

DBSA'S APPROACH TO RISK ANALYSIS AND MITIGATION WITH REFERENCE TO THE TRANSPORT SECTOR

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I. INTRODUCTION: THE CRITICAL IMPORTANCE OF TRANSPORT IN RIAS

Regional cooperation in the transport sector is a prerequisite for effective and sustainable regional economic integration. Operational and sustainable transportation linkages, which connect countries in the region and link them to the outside world are vital for the movement of goods, services, and of course, people. Critically, a well-developed and sustainable transport system is a sine qua non for meaningful economic development.

II. PROBLEM STATEMENT:

To meet its requirements for transport delivery, the Region needs enormous investment in all types of transport infrastructure in order to develop, upgrade and maintain its systems if it is to become a player in the globalising world economy. The problem therefore for regional governments and the private sector, is to access the appropriate and sufficient types of funds to meet its needs. In tackling this problem, sound Risk Management is critical for accessing the right funding for the right types of projects – whether they are of a public or private nature. It is in this respect – the use of sound and credible risk management policies and procedures for project analysis and mitigation, and specifically of the DBSA's approach to this subject, that I want to address you today.

III. DBSA & RISK MANAGEMENT

From its inception in 1983 to 1994, the Development Bank of Southern Africa (DBSA) operated in a protected environment, which was essentially credit risk free. It was established then to "perform an economic development function within the constitutional dispensation which then prevailed" in *apartheid* South Africa, which included the self-governing territories and the homeland governments existing in what was then known as the "TBVC States", or Transkei, Bophuthatswana, Venda and Ciskei.

Following the historic 1994 general election, the new government of South Africa ceased all funding for the DBSA, and required that management seek alternative funding sources, including from the capital markets – both domestic and international. Since 1994, therefore, the DBSA has largely been successful in raising capital both domestically and internationally through the issuance of market-related debt-instruments including Eurobonds.

In 1996 the Government restructured the DFI System in South Africa, essentially creating 5 separate DFIs for facilitating development in the country. These included a restructured DBSA, which was transformed into a wholesaling infrastructure development finance institution; the IDC (for large-scale industrial development), Khula (for SMME

development), the National Housing Finance Corporation and the Land Bank, which was to deal with agricultural and rural development.

The Government's expectation of the DBSA, was that it would be self-sustaining and maximize private sector involvement in project financing. Given the greater concentration of risk expected in the Bank's operations – because of its focus on infrastructure – risk management became a critical part of our practice.

IV. THE DEVELOPMENT OF DBSA'S RISK MANAGEMENT PRACTICES

As the primary source of infrastructure financing in South Africa and to some extent, the SADC region, and given its funding sources, the DBSA's Board recognized as a priority, the need for the institution to develop a sound management philosophy around its twin objectives of financial sustainability and development impact. As a development institution it was recognized that the DBSA would in essence be expected to support projects with higher levels of risk, but the requirement of "sound banking principles" made it mandatory that risk management policies and practices be put in place for project assessments.

To this end and during the re-structuring of the DBSA, a **Risk Management Unit** was created in the Bank in late 1996 and located within the Bank's Finance Complex. Its mission was "to develop risk management to a level of recognized excellence". In addition, and during the period October 1996-March 1998, the Board of Directors and Executive Management of the Bank adopted the following internal objectives in the Bank's *Corporate Strategy and Business Plan*:

- To enhance competence in understanding and managing development risk; and
- to creatively design appropriate financial instruments and appropriately package risk.

As part of the Finance Complex's business objectives, the following were also adopted:

- To proactively manage the risks inherent in trading and dealing;
- To understand and manage all financial risks and develop an integrated Risk Management Policy Framework;
- To establish operational parameters between the Risk Management and Operational Business Units;
- To keep abreast with developments internationally in the area of risk management; and
- To manage the overall credit worthiness of the Bank with the aim of maintaining its AAA local credit rating and obtain an international credit rating equivalent to the country ceiling for South Africa.

V. DBSA'S APPROACH TO RISK MANAGEMENT

Four fundamental themes underlie the DBSA's approach to risk management:

1. The ultimate responsibility for risk management is with the Board – risk management must be practiced by all line functions in the organization, but must be driven top down by the people charged with the overall responsibility for running the business;

2. The Board and Executive Management must recognize a wide variety of risk types, and ensure that the control framework adequately covers all of these, including those that do not readily lend themselves to measurement, such as operational, legal, regulatory, reputational and human resources risk;
3. Support and control functions, such as internal audit, legal, IT and human resources, need to be an integral part of the overall risk management framework;
4. Risk management objectives and policies must be a key driver of the overall business strategy, and must be implemented through supporting operational procedures and controls.

Before taking you through our Risk Management Policies, let me first give you our definition of “risk”.

Risk can be defined in a variety of different ways, including the following: “Risk is defined as the presence of uncertainty, where there may be uncertainty as to the occurrence of an event producing a loss and uncertainty as regards the outcome of an event, where the degree of risk is interpreted with reference to the degree of variability and not with reference to the frequency with which the event will occur or to the probability that it will display a particular outcome.”¹

I however, prefer to use a simple and straightforward definition²: “Risk is the probability of an event occurring.”

The event could be any one of a bewildering array of events; including for example:

- The probability of your offices burning down;
- The probability that your debtors will not pay;
- The probability that government withdraws your grants;
- Since we are talking transport, the probability that the traffic projections for a toll road will not materialize and therefore your return on investment will not be achieved.

VI. RISK MANAGEMENT POLICIES

The following suites of risk management policies are used by DBSA to manage its risk.

1. Country Risk Ratings and Country Lending Limits:

The DBSA reviews country risk for each of the countries that it deals with. These reviews result in country risk ratings and country lending limits. The risk ratings and limits are reviewed at least annually.

2. Client Credit Ratings

The Bank makes use of internally developed credit rating methodologies to credit rate clients. The credit rating methodologies differ according to the type of client being rated; for example a utility or local authority. The credit rating methodologies have been developed to suit particular circumstances. Accordingly the rating methodology used to rate a SADC client will differ from the methodology used to rate a South African client.

¹ Valsamakis A.C., Vivian R.W. and Du Toit, G.S. (1995) *The Theory and Principles of Risk Management*, Johannesburg, Butterworth Publishers (Pty) Ltd, at p. 27.

² Courtesy of Ron Rees at the DBSA’s RMU, June 2001.

3. Single Obligor Limit

The Bank has a board approved single obligor limit. Should the bank wish to make a loan to a client which is in excess of the single obligor limits, the approval of the full Board of Directors is required.

4. High Risk Clients

The Bank uses a limit to manage exposures, in aggregate, to high-risk clients.

5. Security for Loans

The Banks policy on security or collateral for loans requires that the amount of security required for a loan increases as the risk of default increases.

6. Pricing for Risk

All bank loans are priced for risk according to a predetermined formula. The higher the risk the higher the pricing. The Banks policy on pricing for risk enables risk pricing to be rebated according to the value of security supporting the loan.

7. Credit Watch

All clients credit ratings are reviewed at least twice annually. Should events warrant it a client's credit rating would be reviewed more frequently and more intensely.

8. Project Risk Assessment

In 1997, DBSA approved operational guidelines for the assessment of risk in project appraisals. Risk management at the time was still in its infancy and thus it was considered important to continuously test the effectiveness of these policies so as to improve upon them. Several modules were developed to address different aspects of risk in the projects.

These include:

- Economic;
- Financial;
- Institutional;
- Technical;
- Socio-political; and
- Environmental

These must all be reported upon to enable management to make a sound and well-informed decision on the project under appraisal. The depth of the project appraisal process enables the DBSA to price and mitigate risk. It reassures private sector financiers who are invited to co-finance deals, and facilitates further deals that do not require the involvement of the DBSA.

The risk assessment of these modules is placed in the context of the Bank's overall Balance Sheet risk and in summary, the risk assessment is then considered as follows:

a) Portfolio Risk

Areas to be covered under portfolio risk include total DBSA exposure to the client, the region and the province. This may be expressed as a percentage or an amount. If exposure limits, such as the single obligor limits, will be exceeded, this would be specially addressed here and reasons motivating why DBSA should exceed such limits spelt out here;

b) Client Credit Rating – Internal and External

The internal credit rating results of the client before mitigation should be noted here together with the external credit rating/assessment, if these are available. Where there is significant difference between the internal and external credit rating, an explanation of such difference should be noted here. While it is important to give the current credit rating, where possible, efforts should be made to predict the probable future ratings.

c) Credit Risk

The risk of default specifically should be dealt with under this paragraph. This will include items such as liquidity status and debt service percentage, unless already stated under the financial assessment module. Non-compliance with the “Security for Loans” policy should be specifically addressed here.

d) Critical Risks of the Project

Any issues of concern that may affect the overall risk should be noted here. The main aim is to identify chief project risks. Generic classifications may include institutional risk, liquidity risk, project completion risk, financial risk (foreign exchange, interest rate and commodity price), industry risk, legal risk, and environmental risk. In other words, issues of significance that may have an impact on the approval of the loan. For all other project risks that may have been determined as low, a statement to this effect should be made.

e) Mitigation Measures

Mitigation measures under consideration or those agreed with the client will be noted here. Mitigation measures in respect of project risks only will be addressed. It is important to note that where a medium to high-risk rating has been concluded under each module, the mitigation measure should also be included, e.g. permits for environmentally sensitive projects.

f) Country Risk

For projects in SADC countries, a sub-paragraph on country risk should be included. This summary should only reflect the main findings/conclusions.

In managing country risk the DBSA prepares country risk reviews. These reviews include assessments of political risk, economic risk and the legal frameworks of the countries within which DBSA operates. For the latter purpose, legal counsel is appointed in each SADC country to advise the DBSA on, inter alia, the applicable laws and regulatory framework as well as the operations of the judiciary. The reviews inform the country risk ratings which in turn assists us in developing our country lending limits.

g) Risk Rating before Security

Risk rating determined by taking into account client credit rating, project risks and/or country risk, before security is taken into account, would be noted under this sub-paragraph. This is the risk rating that is used to determine whether or not security will be required as per the policy on “Security for Loans”. It is ideal to record the individual scores per appraisal module and the final score, as this will highlight the module that either increased or reduced the risk rating.

h) Security

Where security is required in terms of the policy on “Security for Loans”, the percentage of the loan value required for security and the type and values of security to be provided by the client should be noted here. Where the client will not be asked to provide a security as required, the reasons should be noted and motivated.

i) Final Overall Risk Rating, Pricing and Conclusion

The final risk rating after taking into account the security provided by the client and the final risk pricing will be noted under this sub-paragraph. The following approach is required for all projects:

- Risk Pricing before security _____
- Discount for Security _____
- Recommended Risk Pricing _____

j) Risk Management Comments

The Risk Analyst is expected to note under this sub-paragraph, their concurrence with the risk assessment. Where there are differences that have not been resolved with the project team, such differences should also be noted here.

The above exposition sets out in general terms how the Bank approaches risk generally on its projects. By and large a similar approach would be followed as well for transport related infrastructure projects. However, I think it would be useful for purposes of this presentation to set out hereunder and as a case study, a transport project that has had a pretty high profile, and which effectively explains the types of risk identified and how they were mitigated. The case in point is the N4 Toll Road.

VII. TYPICAL RISK IDENTIFICATION IN A CROSS-BORDER PRIVATE SECTOR TRANSPORT PROJECT – CASE STUDY: THE N4 TOLL ROAD

The N4 Toll Road to Maputo involved the granting of a concession to a concessionaire and was in essence a cross-border project between two SADC countries - South Africa and Mozambique. Specific risks and the way they were handled are identified hereunder, and include the following:

- Political Risks
- Legal Risks
- Traffic and Tariff Risks
- Construction Risks
- Environmental Risks
- Force Majeure Risk
- Operational & Maintenance Risk, and
- Macro-Economic Risks

Each of these risks as identified was assigned to those parties best able to manage them. The manner in which they were handled is further explained below.

1. Political Risk

1.1 THE RISK OF EXPROPRIATION OF THE PROJECT'S ASSETS

While no legislation existed in either country to protect this project specifically, or these types of projects from expropriation and cancellation, the concession agreement addressed this concern. It provided that in the event of expropriation or compulsory take-back or nationalisation of the project by the countries concerned (South Africa and Mozambique), the concessionaire would have a right to terminate the agreement. In addition, upon exercising such right, the concessionaire had to be compensated by the States for, amongst other things, all sums due and outstanding under the loan agreements.

In addition it was considered important that this project is located within the spatial development initiative (SDI) planned by both governments since 1995. The toll road project was therefore considered one of the flagship projects of this SDI, which strengthened its political significance.

1.2 LICENCES, PERMITS AND RIGHTS OF WAY

Each country, while ultimately not responsible therefore, undertook to make every reasonable effort to assist the concessionaire to obtain permits and licences. Failure by the concessionaire to obtain permits, licences, and approvals timeously would bind the parties to a discussion with a view to reaching a mutually acceptable solution.

While this did not eliminate the risk of delayed issue of permits and licences by government departments, and therefore the risks of cost and time overruns, the parties undertook to commit themselves to a dialogue on the situation, and to finding solutions.

South Africa and Mozambique were each obliged to deliver the project site and rights of way to the concessionaire, and bear the costs for the acquisition thereof. In the event of a failure to deliver the site and rights of way timeously, which failure resulted in delay of the project timetable, the Independent Engineer was entitled to make a determination on any extension of time, monetary relief, or such other relief to which the concessionaire could be entitled.

1.3 ADVERSE CHANGES IN TAXATION

Any change in taxation laws, not of general application and which discriminated against the concessionaire, in relation to any other persons, was to be viewed as a material adverse governmental action which would entitle the concessionaire to certain relief. The relief included an appropriate extension of time, monetary relief, or termination of the concession agreement where no other remedy was found to be sufficient to place the concessionaire in as good a position economically as it would have been had the material adverse governmental action not occurred.

Under the terms of the concession agreement, in the event of termination, the government was required to repay all sums outstanding under the loan agreements.

1.4 TARIFFS

The existing border tariffs were subject to negotiations between the States and the concessionaire. The outcome of those negotiations was addressed in the final appraisal.

1.5 GOVERNMENT PLANNING

There was an appreciable risk of one of the governments constructing alternative, even competing, infrastructure facilities. The Mozambican government had indicated that a rail concession from Ressano Garcia to Maputo would be granted. A provision in the concession agreement provided that the States reserved the right to grant such further concessions (but not in respect of a road or roads between the same destinations or between any intermediate points on the highway) as they in their discretion deemed fit. But any action by the countries concerned, the effect of which was to discriminate against the project in relation to other roads, and which action had a material adverse effect on the rights, interests or obligations of the concessionaire and/or results in any actual or prospective change in the concessionaire's costs or revenues, was deemed a material adverse government action. In this regard the concessionaire was therefore protected against such action.

1.6 FOREIGN EXCHANGE RISK

The project's revenues were to be in South African Rands. The final financing structure was determined later in the project's life. At the time of approval, it was not anticipated that there would be considerable foreign currency involved in the financing, so that foreign exchange risks between revenues, on the one hand, and debt service costs, on the other, was not considered a significant issue. This was later confirmed in the final appraisal.

2. Legal Risks

2.1 BILATERAL AGREEMENT

The Implementing Authority (IA) was created by Protocol between the two States, and was responsible for implementing the project on behalf of the States. The IA's legal status as a separate juristic entity was, generally open to doubt, and consequently, the IA was not recognised in the agreement as a contracting party. To give comfort to the concessionaire and the lenders, the States, and the South African Roads Board (the Board), were jointly and severally held to be liable to the concessionaire for the due and proper fulfillment by the States, the Board and the Implementing Authority of their obligations under the concession agreement.

2.2 NATIONAL LEGISLATION

South Africa and Mozambique clearly had control over the risk of non-supportive legislation. While South Africa did not have a concession law, there was generally no legal impediment to the government granting a concession of this type. The Mozambican situation, however, was different. Decree No. 31/96 (the decree) of 18 July 1996, as published in the Government Gazette of the Republic of Mozambique, No. 26, was promulgated with the express intention of allowing government to grant concessions for the operation and maintenance of toll roads and bridges in

Mozambique. This decree was inconsistent in many respects with the provisions of the concession agreement, in that it contemplated, for instance, that the concession company would be a company duly registered as such in Mozambique (which was not the case). Further, that at least 10% of the shareholding shall be held by the Mozambican government (which is not the case). The guarantee provisions were also in conflict with the guarantee provisions of the concession agreement. Thus for example, the proceeds of the performance bonds during the construction period were, in terms of the agreement, to be applied in the first instance towards rectification of the construction works. However, in terms of the decree, the proceeds were to be paid to the government. There were also other inconsistencies in relation to termination rights, and compensation to the lenders on termination (which were adequately addressed in the concession agreement, but inadequately so in the decree).

The DBSA, together with the other lenders to the project, wanted to see this situation satisfactorily addressed before financial closure. We therefore inserted a resolute provision in the concession agreement, to the effect that the Mozambican government would ensure the coming into effect of legislation which would render lawful the rights and obligations created by the concession agreement.

3. Traffic and Tariff Risk

3.1 TRAFFIC PROJECTIONS

The concessionaire, and therefore the lenders, were fully exposed to the actual level of traffic and traffic growth, which would occur in the future on the road. In terms of the concession agreement, the States were not required to provide any minimum traffic guarantees to the concessionaire, nor provide any financial assistance or payment or subsidies or incentives.

The concessionaire appointed its own traffic consultant to check the traffic data provided by the States; and to verify demand forecasts.

The lenders also appointed their own independent traffic advisor, to review the work of the concessionaire's traffic advisor, and to review the existing traffic data and methodologies on which the concession company had based its projections, and thereafter to advise the lenders of their findings.

3.2 TARIFF AGREEMENT

The concession agreement provided for the tolls to be adjusted annually for inflation (or more often if high levels of inflation were experienced), and, although the States had the discretion not to approve such revised tariffs, they were obliged to compensate the concessionaire if they withheld such approval.

4. Construction Risks

4.1 In terms of the concession agreement, the concessionaire was to bear all design and construction risk. The concessionaire in turn would pass all its design and construction obligations to the contractor in terms of the design and construction contract. The contractor was therefore responsible for carrying out the performance of the works in accordance with the States' design requirements.

The risk of a failure of design was borne by the contractor.

4.2 Construction delay risk was borne by the concessionaire. The concessionaire then passed that risk on to the contractor in terms of the design and construction contract. The design and construction contract term sheet, which was an annexure to the concession agreement, was to be a fixed-price, turnkey, arms-length contract, with provisions for liquidated damages in case the contractor failed to perform. It was agreed that the damages, which would flow from the contractor to the concessionaire, would be much larger than those flowing from the concessionaire to the States. This was primarily because while the States had an interest to see the road completed well and on time, the person with a real financial interest in the project was the concession company, to whom delays effectively meant loss of revenue. The concession company would, in terms of the concession agreement, thus be allowed to assign and/or create security, in favour of the lenders, over its rights under the design and construction contract. In practice, this took the form of a pledge over the income stream from penalties flowing from the contractor to the concessionaire.

4.3 The risk of cost overruns during construction was borne by the concessionaire. The concessionaire was to pass this risk on to the contractor in terms of the design and construction contract. Any increase in the contract price, which was caused by the contractor, would thus be for its account.

5. Environmental Risks

5.1 All environmental risks were borne by the concessionaire, and the concessionaire's insurers. The concessionaire was to pass this risk on to the contractor and the operator, in terms of the design and construction contract, and the operation and maintenance contract, respectively. Both the contractor during the construction period, and the operator during operation and maintenance, was required to observe, at a minimum, the legal requirements in each State. The contractor was also required to conduct an Environmental Impact Assessment during the preliminary design stage and thereafter put in place a continuing, improving environmental management plan for the duration of the concession, which should assist in mitigating the risk of unforeseen environmental impacts.

6. Force Majeure Risk

6.1 Force majeure was defined in the concession agreement as the occurrence of any material event beyond the control of either party, including but not limited to war, revolution, protest and/or boycott action against Highway construction or tolls, and such like events, and which caused material and unavoidable physical damage, or materially delayed the time for completion, or materially interrupted the full and regular operation of the project.

The concessionaire was required to take out property and casualty insurance, business interruption insurance, third party liability insurance, and employer's liability insurance, for the duration of the concession period.

In addition, in the event that the concessionaire was unable to carry on with the project, as a result of the force majeure event (which it was obliged to try to do), and if this force majeure event carried on for an aggregate of 182 days or more in any period of two years, then either party was entitled to terminate the contract. In that event, the States

were obliged to pay to the concessionaire all sums outstanding (excluding penalty interest and fees payable solely as a result of early termination) under the loan agreements as at the date of payment thereof, plus the contributed equity at that point, less any amounts paid under insurance policies.

7. Operation and Maintenance Risk

7.1 Under the concession agreement, all operation and maintenance risk was borne by the concessionaire. The concessionaire was to pass this risk on to the operations and maintenance contractor under the operations and maintenance contract.

7.2 The operator bore full responsibility for the tolling system, and all tolling equipment, in terms of the operation and maintenance contract.

The risk of failure of the tolling equipment was covered by insurance. It was also covered by the operation and maintenance bond issued by the concessionaire in favour of the States if such failure of equipment resulted in the concessionaire not being able to carry out its obligations to operate and maintain the highway in accordance with the concession agreement.

8. Macro-economic Risks

The financing provided by the DBSA and the other lenders was non-recourse to the project sponsors. As such, in addition to the above risks, the DBSA was fully exposed to the financial performance of the project, which additionally was affected by, amongst other things, the level of inflation, the level of interest rates, and, as discussed above, possibly the level of exchange rates. However, the Bank was of the opinion then that all appropriate risk events had been identified, analysed and mitigations put in place. The project appraisal was approved and the project went ahead to full implementation and completion. As we say, the rest is history.

VIII. CONCLUSION:

In conclusion, I wish to point out that the DBSA has developed workable and sound risk management policies and procedures, which have served the institution well in credit assessing and risk rating its clients and the projects it finances.

International credit rating agencies have expressed satisfaction with the risk management policies and procedures of the Bank, which has been awarded the sovereign ceiling rating of South Africa (the highest rating possible). However, the Risk management Unit continues to improve its policies and procedures for managing risk and has recently developed an integrated approach to managing risk management using an “enterprise-wide” risk management methodology. It has embraced the generally accepted risk principles (GARP) developed by Coopers & Lybrand, which have international recognition. These will assist the Bank to achieve best practice in managing its risks.

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Manager: Risk Management Unit of the Development Bank of Southern Africa (DBSA), since September 1998. Responsible for management of Bank-wide risk exposure, including credit risk, through development of and monitoring of appropriate risk mitigation policies and procedures, risk assessments at project level and pricing for risk. Managed to BOD approval a project to investigate the feasibility of establishing a debt-guarantee facility at the sub-sovereign level. Manager of Project to identify legal risk for DBSA's lending activities in SADC.

Formerly, (1993- August1998) Legal Advisor & Policy Analyst with the DBSA's Policy Business Unit, where I was involved in policy analysis and co-ordination of activities relating to Southern African. Provided specialist legal advice in the area of international economic law, on the WTO, trade and investment in SADC. I have provided specialist legal advice on the SADC Investment Study, and supported SADC-FISCU on the process involved in drafting a SADC Finance & Investment Protocol.

From June 1996- September 1997 was on sabbatical in the UK (at Cambridge University) writing a Ph.D. thesis, entitled "Regional Integration in Southern Africa from a Policy and Law Perspective". During this period I worked for an international finance law practice (Clifford Chance) in their Securities Department and worked on the privatisation of the Zambian Copper Mines.

I have over 25 publications to my credit, including:

- *A SADC Sugar Agreement in the Context of the WTO and Global Sugar Trade*, monograph published by Institute for Global Dialogue, 2001.
- Co-Editor of "Public-Private Partnerships in South Africa: Progress and Potential" Special Issue of *Development Southern Africa*, Vol.16 No.4 Summer 1999; and
- Co-author of the article "Municipal Bonds as Alternatives to PPPs: facilitating direct municipal access to private capital", in the same Issue (both with Dr. James Leigland).