interests of the public and for which the Concessionaire will be compensated through payment by GOM.
4. The PSO shall be provided by the Concessionaire for a period of five years from the Commencement Date, thereafter, unless cancelled by either Party by ninety days written notice, the Concessionaire will provide the PSO on the payment terms as negotiated and agreed upon.
5. The Concessionaire shall keep and submit to the Minister on an annual basis a statistical record of the services provided as a PSO and of the related revenues. The format of the record shall be agreed upon by the Minister, on a proposal of the Concessionaire.
6. Subject to the provisions of the Railways Act, the Concessionaire shall have the powers to make and enforce bylaws for regulating the travelling upon and the use, working and management of Malawi Railways.
7. No fees, other than the concession fee may be imposed upon the concession, except for normal city fees on residential properties.
8. Subject to the safety provisions and regulations under the Railways Act, the Concessionaire shall develop and employ maintenance standards and operational rules consistent with safety requirements generally accepted in the railway industry.
9. The Concessionaire shall submit to the Minister operational rules and a safety plan formulated in terms of the Railway Act.
10. Where the Minister determines that the condition of the Railway Estate is unsatisfactory the Concessionaire shall be required at his own expense to carry out the necessary Rehabilitation.
11. The Concessionaire may grant occupancy authorizations and give leases to private companies and collect the fees, rents and various incomes on any properties or assets included in the concession.

12. The Concessionaire may ask the Minister to implement the procedures provided by law for the acquisition of land by GOM.
13. The Concessionaire shall notify the Minister in the event that it intends to invest in an addition to the Railway Estate or enter into a contract for the development of an addition thereto where the length of any contract shall exceed the remaining concession period, and the Minister may oppose on reasonable grounds.
14. The Concessionaire shall provide the Minister with a description of the Rehabilitation to be undertaken, including but not limited to financial and investment costs.
15. New railway level or grade crossings and crossing works (bridge-rail and bridge-highway) at the intersection of the railway lines and roads must be authorized by the Minister.
16. The Minister shall specify any new equipment to be put in place and the conditions of the possible crossing custodial service by the Concessionaire (Public Railway Crossings).
17. Following the five year period, the Minister may require the Concessionaire to allow a Railway Service Provider to make use of the Railway Estate to provide Railway Services for an agreed fee for track access to be negotiated with the Concessionaire (Open Access).
18. Contracts for the sale of Moveable Assets between the Concessionaire and third parties must place the Minister on notice and the Minister then has right of first refusal to purchase on the same basis as the third party.

7.4 Deficiencies in Concession Process

7.4.1 Institutional Reforms

The major deficiency in the concession process in Malawi was the failure to enact enabling legislation and establishing an independent regulator to oversee both railway operations and concession contract compliance. Depending only upon the concession contract requires that all clauses are clearly written and cover almost all eventualities. In the instant case, perhaps the area most lacking was a clear clause regarding investment in the track infrastructure. "Where the Minister determines that the condition of the Railway Estate is unsatisfactory the Concessionaire shall be required at his own expense to carry out the necessary Rehabilitation" is inadequate to address the needs of track infrastructure that had been allowed to deteriorate.

An investment plan, by line segment, should have been required specifying current condition, works required in terms of sleeper installation, rail replacement, surfacing and re-ballasting required, switch renewals, etc. The estimated costs of each of these components can then form an investment plan to which both sides agree. The lack of such a detailed investment plan has been an issue of contention for most of the life of the concession.

The same goes for an inventory of track materials on hand, inventory of rolling stock and an assessment of its condition and the investment required to bring the equipment up to a serviceable level. In many cases a large portion of the wagon fleets are out of service and need repair or are commercially obsolete. Locomotives are frequently inoperable and costs to return them to a serviceable condition must be recognized and committed to by the concessionaire. If additional rolling stock is required, it should be stipulated. In the instant case, the equipment was purchased by the concessionaire and the contract should have included an inventory and a serviceability assessment.

A five year business plan would have shown that the concession could not generate sufficient funds to support infrastructure rehabilitation. Given that, an alternative approach would have been to separate the infrastructure from the rolling stock and operations, with the government being responsible for upgrading the infrastructure, similar to what was done in Tanzania. The concessionaire could then focus upon improving efficiency and providing service levels required to attract new business. One suggestion is that earnings from concessions should be ploughed back into the relevant sector rather than being put in a general public fund where the resources cannot be easily drawn for the benefit of the railway sector. This observation stems from the Malawi scenario where fees by the Lessee do not go to the sector, but end up with the Privatization Commission/Treasury. The same situation exists in Zambia, where the concession fees go into the general fund and are not designated to be used for railway infrastructure purposes. As a result, when there are major needs for the railway sector, allocation from the treasury takes time and the railway needs must compete with all of the social needs and interests of the country. Other countries are considering establishing a railway fund from the concession proceeds.

To avoid an end of term cut back on maintenance and investment, the concession should provide for a return of unamortized investment in the event the concession is not extended. Details as to amortization schedules should reflect expected serviceable life as opposed to an accounting depreciation schedule.

Open Access was provided for in the contract in the following clause; "Following the five year period, the Minister may require the Concessionaire to allow a Railway Service Provider to make use of the Railway Estate to provide Railway Services for an agreed fee for track access to be negotiated with the Concessionaire (Open Access)". Two problems arise, the first of which is the level of business being handled. Currently there are fewer than 250,000 tons being moved. That level of revenue will not support one operator, much less two. In many cases of open access the operating company sees its best customer suddenly become its largest competitor and the operating company's revenue decreases at a far higher rate than access fees, or expense reduction, can ever offset. Instead of depending upon open access to assure a given service level, the contract should contain minimum service requirements. Open access is not required for competitive purposes as roadway competition exists and shippers also have the option of using other ports than Nacala.

7.4.2 Annual Report

The Concessionaire shall submit an annual report to the Minister that shall include:

1. a report summarizing all incidents related to operational safety including, but not limited to: derailments; crossing protection failures; accidents; and spillages, and including a report on the actions taken by the Concessionaire to prevent the recurrence of such incidents;
2. a report on the activities undertaken by the Concessionaire in the Maintenance and Rehabilitation of the Railway Estate. The report shall include a description of the projects and the financial and investment costs;
3. a report of the Concessionaire's operating statistics including;
 - a. tons carried by commodity;
 - b. ton kilometers; and
 - c. locomotive and wagon availability statistics.

4. financial statements, including the separate account for gross revenues collected by the Concessionaire or its subsidiaries for use of the Railway Estate, which is used as the basis for calculating the annual concession fee.

The Concessionaire shall engage annually a chartered accounting firm to carry out an annual audit of its finances, capital and revenue transactions, and traffic levels and the results of this audit shall be submitted to the Minister and the Minister of Finance and as described by the Companies Act.



Source CRISIL

7.4.3 Performance of the Concession

In the initial years of the concession traffic levels increased. Prior to the concession the government had ceased investing in the railway. Available locomotives had fallen from between 14 and 18 to only four. Anecdotal evidence saw an improvement in performance regarding locomotive and wagon rehabilitation as well as train performance in the early years of the concession. Monitoring was provided by a railway Inspector. While the concession included only the 710 km within Malawi, the railway actually operates beyond the territorial boundary into Mozambique from Entre Lagos to Cuamba, over the troubled 77 km section.

After the first few years the inspector began to see equipment availability slip. In part this was due to CEAR wagons going into Mozambique, after the Nacala concession, and remaining off line for several months. Spare parts were often not available and the process of cannibalizing other locomotives for parts began. The same observation was made in regards to track maintenance with the concessionaire using only track components that had been left on the property for repairs. Some 30 kg rails were changed to 40kg but that was using rail left on hand at time of concession. After the concession on the Mozambique portion was in place, there is anecdotal evidence of some shipments

taking several months to make the trip from Nacala to destinations in Malawi. The performance is seen in the table below. While traffic levels increased, the operating losses preclude ongoing investment by the concessionaire.

	1999	2000	2001	2002	2003	2004
Tons	344	506	448	463	273	240
Net Tkm	56	87	70	73	41	38
Freight Revenue (Kw million)	185	302	309	327	229	257
Total Revenue (Kw million)		390	387	408	314	375
Total Expense		441	429	411	375	448
Operating Income		-51	-42	-3	-61	-73

Source Bullock

In January 2003 the railway bridge at RiviRivi washed out in Cyclone Delfina. This severed service between Blantyre and Lilongwe. This effectively killed-off almost all local traffic, which dropped from 183,000 ton in 2002 to about 20,000 tons, and also marooned rolling stock and two locomotives north of the bridge.⁴⁰ The bridge was repaired using grant funds from Department for International Development (DFID) but this took over two years to be completed and only returned to service in May 2005.

The contract governing such events was not clear. Contract language must be very precise as relates to force majeure events, specifying whether they be acts of God or of Political unrest, which party must bear the expense of restoring the railway. Generally a Concessionaire is not prepared to replace catastrophic damage on an asset owned by the state that the Concessionaire is only leasing for a fixed period of time. A good example is the wash out of the Limpopo line in Mozambique. If that line had been previously concessioned, no Concessionaire could afford to return the line to service. Catastrophic events such as that must be a responsibility of the state and the contract must clearly set out the parameters, and cost sharing if so needed.

Since the concession of the Mozambique portion of the Nacala Corridor, CDN is the operator of the Mozambique portion of the corridor. CDN and CEAR have the same ownership components so for all practical purposes the corridor is under one management. Thus, locomotives and wagons of Malawi heritage, or acquired by CEAR prior to the Nacala concession, are operated into Mozambique. Issues have arisen over the adequacy of per diem charges for equipment that overstays reasonable trip times in Mozambique. While Malawi may see this as a problem, CFM sees the reverse as a major problem where CFM alleges that equipment lease payments have never been made by CEAR on CFM equipment.

Similar issues have arisen over the division of revenues between the two separate concessions. This is an issue for the GOM as the concession fee is based upon 5% of revenues. The CRISIL study suggests gross revenues realized from operations by CEAR which are used to determine concession payments to the government, and a sharing of revenues between the two portions of the corridor and that there is need of a transparent sharing of the revenues. However, traditionally such interline revenues are shared on a km percentage basis and that should be adequate to cover the interline movements.

⁴⁰ Bullock World Bank Report

7.4.4 Passenger Service

The passenger portion of the concession was based upon such services being provided as a PSO. The three PSO routes were Limbe (near Blantyre) to Makande; Balaka to Nayuchi; and Limbe to Balaka. The governing clause was "The PSO shall be provided by the Concessionaire for a period of five years from the Commencement Date, thereafter, unless cancelled by either Party by ninety days written notice, the Concessionaire will provide the PSO on the payment terms as negotiated and agreed upon." The dilemma is of course, the lack of an agreed upon mechanism to drive the negotiated terms. Thus, while the service was provided at the agreed upon rate for the first five years, the negotiations for the ongoing service reached an impasse.

PSO's are always difficult to negotiate, but doing so upfront, with a clause for renegotiation and arbitration if need be, is much easier than doing so five years into the concession. Terms don't need to be elaborate and can be as simple as;

- i) Government to pay all direct passenger train crew wages and expenses.
- ii) Government to pay dispatching expenses on a percentage of train mile basis.
- iii) Government to pay track maintenance expenses on a train mile basis.
- iv) Government to pay overhead on a percentage basis.
- v) Government to pay station cost on a user percentage basis.
- vi) Government to be responsible for on board services, revenue collection and security.
- vii) Concessionaire to be responsible to provide adequate insurance beyond that provided under the general concession.
- viii) Concessionaire to operate with x% of on time performance, giving passenger trains priority.

In this fashion government can provide any level of service it feels the public requires and the concessionaire is adequately reimbursed for the service. In the first nine months of 2005, 182,000 passengers were carried, but there was then a dramatic drop after September.

The CRISIL study of the Malawi concession has suggested that the GOM could fund a onetime rehabilitation program that will restore the railway assets to maintainable standards, after which the Concessionaire will be responsible for ongoing maintenance. This funding would be in addition to the OPIC funds provided for rehabilitation of the 77 km segment. This goes along the lines of the Tanzania concession where the asset holding company, RAHCO, retains the responsibility for infrastructure investment.

7.4.5 Lessons Learnt

Malawi moved to the concession process without any of the recommended enabling legislation or regulatory reform. In addition, it lacked the harmonizing regulatory reform in Mozambique. That left the concession to be governed by only the language contained in the concession contract. Many changes were made in the DCA in anticipation of future disagreements or disputes, but even those were not adequate replacements for proper regulatory oversight.

A recent study by CRISIL recommended over thirty clauses in the concession contract be modified, some very extensively, to remedy some of the deficiencies that impact the concession operations today. These suggested changes all have merit and show the problems that arise without regulatory oversight. Unfortunately, contractual changes may

only be made with agreement of the parties involved. Whether the current concessionaire will be agreeable is unknown. What triggering event might lead to re-negotiation is also unknown at this time, although it has been rumored that RDC and Edlow Resources have sold their interest to a Mozambique investor. That may provide the opportunity for renegotiation of those clauses recommended by CRISIL.

It has been recently announced that the CEAR and CDN concession interest of the RDC consortium has been sold. "Railroad Development Corporation (RDC) today announced the sale of its interest in the Nacala Corridor to Mozambican investor group INSITEC. The Nacala Corridor, consisting of Malawi's railway and the Nacala port and railway in Mozambique, was concessioned in stages, beginning with the creation of CEAR in 1999 in Malawi and continuing with the concessioning of the Nacala Port and Railway in 2005. Together these represented the first private sector integration of ports and railways for general cargo in recent history. In addition to rail freight service, the Nacala Corridor provides passenger service in selected markets in both Mozambique and Malawi.

The transfer of the concession requires government approval. The time is right for the government to condition that approval upon some modifications to the concession contract. That renegotiation can be a win-win negotiation with the concessionaire being in a position to modify PSO clauses, and for the government to seek those changes listed in the CRISIL study. At the same time both parties must recognize that the investment in infrastructure will require government participation as traffic levels and revenues in the immediate future will not support capital investment.

8. SUGGESTED FUTURE ACTIONS

Where concessions have yet to be granted, the steps recommended in the MLP on Railway Restructuring and Regulation, should be followed. Proper enabling legislation and the establishment of an independent Railway Authority are a pre-condition to a successful railway concession. It has often been stated that the regulator must be independent. It is equally important that the regulator be unbiased and disinterested.

Where concessions have already been awarded, the establishment of the Railway Regulator should be pursued as soon as possible. Piecemeal steps to change the Railway Inspector into the Railway Regulator will not be sufficient. Concessions already granted are governed by the contracts to which both parties agreed and changes may be made only by mutual agreement. There are areas where the government can enhance the PSO provisions, thereby relieving the Concessionaire of a financial burden while at the same time providing a needed social service. In return the government should expect contract changes to ensure better freight service.

In cases where the roadway serves the same routes as the railway, it is likely that highway transport will soon win the majority of intercity passengers. A large number of people will prefer road transport over rail. It is a fact around the world that with improved bus and minibus service in terms of frequency and flexibility, it is difficult for rail to compete with road transport. Road transport, particularly over short distances of up to 400 km is highly competitive and in most corridors in SADC average trip length is less than 400km. Even so, passenger train service is a major source of conflict in several of the railway concessions and modifications to the PSO provisions can alleviate this conflict.

Tanzania's approach in establishing RAHCO can provide a model for those countries where the concessionaire's internally generated funds are not sufficient to rehabilitate the

railway. Time will tell if that concession will be successful, as the tonnage levels must increase to support a railway of that size. Some have indicated that Zambia is considering legislation that would place diesel fuel taxes paid by railways into a rail rehabilitation fund. These taxes would not in themselves be adequate, but they can be supplemented by the government where it is deemed necessary to upgrade a deteriorated rail system. Malawi is also considering a rail investment fund.

Malawi and Mozambique may have the opportunity to renegotiate some concession contract clauses, given the change in ownership of the CDN and CEAR concessions. Analysis done in the CRSIL study provides a sound guide for contract changes. The RSZ concession has provisions for cancellation of the concession, albeit at a very high price. Cancellation should only be considered as the last resort, but if Zambia is so dissatisfied with RSZ performance, it retains that option. A better approach would be third party mediation of areas of dispute. Here a disinterested regulator is called for.

In any future concessions the Model Freight and Passenger Concession guidelines should be closely followed. Drafters of the concession should be experienced railway specialists who can anticipate pitfalls, such as those seen in the RSZ de facto abandonment of inter-mine service. After the concession is awarded, material changes should not be made and negotiations should only cover logistical and administrative matters.

ANNEX 1: SARA CORRIDORS BACKGROUND PAPER

1. Background/Contextualization

The concept of traffic corridors within the SARA arises from the geographical location and connectivity among members' railway networks and the need to provide joint railway services to customers for transit traffic. As an association, SARA strives to satisfy customer requirements and the corridor concept enhances the association's efforts to do joint marketing, pool resources together and synchronize operations. These efforts put railways in a better position to effectively compete against road. There are a number of ports in the region where traffic originates from or is destined to and also a number of alternative rail routes to and from these ports.

From the SARA member railways' position, each one stands to benefit more, the more distance is traversed over its rail network. This being the case, there is bound to be competition for traffic among corridors. As an association, SARA had to come up with a systematic way to distribute such traffic to avoid disadvantaging any of its members. However, the natural corridor to be followed by any traffic largely depends on where it is originating from and where it is destined.

2. Current SARA Corridors and their Operations

The focal points in as far as corridor dynamics is concerned with SARA are the NRZ due to its central location in the network and the multiplicity of interfaces it has with contiguous railways (Spoornet, CFM, CCFB, BBR, BR and RSZ) and Spoornet due to its proximity to ports, multiplicity of interfaces with neighbouring railways (BR, BBR, NRZ, CFM, SR and TransNamib) and also as a major originating railway for traffic generated in the Republic of South Africa. BR and BBR are predominantly transit lines and as such owe their survival to the movement of high volumes of such traffic. When one looks at these two railway networks, they look somewhat parallel. The distribution of traffic between these two railway administrations will be discussed below.

2.1 Shortest route principle

2.1.1 Handover of BR by NRZ

The genesis of the shortest route principle goes back to years before SARA was formed, to around 1987 when the NRZ handed over Botswana Railways. Up until 1987, NRZ used to operate on the rail network through Botswana up to Mafikeng and therefore the distribution of traffic to and from South Africa between the Plumtree and Beitbridge routes was immaterial. Following the hand-over of the rail network in Botswana to BR in 1987, NRZ diverted most of the traffic to the Beitbridge route where it had longer distances in excess of 400 km as opposed to the 100 km that were left on the Plumtree route following the handover of BR. This left BR with reduced traffic volumes leading to the proposal to have traffic following the shortest route between origin and destination as a logical way of distributing traffic between NRZ and BR. The issue was discussed between Spoornet, NRZ and BR who were the only affected parties then, and the discussions resulted in the acceptance of the proposal and some traffic going back to BR.

2.1.2 Emergence of BBR

BBR constructed a line linking Beitbridge to the line between West Nicholson and Bulawayo which now became the shortest route to and from the North and South via Bulawayo. Traffic was again traffic diversion from BR (Plumtree route) to BBR (Beitbridge route) and also from NRZ's Rutenga line to BBR as the latter was now the shortest route. BR proposed an amendment to the principle resulting in its amendment to include cost, efficiency, customer preference etc considerations when consigning traffic. Traffic volumes on the Plumtree route continued to decline leading to the elevation of the issue to Heads of State level at some point in time (Botswana and Zimbabwe). The problem did not disappear after the intervention of Heads of States.

2.1.3 Zoning of Spoornet network

Considering that Spoornet was the largest origin and destination for both North and South bound traffic, there was need to come up with a way to minimize the exposure of BR. It was agreed at SARA level to Zone the Spoornet network as a way of sharing traffic between BR, BBR and NRZ depending on the origin or destination in South Africa. The outcome of this zoning was that all traffic emanating from or destined to the western parts of South Africa was supposed be consigned via BR lines and the rest via Beitbridge. Zoning provided a clear framework for sharing traffic between BR, BBR and NRZ.

2.1.4 Operational changes at Spoornet

Some operational changes with a negative impact on BR were enforced at Spoornet. These entailed defining Johannesburg as the originating point for all trains in and around the Gauteng area. This had the effect of incorporating some traffic that had previously been zoned to move via BR lines to the North resulting in the traffic being diverted to move via Beitbridge as Johannesburg was now the designated originating station.

2.1.5 BR's grievance

BR contends that the changes in operational procedures violated the zoning agreement reached on earlier and as such resulted in the manipulation of the shortest route principle to the benefit of other railways at its detriment. BR looks up to the SARA Board to urgently resolve this matter to save it from imminent collapse given the long time it has taken to resolve this problem. Facts on the ground are that the diversion of traffic from BR lines has resulted in serious retrenchments and under-utilization of capacity.

2.2 Corridor Management Groups

Corridor Management Groups (CMGs) were formed in 1998 with the responsibility to coordinate and spearhead implementation of agreed interventions and procedures in each corridor. All CMGs have Corridor Coordinators and other members from key railway disciplines including Operations, Safety, Marketing, Technical, Accounting etc. CMGs are expected to meet at agreed intervals with the output of the meetings forwarded to the Secretariat.

2.2.1 Single/Joint Train Inspections at Boarder Stations

Some Border stations have joint inspections and it is desirable for all to follow suite as this reduces delays at interchange points. The success of this exercise will depend a lot on the

maintenance standards for interchanged equipment especially wagons which should be fit to run for 1000 km without re-examination.

3. Future of Corridor Operations

3.1 Marketing policy

SARA members should implement the marketing policy that was developed in 2001 as it provides a framework for common marketing strategies and practices on a corridor basis. Failure to apply the agreed policy will weaken the association in its quest to fight road competition, satisfy customer needs by providing a cost effective seamless rail transport service.

3.1.1 One Stop Shop

There is need for adopting a One Stop Shop approach to reduce the effort and cost to customers when they try to access railway transport services. Militating against this desirable position is the lack of transparency on cost structures hence failure to adopt common pricing strategies, different legal requirements and railway policies and shortage of foreign currency in some member countries for smooth interchange settlement.

3.2 Sharing of traffic

If the association is to remain united, there is need to ensure that no member is disadvantaged by others in terms of traffic routing. In this regard, there is need to stick to agreed SARA positions recognizing the need to table any changes with far reaching implications before the SARA Board. There is therefore need to stick to the zoning as agreed at SARA level. It would appear that a lasting solution to BR's problem will be found if BR itself, BBR, NRZ and Spoornet were to sit down and objectively deal with the matter. The Secretariat on the other hand can only facilitate such initiatives aimed at resolving the impasse. The secretariat has no constitutional mandate to rule on such an issue, it is therefore the railways themselves who should resolve the problem either through the SARA Board, bilateral engagements or any other viable alternatives.

3.3 Corridor Management Groups

Corridor management groups should be properly constituted and meet regularly and feedback on their deliberations being forwarded to the secretariat. CMGs should be active in operational, technical, commercial and safety related issues if regional railway efficiency and performance improvement is to be achieved.

3.4 Sharing of resources

Sharing of resources is important for all railways in the region as long as the owner of the resource is adequately compensated. This will offset individual surpluses and shortages, and hence reduce the overall cost of providing the service. This is achieved through "Through Running" of locomotives and crews. The service continuum will not be subject to controllable bottlenecks that impose unnecessary costs to customers.

3.5 Dispute resolution

All disputes arising within corridors should be quickly resolved to avoid exposure of the

affected railways. Such dispute resolution should be in accordance with the provisions of the SARA Constitution as amended from time to time and the bilateral agreements between and among the railways.

3. Conclusion

It is absolutely important to maintain the corridor concept as it provides the right platform for the provision of an integrated, cost effective and seamless service, ideals that SARA strive to achieve. The success of the association in terms of performance will be measured by the extent to which it meets these ideals. Resolving BR's case will be a giant step in the right direction (Map and Diagram omitted).

CONCESSION QUESTIONNAIRE



5/14/2008

Concession Questionnaire

Concession Questionnaire

BRS

1. Was the concession offered competitively, if so how many bidders responded? How many met minimal financial requirements? How many met operational experience requirements?
2. Was there international donor funding available?
3. What international donor funding went to the project?
4. For Retrenchment?
5. For equipment?
6. For Infrastructure rehabilitation?
7. What is the investment pledged by the concessionaire over and beyond the donor funding?
8. Is the rehabilitation proceeding on target? When is service to begin on the Sena Line?
9. What is the % ownership basis of the consortium?
10. What are the limits of the concession?
11. Are the Sena Line and the Machipanda Line concessioned together or separately?
12. What are current traffic levels on the Machipanda? What are projections?
13. Is the concessionaire required to continue service on Machipanda even if traffic levels do not increase?
14. Does the consortium include CVRD?
15. What equipment was included? Is equipment owned by CFM and simply leased to the BRS?
16. Is the entire railway to be included in the concession or are some branchlines not to be in operation?
17. Is there an established Railway Regulator who monitors the concession performance?
18. Is the Regulator separate from CFM?

19. What is CFM's role after the concession is in operation?
20. What staffing level at CFM is devoted to monitoring the various concessions?
21. As a minority shareholder, will CFM have any day to day input into the operation of the railway?
22. Does the concessionaire meet regularly with the regulator?
23. Are there required reports of performance? If so please give the projections in terms of traffic volumes for the Machipanda and Sena segments of the concession. What are volumes of trains and passengers of each line? Will there be passenger trains on the Sena Line? If so will they be operated as Public Service Obligations and paid for by the state?
24. How was the labor reforms, retrenchment handled? Were the retrenched the responsibility of the state? What was the magnitude of the retrenchment? What retraining was required?
25. How many CFM employees will remain or be retained by the concessionaire in the Central Corridor?
26. What were the objectives of the State?
27. Was there political support for concessioning?
28. What performance standards were set for the concessionaire? Traffic volumes, safety, km rehabilitated, total investment made versus pledged?
29. Are rates regulated?
30. Since concession, provide projected traffic levels in tkm, tons, revenues (roughly), pkm. Were target levels provided in the contract? Have they been met? Are regular performance reports to be made to the Regulator?
31. Were there rehabilitation targets set out in the concession contract? Have they been met?
32. Since concession, provide estimates of fees paid to the government.
33. Are there recapture provisions for unamortized investment at the end of the concession?
34. Were any credit risk guarantees made available, such as from the World Bank?

35. How many km were operated at reduced speed on the Machipanda at time of concession and what is the targets post concession?
36. Have there been any unanticipated events that have impacted performance?
37. Does the concession contract impose “common carrier” obligations on the concessionaire? May tendered traffic be refused? Must connecting railways be treated equally?
38. Have interline agreements been made with NRZ? CEAR?
39. Is the Port of Beira included in this concession?

CONCESSION QUESTIONNAIRE



5/14/2008

Concession Questionnaire

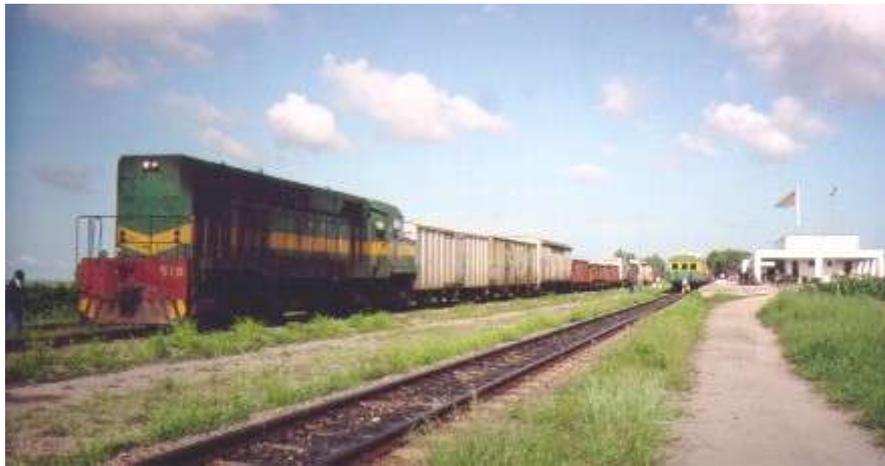
Concession Questionnaire

1. Was the concession offered competitively, if so how many bidders responded? How many met minimal financial requirements? How many met operational experience requirements?
2. What is the concessionaire management's railway experience?
3. Was there international donor funding available?
4. What international donor funding went to the project?
5. For Retrenchment?
6. For equipment?
7. For Infrastructure rehabilitation?
8. What is the investment pledged by the concessionaire over and beyond the donor funding?
9. Is the rehabilitation proceeding on target? Has the line been rehabilitated on target?
10. Are all former lines still in service?
11. What is the % ownership basis of the consortium?
12. What are the limits of the concession?
13. Has the concessionaire met investment pledges?
14. What equipment was included? Is equipment owned by Malawi and simply leased to the CEAR?
15. Is the entire railway to be included in the concession or are some branchlines not to be in operation?
16. Is there an established Railway Regulator who monitors the concession performance?
17. Does the Regulator regulate service discontinuance? Does the regulator monitor customer complaints?
18. Does the concessionaire meet regularly with the regulator?

19. Are there required reports of performance? If so please give the projections in terms of traffic volumes for the CEAR segments of the concession. What are volumes of trains and passengers of each line? Are there passenger trains on the CEAR? If so, are they be operated as Public Service Obligations and paid for by the state? How many passenger trains at concession? How many today?
20. How was the labor reforms, retrenchment handled? Were the retrenched the responsibility of the state? What was the magnitude of the retrenchment? What retraining was required?
21. What were the objectives of the State?
22. Was there political support for concessioning?
23. What performance standards were set for the concessionaire? Traffic volumes, safety, km rehabilitated, total investment made versus pledged?
24. Are rates regulated?
25. Since concession, provide projected traffic levels in tkm, tons, revenues (roughly), pkm. Were target levels provided in the contract? Have they been met? Are regular performance reports to be made to the Regulator?
26. Were there rehabilitation targets set out in the concession target? Have they been met?
27. Since concession, provide estimates of fees paid to the government.
28. Since concession, provide the annual capital investments made by the concessionaire.
29. Did the state retain any ownership interest in the railway?
30. Are there recapture provisions for unamortized investment at the end of the concession?
31. Were any credit risk guarantees made available, such as from the World Bank?
32. How many km were operated at reduced speed on the CEAR at time of concession and what is the target post concession?
33. Have there been any unanticipated events that have impacted performance?
34. Is the line in operation all of the way into Mozambique?

35. Does the concession contract impose “common carrier” obligations on the concessionaire? May tendered traffic be refused? Must connecting railways be treated equally?
36. Is there a commitment to connect to Zambia? At whose expense?
37. Are there arbitration mechanisms in place to resolve disputes with the concessionaire?

CONCESSION QUESTIONNAIRE



5/14/2008

Concession Questionnaire

Concession Questionnaire

1. Was the concession offered competitively, if so how many bidders responded? How many met minimal financial requirements? How many met operational experience requirements?
2. What is the concessionaire management's railway experience?
3. Was there international donor funding available?
4. What international donor funding went to the project?
5. For Retrenchment?
6. For equipment?
7. For Infrastructure rehabilitation?
8. What is the investment pledged by the concessionaire over and beyond the donor funding?
9. Is the rehabilitation proceeding on target? Has the line been rehabilitated on target?
10. Is the 77 km segment between Entre Lagos and Cuamba upgraded?
11. What is the % ownership basis of the consortium?
12. What are the limits of the concession?
13. Is the Malawi portion of the corridor separately concessioned?
14. What are current traffic levels on the Nacala? What are projections?
15. Has the concessionaire met investment pledges?
16. What equipment was included? Is equipment owned by CFM and simply leased to the CDN?
17. Is the entire railway to be included in the concession or are some branchlines not to be in operation?
18. Is there an established Railway Regulator who monitors the concession performance?
19. Is the Regulator separate from CFM?

20. What is CFM's role after the concession is in operation?
21. Does the concessionaire meet regularly with the regulator?
22. Are there required reports of performance? If so please give the projections in terms of traffic volumes for the CDN and CEAR segments of the concession. What are volumes of trains and passengers of each line? Will there be passenger trains on the CDN? If so will they be operated as Public Service Obligations and paid for by the state?
23. How was the labor reforms, retrenchment handled? Were the retrenched the responsibility of the state? What was the magnitude of the retrenchment? What retraining was required?
24. How many CFM employees will remain after concession?
25. What were the objectives of the State?
26. Was there political support for concessioning?
27. Is the port operator a part of the consortium?
28. What performance standards were set for the concessionaire? Traffic volumes, safety, km rehabilitated, total investment made versus pledged?
29. Are rates regulated?
30. Since concession, provide projected traffic levels in tkm, tons, revenues (roughly), pkm. Were target levels provided in the contract? Have they been met? Are regular performance reports to be made to the Regulator?
31. Were there rehabilitation targets set out in the concession target? Have they been met?
32. Since concession, provide estimates of fees paid to the government.
33. Did the state retain any ownership interest in the railway?
34. Are there recapture provisions for unamortized investment at the end of the concession?
35. Were any credit risk guarantees made available, such as from the World Bank?
36. How many km were operated at reduced speed on the Nacala at time of concession and what is the target post concession?

37. Have there been any unanticipated events that have impacted performance?
38. Is the line in operation all of the way into Malawi?
39. Does the concession contract impose “common carrier” obligations on the concessionaire? May tendered traffic be refused? Must connecting railways be treated equally?
40. Is there a commitment to connect to Zambia? At whose expense?
41. Are there arbitration mechanisms in place to resolve disputes with the concessionaire?
42. Is CFM the sole party responsible for setting concession standards? For regulating and monitoring the concession? Is CFM a part owner?

CONCESSION QUESTIONNAIRE



5/14/2008

Concession Questionnaire

Concession Questionnaire

RSZ

1. Was the concession offered competitively, if so how many bidders responded? How many met minimal financial requirements? How many met operational experience requirements?
2. What is the concessionaire management's railway experience?
3. Was there international donor funding available?
4. What international donor funding went to the project?
5. For Retrenchment?
6. For equipment?
7. For Infrastructure rehabilitation?
8. What is the % ownership basis of the consortium?
9. What are the limits of the concession?
10. What equipment was included?
11. Is the entire railway included in the concession still in operation?
12. Was a Regulatory Authority established by legislation?
13. Does the regulatory authority have power to require service to all customers? May service be discontinued without regulatory approval?
14. Is there an established Railway Regulator who monitors the concession performance?
15. When was the regulator established? Is the regulator established by legislation?
16. Does the concessionaire meet regularly with the regulator?
17. What is the role of ZRL in monitoring the concession?
18. What is ZRL employment level? What was it prior to concession?

19. Are there required reports of performance? If so please give the performance in terms of traffic volumes for each segment of the concession. What is the history of tonnage levels in the segment A portion? Same for segment B? What are volumes of trains and passengers of segment C from day one to today? If trains have been dropped please explain why?
20. What were the objectives of the State?
21. Was there political support for concessioning?
22. What performance standards were set for the concessionaire? Traffic volumes, safety, km rehabilitated, total investment made versus pledged?
23. Are rates regulated?
24. Are passenger trains treated as a public service obligation?
25. What portion of passenger costs is born by the state?
26. Since the concession began provide traffic levels in tkm, tons, revenues (roughly), pkm. Were target levels provided in the contract? Have they been met? Are regular performance reports made to the Regulator?
27. Were there rehabilitation targets set out in the concession target? Have they been met? Indicate where the funding was donor or on-lent and where the concessionaire was responsible.
28. Since concession provide estimates of fees paid to the government.
29. Did the state retain any ownership interest in the railway?
30. Are there recapture provisions for unamortized investment at the end of the concession?
31. Were any credit risk guarantees made available, such as from the World Bank?
32. How many km were operated at reduced speed at time of concession and today?
33. Have there been any unanticipated events that have impacted performance?
34. Does the concession contract impose "common carrier" obligations on the concessionaire? May tendered traffic be refused? Must connecting railways be treated equally?
35. Have interline agreements been made with TAZARA?

36. May traffic be routed via Plumtree? How much has been so routed?

37. Has equipment and resources been furnished to the inter-mine concession, segment A?

38. Does the concession have a cancellation clause for non-performance?

CONCESSION QUESTIONNAIRE

8/11/2008

Concession Questionnaire

Concession Questionnaire

TRC

1. Was the concession offered competitively, if so how many bidders responded? How many met minimal financial requirements? How many met operational experience requirements?
2. What is the concessionaire management's railway experience?
3. Was there international donor funding available?
4. What international donor funding went to the project?
5. For Retrenchment?
6. For equipment?
7. For Infrastructure rehabilitation?
8. What is the % ownership basis of the consortium?
9. What are the limits of the concession?
10. What equipment was included?
11. How many locomotives were operational at time of concession? How many wagons were operational at concession? Must TRL furnish a minimum number of locos or coaches or wagons? At end of concession does the rolling stock revert to the RAHCO?
12. Is the entire railway included in the concession still in operation?
13. Was a Regulatory Authority established by legislation?
14. Does the regulatory authority have power to require service to all customers? May service be discontinued without regulatory approval?
15. Does the Railway Asset Holding Company have regulatory authority over the operations of the concessionaire or only over the state of the infrastructure.
16. Is there another established Railway Regulator who monitors the concession performance?
17. When was the regulator established? Is the regulator established by legislation?

18. Does the concessionaire meet regularly with the regulator?
19. What is the role of TRC in monitoring the concession or was TRC terminated as a company at concession?
20. What is TRI employment level? What was it prior to concession? Was retrenchment funding provided internally or was donor funding used. ?
21. When was the restructuring announced to employees?
22. When were the retrenchments accomplished? Were they in phases?
23. Are there required reports of performance? If so please give the performance in terms of traffic volumes for each segment of the concession. What is the history of tonnage levels in the segment
24. What were the objectives of the State?
25. Was there political support for concessioning?
26. What performance standards were set for the concessionaire? Traffic volumes, safety, km rehabilitated, total investment made versus pledged?
27. Are rates regulated?
28. Are passenger trains treated as a public service obligation?
29. What portion of passenger costs is born by the state? May TRL cease passenger operation on any line segment without regulatory authority?
30. If the government directs that passenger service be provided does government bear the entire cost of the service?
31. Since the concession began provide traffic levels in tkm, tons, revenues (roughly), pkm as compared with pre-concession levels. Were target levels provided in the contract? Have they been met? Are regular performance reports made to the Regulator?
32. Were there rehabilitation targets set out in the concession target? Have they been met? Indicate where the funding was donor or on-lent and where the concessionaire was responsible.
33. Since concession provide estimates of fees paid to the government.

34. Did the state retain any ownership interest in the railway?
35. Are there recapture provisions for unamortized investment at the end of the concession?
36. Were any credit risk guarantees made available, such as from the World Bank?
37. How many km were operated at reduced speed at time of concession and today?
38. Have there been any unanticipated events that have impacted performance?
39. Does the concession contract impose “common carrier” obligations on the concessionaire? May tendered traffic be refused? Must connecting railways be treated equally?
40. Does the concession have a cancellation clause for non-performance?
41. Is there any provision that would require the RAHCO to repair any catastrophic losses, such as a major structure damaged by cyclone, derailment etc.?

ANNEX 4: ACKNOWLEDGEMENTS

This study was principally based upon desk top research of material publically available. It draws heavily upon several World Bank and other studies and those have been noted where indicated. Facts given are from interviews and research of available documents. Where conclusions are drawn, they are based upon the consultants judgment and understanding of the facts available. Where opinions are given, they are those of the consultant. The following provided much of the information contained here.

1. Zambia Privatization Agency “Study of the Effects of Privatization”
2. World Bank IMPLEMENTATION COMPLETION REPORT
3. (IDA-34330 TF-23134) December 20, 2005
4. AICD Final Report, Taking Stock of Railways in Sub-Saharan Africa
5. Results of Railway Privatization in Africa
6. Richard Bullock, World Bank
7. African Review of Business and Technology, December 2005
8. SSATP Toolkit
9. NLPI website
10. TECHNICAL ASSESSMENT REPORT, RAPID 2000
11. MODEL LEGISLATIVE PROVISIONS:
12. RAILWAY RESTRUCTURING AND REGULATION, 11 April 2001
13. BEST PRACTICES FOR RAIL CONCESSIONS AND RECOMMENDATIONS FOR MALAWI, CRISIL October 29, 2007

Many stakeholders were interviewed in the course of the study. These include:

David Junior Cossa	- Ministry of Transport and Communication, Mozambique
Horacio Parquino	- Ministry of Transport and Communication, Mozambique
Osorio Lucas	- Executive Board Member CFM
Adelino Mesquita	- Executive Board Member CFM
Luis Ah-Hoy	- Advisor to the Board CFM
Ignacio Rodrigues Junior	- Director Human Resources CFM
Babe Botana	- Former CEO BR and RSZ
Lovemore Bingandadi	- Railway Consulting, Regional Expert
Nelson Nyangu	- Ministry of Transport and Communication, Zambia
B. A. N. Liamba	- Ministry Infrastructure Development, Tanzania
Board Member	- RAHCO
Victor Lungu	- Director of Planning, Ministry of Transport, Public Works and Housing, Malawi
Patrick G. J. Lapunteni	- Corridors Project Manager, Ministry of Transport, Public Works and Housing, Malawi
Regina Mwale	- Director of Finance, ZRL